Barriers to Debt Relief through Bankruptcy: Evidence on the Filing Decision from a Legal Technology Platform*

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Abstract

Millions of households could increase their net worth by filing for bankruptcy, yet fewer than 10% of these households file each year. We study 15,186 debtors considering bankruptcy who have an average benefit from filing of $42,000 (approximately 20 months of household income), just 51% of whom file. We show that many households are deterred by a $338 filing fee. In a regression discontinuity design that exploits an income threshold for obtaining a waiver of the filing fee, we estimate that the fee causally reduces filing rates by 6.4 percentage points (12.5%). Marginally deterred debtors mirror filers, except that they lack liquid assets and have even higher levels of debt. Our results highlight that even relatively small fees can impede the targeting of social insurance.

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1 Introduction

Prospective beneficiaries of government policies frequently do not access the benefits for which they are eligible (Currie, 2006). Barriers to access are policy choices that can enhance welfare when they are less costly for the targeted beneficiaries and vice versa (Nichols and Zeckhauser, 1982; Kleven and Kopczuk, 2011; Finkelstein and Notowidigdo, 2019). These barriers can include means testing, application costs, administrative ordeals, and complexity. Despite the centrality to optimal policy design, understanding whether programs are targeted efficiently is often hampered by difficulty observing individuals who forgo benefits and estimating the causal deterrent effect of barriers to access. Overcoming these challenges in a novel high-stakes setting, we show that application costs meaningfully limit access to government benefits without improving targeting efficiency.

We study the consumer bankruptcy filing decision, where the benefits of access typically imply tens of thousands of dollars of debt relief and the barriers to access have long been a central component of the policy design.[1] The average Chapter 7 bankruptcy relieves approximately $115,000 of debt (US Courts, 2023). White (1998) estimated that as many as 15 percent of households could increase their net worth by filing for bankruptcy, and this remains true of between 8 and 16 percent of individuals, even after a 2005 reform made it less beneficial to file (see Appendix Figure A.1). While many individuals could benefit from bankruptcy, less than one percent of all households file in a typical year. The low take-up rate and large potential benefits of bankruptcy raise important policy questions: How do debtors decide whether to file? How do barriers to access like court fees affect filing choices? We exploit novel data to answer these questions. While debtors with more to gain from bankruptcy are more likely to file, many debtors with larger-than-average potential benefits cannot afford to pay the $338 fee to file for bankruptcy.

New technologies like artificial intelligence are transforming access to financial and legal services, as the costs of distribution and providing personalized service decline with automation (Gisbert, 2024; Strange et al., 2024). We partner with Upsolve, a 501(c)(3) nonprofit that provides software to help debtors complete bankruptcy filing forms without hiring an attorney.[2] Upsolve provides

[1] The bankruptcy code has an unusually punitive policy history with roots in debtors' prisons and highly stigmatized treatment of debtors. See American Bankruptcy Institute (n.d.) for more on this history and examples.

[2] Upsolve's bankruptcy filing tool is similar to tax preparation software such as TurboTax, H&R Block, or IRS Free File.

a free substitute for bankruptcy attorneys, which typically cost around $2,000 (O'Neill, 2023), and creates an opportunity to explore who gains access to debt relief through bankruptcy when labor-replacing technologies lower cost barriers.

Upsolve offers a valuable context for studying the targeting properties of bankruptcy and the filing decision for three reasons. First, we observe both filers and *prospective filers who did not file*, enabling a rich characterization of who follows through on filing conditional on considering bankruptcy as an option. Specifically, we observe 15,186 Upsolve users who completed their bankruptcy filing paperwork with an average benefit from filing of $42,000, only 51% of whom file. Second, the bankruptcy filing petition and associated schedules include much more complete and granular data on prospective filers' debts, assets, income, and expenses than virtually any other dataset on household finances. By partnering with Upsolve, we are able to supplement this rich data with a survey of their users' financial lives and reasons for considering bankruptcy. Third, Upsolve serves a large number of debtors in difficult financial circumstances who may particularly benefit from debt relief through bankruptcy but may be marginally deterred by barriers to filing. In particular, we estimate the effect of the $338 court fee on whether a debtor files using variation in eligibility for a waiver of the filing fee. We observe a significant number of debtors around the eligibility threshold, which is set at 150 percent of the Federal Poverty Level (FPL).

We provide new descriptive evidence on the reasons debtors consider filing for bankruptcy and what predicts which debtors follow through on filing. We find that prospective filers most often cite falling behind on bills, job loss, and irresponsible spending as reasons for considering bankruptcy. Medical debt, frequently cited as the leading cause of filing for bankruptcy, plays a comparatively minor role. The financial benefit is central to the decision to follow through on filing for bankruptcy. We estimate that a 10% increase in the financial benefit of filing increases the probability of filing by 0.6 percentage points. Those who forgo filing nevertheless leave tens of thousands of dollars of debt relief on the table by not filing.

We use a regression discontinuity (RD) design around the fee waiver eligibility threshold and estimate that debtors are 6.4 percentage points (12%) more likely to file when they qualify for a waiver of the $338 filing fee in our preferred instrumental variables (IV) estimate. In our first stage, we estimate a stark 87.6 percentage-point increase in fee waiver applications for prospec-

tive bankruptcy filers below the FPL threshold. We find no evidence of bunching or differences in prospective filers' characteristics around the threshold, supporting the validity of the research design. Our RD results are broadly robust to the included controls, bandwidth selection, kernel weights, and functional form. This effect is remarkably large given that waiver-ineligible non-filers above the threshold (150-250% of the FPL) have an estimated $46,887 of dischargeable debt on average (median $36,705) and the filing fee is just $338.[3] It is even starker given that 59.9% of waiver-ineligible filers within this income range pay the filing fee in installments.

Our RD results reveal that many "marginal filers" file if and only if they receive a fee waiver. In theory, by deterring these marginal filers, the filing fee could improve targeting efficiency. For example, one might conjecture that marginal filers are sensitive to the filing fee because their net financial gain from filing is small. Under this conjecture, the filing fee efficiently preserves the time and resources of court officials for individuals with the most to gain from filing. Using our unique setting, we show that this conjecture is false: marginal filers have *more* to gain from filing than typical filers.

Specifically, estimating our RD specification in disjoint subsamples, we find that the filing fee is a greater deterrent for high-debt individuals. In a complementary exercise comparing marginal filers to "always takers" that file without a fee waiver, we find that marginal filers have significantly more debt. The same comparative exercise shows that marginal filers have significantly fewer liquid assets. Consistent with these findings, nearly all Upsolve users report that they would be either unable to file (56.8%) or would need to delay filing (39.7%) if they had to pay for an attorney. More broadly, we find no evidence that marginal filers are less vulnerable than always takers. In this sense, we find no evidence that the filing fee improves targeting. If anything, the fee worsens targeting by excluding individuals with a greater-than-average benefit from filing. This evidence is difficult to rationalize with a frictionless model in which filing choices depend solely on monetary benefits; instead, this evidence suggests that frictions such as misperceptions or stigma prevent debtors from obtaining a "fresh start", such that the marginal filer gains a great deal from bankruptcy.

We make two primary novel contributions. First, we demonstrate that the $338 fee to file for

[3] We estimate dischargeable debt by mapping users' reported liabilities to the debt categories in Appendix Table A.4, which we flag as dischargeable or nondischargeable based on the bankruptcy code.

Chapter 7 bankruptcy is a prohibitive barrier for many. Even in our sample of individuals who are seriously considering bankruptcy, the filing fee reduces filing rates by 12%. Second, we show that the filing fee does not improve the targeting efficiency of bankruptcy protection: if anything, marginal filers who are deterred by the fee have more to gain from bankruptcy than typical filers. Our results suggest that even small, seemingly innocuous barriers to filing may prevent the most vulnerable debtors from accessing the benefits of debt relief through bankruptcy.

In related work, Gross et al. (2014) find that anticipated liquidity provided by tax rebates increased bankruptcy filings by 2% in 2001 and 6% in 2008 (when rebates were higher). Similarly, using variation in mortgage payment reductions, Indarte (2023) finds that increases in liquidity lead to more filings.[4] Relative to this earlier work, we contribute new evidence on liquidity barriers to filing by analyzing the causal effect of a direct policy choice – the filing fee and fee waiver eligibility threshold – and provide a rich characterization of who this excludes from debt relief through bankruptcy. Our focus on the filing fee is particularly relevant for policy: the Consumer Bankruptcy Reform Act of 2020 (Warren, 2020) includes a proposal for reducing the filing fee to increase bankruptcy access to vulnerable populations.

The large effect of the filing fee on filing has important implications for the design of bankruptcy policy. Prior work shows that discharging debt through bankruptcy improves finances, increases earnings, reduces mortality, and decreases mortgage default (Li et al., 2011; Dobbie and Song, 2015; Dobbie et al., 2017), and these effects could be especially large in our context given the vulnerability of the population we study. Imposing a filing fee as a barrier to accessing the benefits of bankruptcy will only increase welfare if it is more costly for the households who are more likely to abuse the bankruptcy system. We find little evidence that the debtors who are marginally deterred by the filing fee are those that policymakers might have intended to exclude. On average, they have dischargeable debt equivalent to more than 20 months of their monthly household income. While policymakers must weigh the cost of easier access to bankruptcy against higher costs and lower supply of credit (Mitman, 2016; Gross et al., 2021), our results show that even modest fees do not appear to be an effective screening tool. Liquidity constrained filers who cannot pay the

[4]Using variation in wage garnishment rules, Argyle et al. (2020) find that an additional $100 in monthly cash flows actually delays bankruptcy filing by an average of one month.

filing fee may resort to Chapter 13 filings, which exhibit high rates of failure, despite having few assets to protect (Argyle et al., 2023). This paper demonstrates that expanded eligibility for fee waivers, technology that lowers filing costs, and policy proposals that would allow Chapter 7 filers to pay filing costs over time (as is allowed in Chapter 13) would likely have outsized effects on the ability for low-resource households to access debt relief through bankruptcy.

Our research contributes to the literature on the bankruptcy filing decision and the implications for bankruptcy policy. Early papers used data from the Survey of Consumer Finances (SCF) and the Panel Study of Income Dynamics (PSID) to examine drivers of the filing decision and showed that the financial benefit, asset exemptions, stigma, and the option to file later all play a role (Gropp et al., 1997; White, 1998; Fay et al., 1998; Chakravarty and Rhee, 1999; Fay et al., 2002). Recent work focuses on the role of credit expansions (White, 2007; Skiba and Tobacman, 2019) and adverse events like job loss (Keys, 2018) and health events (Himmelstein et al., 2005; Dobkin et al., 2018a,b; Himmelstein et al., 2019; Gross et al., 2021). We contribute new evidence to longstanding puzzle of why more debtors do not file bankruptcy by analyzing granular new data from prospective filers who stand to gain considerably from filing – half of whom do not file. While a 10% increase in the benefit from filing increases the probability of filing by 0.6 percentage points, this effect is an order of magnitude smaller than the effects of the filing fee, which suggests a very limited role for "strategic filing" in comparison to barriers to filing.

In this vein, we also contribute to the broader literature on how program design affects the take-up and targeting of social programs. While bankruptcy is an unusual social program in that the primary costs are borne by other borrowers (Gross et al., 2021) rather than taxpayers, the consequences of these policy choices are particularly significant given the magnitude of debt relief potentially available to eligible debtors. A central focus of this literature is how program design can encourage self-targeting, where individuals facing higher benefits from participation are more likely to enroll, thereby improving targeting efficiency (Nichols and Zeckhauser, 1982). Prior studies examine barriers to enrollment and found that notifying potential beneficiaries of their eligibility increases take-up of college financial aid (Bettinger et al., 2012), the Earned Income Tax Credit (Bhargava and Manoli, 2015; Linos et al., 2022), and the Supplemental Nutrition Assistance Program (Finkelstein and Notowidigdo, 2019). Deshpande and Li (2019) and Goda (2024) highlight

how financial and administrative frictions can disproportionately deter higher-need populations, undermining targeting efficiency. In contrast, (Rafkin et al., 2024) find that the social benefits from self-targeting generally exceed the social costs of ordeals in their analysis of eight major safety net programs. Our fee waiver RD provides new evidence on how financial barriers to access, even if small relative to the benefits of the program, can prevent interested recipients from accessing benefits. We find no evidence that the filing fee increases targeting efficiency and, if anything, is likely to deter prospective filers who would impose smaller credit market externalities given their smaller debt burden.[5]

The paper proceeds as follows. Section 2 provides background on the U.S. bankruptcy code and Upsolve. Section 3 describes the data. Section 4 describes our empirical framework. Section 5 describes the results. Section 6 concludes.

2 Setting

2.1 U.S. Bankruptcy Code

The U.S. bankruptcy code includes two chapters to discharge eligible debts through personal bankruptcy. We focus on Chapter 7, the most popular chapter.[6] In Chapter 7, a debtor discharges eligible debts and, in exchange, forfeits their non-exempt assets to repay creditors (US Courts, 2024c). Eligible debts typically include credit card debt, medical debt, utility bills, auto loans, personal loans, and payday loans.[7] Asset exemptions protect certain assets from being forfeited. Exemptions, which are specified both federally and by state, typically protect one's primary residence ("homestead"), motor vehicle, household essentials, health aids, jewelry, and professional implements. In addition, federal and most state exemptions include a "wildcard" exemption that protects some otherwise non-exempt property. Due to these generous rules, the average Chapter 7

[5] This is similar to the Shepard and Wagner (2023) result that increasing barriers to health insurance enrollment screens out some of the lowest risk beneficiaries.

[6] In Chapter 13 "reorganization", a debtor keeps their assets but establishes a judge-approved repayment plan: the debtor partially repays debts over three to five years. In 2023, 58% of bankruptcy filers chose Chapter 7 (US Courts, 2023).

[7] Secured debts are not discharged if the underlying collateral is retained (e.g., an auto loan linked to an exempt vehicle). Some other categories of debt, such as student loans or domestic support obligations, are typically not discharged either.

debtor discharges $115,000 of debt and fewer than 5% of Chapter 7 debtors surrender any assets.[8] Debtors who discharge their debt through Chapter 7 are ineligible to file again for eight years and their credit reports include a bankruptcy flag for ten years (US Courts, 2024d).

This paper focuses on the process of filing for Chapter 7 bankruptcy. Access to Chapter 7 is limited in a few ways. First, a prospective filer must pass the "means test," which prohibits high-income individuals from filing for Chapter 7. This test was instituted in 2005 under the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA). Second, the filer must complete the required forms.[9] Third, the filer must pay the upfront costs of filing: (1) approximately $100 for mandatory pre-filing education courses,[10] (2) the court fee of $338,[11] and (3) attorney fees of approximately $2,000 if the debtor chooses to hire an attorney (O'Neill, 2023). Most filers work with an attorney, but 6.5% percent of filers file *pro se* (i.e., on one's own behalf) (Federal Judicial Center, 2024).

The Fee Waiver: Low-income filers can apply for a waiver of the $338 court filing fee. Specifically, a filer whose income is below 150% of the federal poverty line (FPL) is eligible to apply for a court fee waiver (US Courts, 2024b). If they are ineligible for a waiver, a filer may request to pay the $338 fee in up to four installments. The last installment must be paid within 120 days of the filing date (US Courts, 2024a).

2.2 Upsolve

We partner with Upsolve, a 501(c)(3) nonprofit organization that provides free online resources to help debtors in the United States understand their debt relief options, dispute or negotiate their debt, or file for personal bankruptcy. Most users arrive at Upsolve's website through web

[8] See https://www.abi.org/abi-journal/chapter-7-asset-cases. Surrendered nonexempt assets are sold by a trustee to repay creditors, see Antill (2024) for details.

[9] Required forms include: (1) a voluntary petition which initiates the bankruptcy filing; (2) schedules of assets, liabilities, income, and expenses; (3) a statement of financial affairs which covers any legal proceedings, property transfers, and other relevant financial activities; and (4) a statement of current monthly income used to confirm eligibility under the means test (US Courts, 2024c).

[10] BAPCPA requires filers to complete a credit counseling and post-filing debtor education course. Different course providers charge different fees. Regardless of the provider, debtors with incomes below 150% of the FPL are eligible to apply for a course-fee waiver for these courses. We do not observe these course-fee waivers in our data.

[11] The $338 court fee consists of a $245 filing fee, a $78 administrative fee, and a $15 trustee surcharge, payable upon filing the petition. The Chapter 7 court fee is constant throughout our study period. The fee was last adjusted in December 2020, increasing from $335 to $338 (Rao, 2020).

searches that lead them to their online resources, which include attorney-written articles on debt- and bankruptcy-related topics such as asset exemptions, debt collection practices, and wage garnishment.

Upsolve's leading service is a "TurboTax for Bankruptcy" application that helps qualified users prepare their Chapter 7 bankruptcy filing forms without incurring the cost of an attorney.[12] The application auto-populates users' Chapter 7 paperwork using their responses to a detailed questionnaire that covers sources of income, secured and unsecured debts, real and personal assets, expenses, and household characteristics.[13] The application automatically assesses users' eligibility for the fee waiver and helps users complete the filing fee waiver application form. Roughly 16,000 debtors have discharged more than $700 million of debt using Upsolve's bankruptcy filing application since its founding in 2016.

Upsolve offers a valuable setting to study the bankruptcy filing decision. We observe all components of 15,186 users' filing forms, including asset and liability-level information. We also observe their motivations for filing, as measured in an intake survey. While all users in our sample completed their filing paperwork, only 7,805 (51%) ultimately filed, allowing us to compare filers and non-filers. We observe the same detailed information for both sets of users and can thus can explore a large set of observable factors that influence the filing decision. Further, 62% of users have incomes below the fee waiver eligibility threshold (150% FPL), which provides identifying variation for our regression discontinuity (RD) design. Debtors filing using Upsolve comprise 16% of *pro se* Chapter 7 filers over our sample period and 20% of *pro se* filers who do not own a home and filed individually (see Appendix Table A.1 and Appendix Figure A.2).

3 Data

We obtained deidentified data on 15,186 users who completed the bankruptcy filing forms using Upsolve's application between September 2021 to December 2024. We observe each field required to

[12] Access to the application is limited to debtors with comparatively simple bankruptcy cases, excluding debtors who own homes, plan to file jointly with a spouse, or are involved in personal injury lawsuits. The tool also does not serve users with high incomes that are likely to fail the means test. Upsolve instead connects these users with a bankruptcy attorney in their area.

[13] To assist users with filling out the questionnaire, Upsolve pulls their most recent credit report and pre-populates some fields.

complete the forms including income and expenses, account-level assets and debts, and exemptions used. We also observe responses to an intake survey that asks users about: (i) their motivations for considering bankruptcy, (ii) the other actions they have taken to improve their financial situation, (iii) whether they would file in the absence of Upsolve, and (iv) basic demographic questions. Upsolve tracks whether users applied for a fee waiver, which users filed for bankruptcy, and who received a discharge. We link users who file to the Federal Judicial Center (FJC) Integrated Database, which records all bankruptcy filings in the United States.[14] For filers in the FJC data, we observe whether a fee waiver was ultimately received.[15]

Table 1 presents Upsolve user characteristics and how these characteristics correlate with decisions to file. The average Upsolve user is 42 years old, unmarried (80.7%), and female (61.3%). Nearly half (42.8%) have dependents and 32.4% receive some form of government benefits. Upsolve users are more likely to be Black (29.3%) than the national population. Filers tend to be older and are less likely to be married or have dependents. They are also more likely to receive government benefits. The most commonly cited reasons for considering bankruptcy are falling behind on bills (64.0%), job loss (37.7%), irresponsible spending (37.2%), and medical bills (24.9%).

Appendix Table A.1 compares the Upsolve sample to all Chapter 7 and Chapter 13 personal bankruptcy filers in the FJC database during our sample period. Upsolve users have significantly lower monthly income ($1,996 vs. $3,734) and assets ($13,593 vs. $84,287) on average than Chapter 7 filers overall (see Appendix Figure A.3 for a comparison of the income distributions). Upsolve users have less debt overall ($80,237 vs. $125,547) than typical Chapter 7 filers, but this difference is driven entirely by secured debt such as mortgages. Upsolve users have as much unsecured non-priority debt, which is the most easily dischargeable debt in bankruptcy, as typical Chapter 7 filers ($67,309 vs. $67,050). Compared to typical Chapter 7 filers, Upsolve filers are less likely to be repeat filers (3.3% vs. 7.8%), but much more likely to receive a fee waiver (49.5% vs. 4.1%) and file *pro se* (98.9% vs. 6.6%).

[14] We successfully link 77% of Upsolve filers to the FJC database using their filing date and their case's district, office, and sequence number. Among the remaining filers, 64% cannot be linked because Upsolve does not provide these case details and 36% cannot be linked because we do not find a match in the FJC database.

[15] We do not observe whether users applied for or received fee waivers for the pre-filing credit counseling or post-filing debtor education courses. Some providers automatically waive these fees if the US Bankruptcy Court waived the debtor's filing fee, while others require eligible debtors to complete a form requesting a fee waiver.

Prospective filers face extreme financial hardship. The average Upsolve user has $80,237 in total debt, of which $48,097 is likely dischargeable through bankruptcy. In other words, by filing for bankruptcy, the average Upsolve user could discharge an amount of debt equal to over two years of their income. Appendix Tables A.3 and A.4 provide more detailed breakdowns of Upsolve users' assets and liabilities, including an overview of available exemptions and debt dischargeability.

4 Empirical Framework

We use an RD design to estimate the causal effect of the $338 filing fee on the decision to file for bankruptcy. Our design exploits the threshold for fee waiver eligibility—income equal to 150% of the FPL. At this threshold, we estimate the discontinuity in applications for the fee waiver (and thus exposure to the filing fee). The running variable (income as a percentage of the FPL) is recorded when Upsolve evaluates the prospective filer's eligibility for the fee waiver. Applying for the fee waiver is optional, but Upsolve automatically screens users for eligibility and 94% of eligible users complete the paperwork to apply. For a small number of users, eligibility can change (e.g., if they wait to file and their income shifts above or below the threshold). To account for this imperfect compliance, we use a "fuzzy RD design": we instrument for fee-waiver applications using an indicator for whether the user's reported income exceeds 150% of the FPL.[16] We estimate a two-stage least squares regression with the following first and second stage equations:

$$W_i = \alpha_0 + \alpha_1 E_i + \alpha_2(FPL_i - 150) + \alpha_3 E_i \times (FPL_i - 150) + \alpha_4 X_i + \gamma_s + \delta_t + \varepsilon_i \tag{1}$$

$$F_i = \beta_0 + \beta_1 \hat{W}_i + \beta_2(FPL_i - 150) + \beta_3 E_i \times (FPL_i - 150) + \beta_4 X_i + \gamma_s + \delta_t + \varepsilon_i. \tag{2}$$

In these equations, i indexes users, FPL_i is income as a percentage of FPL, E_i is an indicator for waiver eligibility (determined by $\mathbb{1}[FPL_i < 150]$), and W_i is an indicator for fee waiver application. Our outcome variable is F_i, an indicator for filing for bankruptcy. The running variable, $(FPL_i - 150)$, represents the percentage-point distance from the 150% eligibility threshold. The vector X_i

[16] We validate Upsolve's measures for the filing fee waiver eligibility by examining filers' outcomes in the FJC database, where 86% ultimately received a waiver.

contains controls for user characteristics. We include year-month fixed effects (δ_t) and state fixed effects (γ_s). Our coefficient of interest is β_1, the effect of receiving the fee waiver ($\hat{W}_i$) on filing (F_i).

Our baseline specification uses a 100 percentage-point bandwidth (50 to 250% of FPL), assumes linear relationships above and below the threshold, and uses uniform kernel weights.[17] We control for the number of days the user spent on the questionnaire, demographics, the log of each category of debt, the log of each category of assets, and indicators for users' reasons for considering bankruptcy. The demographic controls include a linear term for age (along with an indicator for age missing) and indicators for gender (female, other, or missing; male omitted), race (Black, Hispanic or Latino, other, or missing; white omitted), having dependents, being married, renting housing, having unstable housing, and receiving government income.

Our identifying assumption is that, absent the discontinuity in fee waiver eligibility, the filing rate and any relevant factors for the filing decision would trend smoothly through the discontinuity. In Appendix B, we show three tests that support this assumption. First, we present the McCrary (2008) and Cattaneo et al. (2020) tests for manipulation of the running variable, which could suggest selection into eligibility for the fee waiver. We find no evidence of bunching around the threshold, which is visually evident in Figure 1 and confirmed by the tests presented in Appendix Figure A.4 (p-values of 0.333 and 0.743, respectively). We also assess whether covariates trend smoothly through the discontinuity by estimating equations (1) and (2) with each of the covariates listed above as the dependent variable. These results are shown in Appendix Table A.5. As one would expect by random chance given the large number of covariates, we identify a small handful (4 out of 35) for which we estimate statistically significant differences at the discontinuity. We plot each of them in Figure A.5 where discontinuities at 150% of FPL are not clearly apparent. Further, as described above, we flexibly control for these and other covariates. These controls *strengthen* our main estimates, rather than weakening them as one would expect if the changes in filing behavior were caused by factors other than the fee waiver.

In Table 2 we sequentially add controls for demographics, debt, assets, and reasons for filing,

[17] Given our relatively limited sample size of 15,186 users, we select a 100 percentage-point bandwidth to increase precision while avoiding bias from users with incomes far from the threshold. In particular, zero-income users account for 18% of the full sample.

including the state and year-month fixed effects and questionnaire completion time in all specifications (our baseline specification in column (5) includes all controls). In Appendix B, we also show robustness to alternate RD specifications. To evaluate the bias-variance tradeoff, we vary the bandwidth from 10 to 150 percentage points and apply triangular kernel weights, which are inversely proportional to the distance from the threshold. This bandwidth range includes the mean squared error (MSE) optimal bandwidth, based on the algorithm from Calonico et al. (2020), which we calculate as 46.2 and 44.4 percentage points when using uniform and triangular kernels, respectively. Separately, we assess robustness to using a quadratic rather than linear functional form.

5 Results

5.1 Predictors of the Filing Decision

We leverage our unique data to provide new descriptive evidence on two long-standing questions. First, what are the most important reasons households consider filing for bankruptcy? Second, why do so few households who would benefit follow through on filing?

There is widespread debate over the reasons households file for bankruptcy. We collect the self-reported reasons for considering bankruptcy in an intake survey of Upsolve users. This new dataset provides a larger sample of filers than the Consumer Bankruptcy Project (CBP), which has been recognized as the only systematic data collection on bankruptcy filers (Foohey et al., 2021). Table 1 Panel E summarizes these responses.[18] The most common reasons for considering bankruptcy are being behind on bills (64.0%), job loss (37.7%), and spending irresponsibly (37.2%). Medical reasons are frequently cited as a leading cause (Himmelstein et al., 2009, 2019) but medical bills are listed as a reason by only a quarter of Upsolve users. Of those users, it comprises just 7.4% of outstanding debt, suggesting that medical bills play a meaningful role but are not themselves the leading cause of bankruptcy, as is frequently claimed.[19] Sickness and disability, income loss, and wage garnishment also appear to play meaningful roles as triggers for considering bankruptcy.

While the above characterization provides insight into why these debtors considered bankruptcy

[18] Appendix Table A.6 shows the most common combinations of reasons and Appendix Table A.7 shows the composition of debt by reason for considering bankruptcy.

[19] See, for example, "Health Care Costs Number One Cause of Bankruptcy for American Families" at the American Bankruptcy Institute. See Dobkin et al. (2018b) for some of the limitations of relying only on self-reports of filers.

in the first place, it does not explain why – conditional on completing the paperwork to file – only 51% follow through with filing. The puzzle of why more households do not file for bankruptcy dates back to White (1998), who estimated that as many as 15 percent of households could increase their net worth by filing for bankruptcy. We update these estimates in Appendix Figure A.1, and find that 8.5 percent of households would increase their net worth by filing for Chapter 7 in the 2022 SCF but just 0.2 percent file.[20] By leveraging the granular data from users' filing forms, we can understand how financial factors like the composition of household balance sheets, sources of income, and the financial benefit from bankruptcy influence the decision to file.

Table 1 displays this information for the full sample, filers, and non-filers (Columns 1-3), the t-test of the difference in means (Columns 4-5), and the coefficient of an indicator for filing on the explanatory variable, controlling for income. Several relationships are worth highlighting. Surprisingly, not all debts are positively correlated with following through on filing in the Upsolve sample. Credit card, medical debt, and priority claims are strongly positively associated with filing, while auto debt and debt in collections are *negatively* associated with filing. The auto debt relationship may reflect an aversion to asset forfeiture, as these loans are secured by a vehicle and only dischargeable if the vehicle is surrendered. Debt in collections may be less of a factor because little of this debt is ever repaid and it has smaller financial consequences than other types of debt (Kluender et al., 2024). Upsolve users with more assets, particularly liquid assets, are much more likely to file, which reflects that available resources may be an important driver of filing. Conditional on income, individuals who receive income from government benefits are more likely to file, potentially reflecting heightened economic need or lower perceived stigma associated with debt relief. Among the reasons for considering bankruptcy, job loss is the strongest predictor of filing. The other reasons for filing are largely similar across filers and non-filers.

Finally, we can reduce the dimensionality of the exercise and estimate the elasticity of the filing decision to the prospective financial gain from filing. Figure 2 Panel A plots the distribution of the financial benefit, defined as dischargeable debt minus non-exempt assets and the cost of filing. The

[20] We see similar failures to take advantage of COVID debt relief programs, where a quarter of non-performing eligible government-sponsored enterprise (GSE) mortgages failed to take advantage of forbearance (Kim et al., 2024); income-driven loan repayment, where more than 60 percent of borrowers failed to re-certify their income and returned to their original payments (Herbst, 2023); and other government programs like the EITC (Bhargava and Manoli, 2015; Linos et al., 2022), SNAP (Finkelstein and Notowidigdo, 2019), and SSDI (Armour, 2018).

mean financial benefit is $41,962 and the median benefit is $31,402. Given the low incomes within our sample (average monthly household income of $1,996), even those with smaller benefits may significantly increase their net worth by filing. Panel B shows that the financial benefit is strongly associated with the decision to file: a 10% increase in the benefit of filing increases the likelihood of filing by 0.6 percentage points (+1.2%). Our results echo the Fay et al. (2002) result in a much larger sample of marginal bankruptcy filers and a different bankruptcy policy regime.[21]

5.2 Effects of the Filing Fee

Figure 1 presents the first- and second-stage estimates from our baseline RD specification. Panel A presents the distribution of income, with the colors of the bars indicating who opted to apply for a fee waiver (red), apply to pay the fee in installments (blue), or pay the fee in full (green). Panel B plots the first-stage effect of income on application for the filing fee waiver, as estimated in equation (1). Users just below the threshold are 87.6 percentage points more likely to apply for the fee waiver than those just above the threshold. The majority of prospective filers who are ineligible for the fee waiver apply to pay the filing fee in installments rather than upfront, which provides a partial remediation of the liquidity barrier to filing for those above the threshold. As a result, we will understate the impacts of the $338 filing fee on the filing rate relative to a world in which the fee must be paid in full by everyone who does not receive a waiver.

Panel C of Figure 1 presents the second-stage estimates of the fee waiver on bankruptcy filing, as estimated in equation (2). We observe a positive relationship between income and filing below the fee waiver eligibility threshold that flattens above the threshold, and a clear discontinuity in filing at threshold. The $338 filing fee significantly reduces the likelihood of filing by 6.4 percentage points (12%, p-value = 0.004). We emphasize that this estimate reveals an extraordinary degree of sensitivity to the financial barriers prospective filers face in order to obtain debt relief. Non-filers just above the eligibility threshold are forgoing $46,887 of debt relief on average. This sensitivity would be difficult to generate in any theoretical model that does not include extreme binding

[21] Using the Panel Study of Income Dynamics from 1984 to 1995, Fay et al. (2002) show that a $1,000 higher financial benefit is associated with a 0.021 percentage-point (+7%) higher probability of filing. In the Upsolve sample, a $1,000 higher financial benefit (+2.4%) is associated with a 0.192 percentage-point (+0.4%) higher probability of filing. We observe 7,805 bankruptcy filings compared to the 254 in their sample.

liquidity constraints or perceived non-financial costs, like stigma, that generate ambivalence toward filing (making individuals more sensitive to small marginal barriers).

Our results are broadly robust to alternative specifications. Table 2 presents how our results change when we incrementally add controls for demographics, debt, assets, and reasons for considering bankruptcy (our baseline specification in column (5) includes the full set of controls). The RD estimate generally increases in magnitude with the number of controls, varying from 5.6 to 6.4 percentage points, and it broadly remains significant at the 1% level. In Appendix Figure A.6, we vary the bandwidth from 10 to 150 percentage points and test triangular kernel weights. Under both kernels, the RD estimate holds steady between 5 and 7 percentage points until the bandwidth falls below 25 percentage points, after which the small sample size introduces noise. The 95% confidence interval around the estimate predictably widens with narrower bandwidths. The RD estimate remains significant at the 5% level up to a 45 percentage-point bandwidth in the uniform kernel specification and up to a 55 percentage-point bandwidth in the triangular kernel specification. The magnitude and direction of our estimate remain robust at the MSE-optimal bandwidth under both kernels (46.2 percentage points for uniform and 44.4 for triangular), and only begins to erode for the narrowest bandwidths and triangular kernel.[22]

5.3 Who Does the Filing Fee Prevent from Filing?

Our results show that the filing fee significantly deters bankruptcy filings, even among debtors who are strongly considering bankruptcy. We estimate that the filing fee causally reduces the filing rate by 6.4 percentage points, despite amounting to less than 1% of the average potential debt discharge in our sample. The filing fee is thus a meaningful barrier to bankruptcy access for many potential filers. We now analyze whether this barrier improves the targeting efficiency of bankruptcy. In the targeting literature, the efficiency of a barrier is typically assessed by characterizing the compliers who are deterred by the barrier (Kleven and Kopczuk, 2011). We implement this standard approach by estimating the characteristics of the compliers who file if and only if they receive a fee waiver.

Analyzing the efficiency of the filing fee is particularly relevant for policy given recent changes to

[22]Detailed regression output and RD plots are shown for selected bandwidths (149, 100, 75, and 50 percentage-point and MSE-optimal) are shown in Appendix Table A.8 and Appendix Figure A.7.

the bankruptcy code and active proposals for reform. The 2005 BAPCPA reform aimed to prevent "strategic" bankruptcy filings by opportunistic consumers who could have otherwise repaid their debts. BAPCPA implemented a number of barriers to filing that are similar in character to the filing fee (e.g., mandatory credit counseling and post-filing debtor education courses that must be paid for by the debtor) which have substantially reduced filings (Gross et al., 2021). Understanding which debtors are marginally deterred by the filing fee can inform our understanding of these reforms, as well as the potential effects of the filing fee reduction proposed in the Consumer Bankruptcy Reform Act of 2020 (Warren, 2020). We estimate the characteristics of those who are marginally deterred by the filing fee using two complementary approaches that produce the same conclusion: Debtors deterred from filing by the fee are just as vulnerable as those who pay the fee and file. If anything, the deterred compliers have *more* to gain from filing than typical filers. In this sense, the filing fee worsens the targeting efficiency of the bankruptcy code.

First Approach: Subsample RD Estimates The magnitudes of our RD treatment effect estimates (β_1 in equation (2)) capture the extent to which the filing fee deters filings. If the treatment effect is larger for some populations, that suggests that fee waivers are a more significant deterrent for that population. Accordingly, if the treatment effect is larger in subsamples of debtors who the bankruptcy code is designed to help (and smaller in subsamples of debtors who may be more opportunistic), that suggests that the filing fee might be increasing Type I errors (i.e., screening out debtors the bankruptcy code is designed to help).

We implement subsample RDs for a given binary variable X by estimating our main RD specification separately for the subsample in which $X = 1$ and the subsample in which $X = 0$. We control for only state and year-month fixed effects and questionnaire completion time, aligning with the specification in column (1) of Table 2.

Table 3 presents the subsample RD estimates in columns 1-7 (corresponding figures can be found in Appendix Figure A.8). Filing fees are more likely to deter filings among those who are more financially constrained: the RD estimate is 2.4pp larger for those with less than $10,000 of assets and 4.1pp larger for those with over $50,000 of debt. Prospective filers with limited assets and high levels of debt are the most likely to benefit from the "fresh start" that a Chapter 7 discharge offers.

Filing fees appear to be an even lager deterrent for debtors with more to gain from bankruptcy.

Additionally, our subsample RDs reveal interesting heterogeneity in treatment effects across individuals with different types of debt. We estimate larger RD estimates for prospective filers with more than $10,000 of credit card debt (8.3pp vs. 2.9pp), which tends to carry high interest rates and is easily dischargeable in bankruptcy. We also estimate larger effects for those with non-zero medical debt (10.4pp vs. 3.7pp), who may be struggling in the aftermath of a negative health shock, and those with student loan debt (10.4pp vs. 0.9pp). Student loan debt is generally not dischargeable through bankruptcy. The larger effects for this subsample could imply that these debtors struggle to service their overall portfolio of debt. We also find document treatment effects which vary across demographics. RD estimates are larger for debtors who are male (4.1pp difference), non-white (7.1pp), and younger than 40 (6.4pp). We are generally underpowered to test for the statistical significance of these differences between the subsample RDs, but the strong statistical significance for the highlighted subsample RD estimates in isolation makes it clear that the filing fee is particularly binding for debtors who need debt relief from bankruptcy the most.

Second Approach: Characterizing "Compliers" Next, we examine the individuals in our sample who file for bankruptcy. In our causal framework, filers with income above the fee waiver threshold are "always takers" – those who file regardless of whether they have to pay the fee. In contrast, filers with income below the threshold comprise a combination of always takers and "compliers" – those who file only if they receive a fee waiver. To evaluate the targeting efficiency of the filing fee, we compare compliers, who are deterred by the filing fee, to always takers, who file in spite of the fee.

We operationalize this comparison with the following approach. We focus on bankruptcy filers in our sample whose income (as a percentage of the FPL) is within 100 percentage points of the fee waiver threshold, the same bandwidth we use in the RD estimation. For a given characteristic X, we first partial out the income-to-FPL ratio by regressing X on this ratio, calculating the residuals, and adding the residuals to the mean of X. Then, we compare the residualized means for two groups: the 2,249 filers with income above the fee waiver threshold (always takers) and the 2,924 filers with income below the threshold (a mix of always takers and compliers). We present the

results and the t-test for differences in in means in Table 3 columns 8-11.

This comparison can help reveal how compliers may differ from always takers. Specifically, recall that the identifying assumption for our RD design requires that, conditional on income, the characteristics of the samples just above and just below the threshold are as-good-as randomly assigned *unconditional on filing*. In this exercise, we make the more demanding assumption that this quasi-random assignment holds true further away from the threshold. Under this assumption, the only substantive difference between *filers* above versus below the cutoff is their *complier status* — all filers above the cutoff are always takers while filers below are a combination of always takers and compliers. While these estimates should be interpreted with caution, they provide complementary evidence to the first approach and shed light on the characteristics of compliers who would other have been marginally deterred by the filing fee.

Table 3 shows the results in columns 8-11. Relative to always takers, the combined group of always takers and compliers are significantly more likely to have substantial debt over $50,000. Compliers are also more likely to have liquid assets below $200 and to receive government benefits. Moreover, there is no evidence that compliers are less vulnerable on other dimensions (e.g., compliers are equally likely to experience unstable housing or disability). The compliers who are marginally deterred by the filing fee appear to be more desirable targets of government support than always takers. In Appendix Table A.10, we present this analysis with 149 and 50 percentage-point bandwidths and find similar results

Collectively, the results from these complementary analyses strongly suggest that the filing fee deters the filers with the greatest potential benefit from bankruptcy (e.g., over $50,000 in total debt). Moreover, the deterred potential filers are equally vulnerable on other important dimensions. These facts are difficult to rationalize with a model in which the filing decision depends solely on the financial gains from filing. In such a model, individuals would only be sensitive to a $338 filing fee if their potential benefit from bankruptcy is small. Instead, this fact is consistent with a model in which liquidity constraints, misperceptions, stigma, or other frictions prevent many beneficial filings, such that the marginal filer has a great deal to gain from bankruptcy.[23]

We focus on the filing fee because our identification strategy allows us to cleanly identify its

[23]See Antill (2022) for a formalization of this logic in the context of Chapter 11 bankruptcy.

targeting properties. However, many other aspects of the bankruptcy process could prevent filings in a way that harms targeting efficiency. Indeed, the $338 filing fee is just a fraction of the liquidity requirements to file for bankruptcy, which typically average around $2,000 after accounting for attorney fees. Upfront payment of attorney fees is required for Chapter 7 but not for Chapter 13, despite the poor fit and low success rates of Chapter 13 filings among indigent debtors.[24] More broadly, many aspects of the bankruptcy code impose a significant burden on debtors before they are able to access relief; our results suggest that these barriers could prevent vulnerable debtors from accessing debt relief through bankruptcy.

6 Conclusion

Consumer bankruptcy provides an important form of insurance for US households: Chapter 7 bankruptcy filings discharge $115,000 of debt on average (US Courts, 2023). Despite these benefits, only a small share of debtors who would benefit from filing file in any given year. Nevertheless, the generous nature of the bankruptcy option has drawn attention from policymakers concerned about abuse who have instituted a number of barriers to accessing debt relief to deter these cases. Understanding who files for bankruptcy and who is marginally deterred by barriers to filing for bankruptcy is essential for evaluating ongoing efforts at reforming the bankruptcy code.

We study a unique proprietary dataset covering 15,196 debtors who have completed all of their paperwork to file for bankruptcy, only 51% of whom file. We find that prospective filers most often cite falling behind on bills, job loss, and irresponsible spending as reasons for considering bankruptcy. The financial benefit from filing helps explain whether a debtor follows through on filing for bankruptcy; a 10% increase in the financial benefit of filing increases the probability of filing by 0.6 percentage points. Nevertheless, nearly half the sample is leaving tens of thousands of dollars on the table by not filing.

We study the effect of one barrier to accessing debt relief through bankruptcy, the $338 filing fee, on filing. In an RD design comparing prospective filers around the eligibility threshold for a filing fee waiver at 150% of the FPL, we estimate that the filing fee causally reduces filings by 6.4

[24] Upfront liquidity requirements have been shown to reduce insurance take-up in other settings including auto insurance (Kluender, 2024) and crop insurance (Casaburi and Willis, 2018).

percentage points (12%). Those marginally excluded from filing forgo an average of $46,887 of debt relief.

The targeting efficiency of the filing fee depends on whether those marginally deterred from filing for bankruptcy are the intended targets of the policy. We find that the deterrence effects of the filing fee are larger for those who appear to be good candidates for relief, including those with more than $50,000 in debt. In a high stakes setting, our results show how even small financial barriers to accessing government benefits and programs can have outsized consequences for the most vulnerable. Similar barriers appear across various government programs, including naturalization fees, GED testing fees, professional licensing fees, unemployment insurance job-search workshops, Medicaid buy-in premiums, and small business license application fees, highlighting the widespread relevance of our findings for policies where upfront costs may limit access for vulnerable populations.

Our results are relevant for ongoing debates over the bankruptcy code and regulations on technology providing financial assistance. Our effects on the targeting efficiency of the filing fee suggests that the aspects of the recently proposed Consumer Bankruptcy Reform Act of 2020 that aim to simplify the filing process and reduce filing fees are likely to improve access for vulnerable households. Our results are also relevant for the ongoing debate over whether to allow technology to automate legal and financial advice. Given the high cost of legal representation and capacity constraints of non-profits, the software tool we study in this paper expands access to financial services and debt relief for the sample we study — 96.5% of whom say they would be unable to file without access to the tool.

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Table 1. Summary Statistics and Predictors of Filing

	Means			t-test		Filed $\sim X_i$	
	Full sample	Filers	Non-filers	Difference	p	Coefficient[1]	p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Demographics and household characteristics							
Age (years)	41.7	42.7	40.5	2.1	0.000	0.2	0.000
Male (%)	37.4	38.0	36.8	1.2	0.122	0.8	0.332
Female (%)	61.3	60.8	61.8	-0.9	0.255	-1.5	0.066
Black (%)	29.3	29.6	28.9	0.7	0.383	0.3	0.767
Hispanic or Latino (%)	13.0	12.7	13.3	-0.6	0.304	-1.9	0.130
White (%)	59.3	59.0	59.6	-0.6	0.440	-1.7	0.036
Has dependents (%)	42.8	40.9	44.8	-3.8	0.000	-3.7	0.000
Married (%)	19.3	17.8	20.9	-3.1	0.000	-5.1	0.000
Government benefits (%)	32.4	33.6	31.1	2.5	0.001	5.3	0.000
Monthly household income ($)	1,996	2,037	1,952	86	0.001	.	.
Panel B: Household assets							
Total assets ($)	13,593	14,161	12,992	1,170	0.000	2.3	0.000
Liquid financial assets ($)	458	494	419	75	0.000	3.1	0.000
Vehicle assets ($)	6,901	7,218	6,566	652	0.000	0.6	0.000
Panel C: Household debt							
Total debt ($)	80,237	85,053	75,143	9,910	0.000	5.3	0.000
Unsecured debt ($)	71,217	76,507	65,619	10,888	0.000	5.7	0.000
Dischargeable debt ($)	48,097	51,995	43,973	8,022	0.000	9.1	0.000
Alternative debt ($)	450	482	415	67	0.010	0.2	0.081
Auto debt ($)	13,432	12,775	14,126	-1,351	0.000	-0.6	0.000
Credit card debt ($)	17,470	20,392	14,378	6,014	0.000	2.9	0.000
Debt in collections ($)	5,852	6,017	5,677	340	0.040	-0.7	0.000
Medical debt ($)	1,964	2,129	1,789	340	0.014	1.0	0.000
Student debt ($)	23,500	24,728	22,201	2,527	0.000	0.0	0.611
Other debt ($)	15,232	16,168	14,241	1,928	0.000	0.3	0.006
Panel D: Reasons for considering bankruptcy							
Behind on bills (%)	64.0	62.3	65.8	-3.4	0.000	-2.0	0.039
Lost job (%)	37.7	37.7	37.6	0.2	0.837	3.4	0.000
Spent irresponsibly (%)	37.2	36.3	38.1	-1.8	0.021	-1.0	0.252
Medical bills (%)	24.9	23.5	26.3	-2.8	0.000	-2.0	0.052
Sick or disabled (%)	23.3	22.8	23.9	-1.0	0.140	1.0	0.314
Hours or pay cut (%)	20.0	19.9	20.0	-0.1	0.924	1.6	0.145
Wages garnished (%)	13.0	12.8	13.1	-0.3	0.613	0.1	0.933
Divorce (%)	11.6	11.1	12.0	-0.9	0.089	-1.0	0.450
Other reason (%)	48.4	48.0	48.9	-1.0	0.240	0.5	0.537
Observations							
N	15,186	7,805	7,381				

Notes: Columns (1) to (3) present summary statistics for the full Upsolve sample, those who file for bankruptcy, and those who do not file. Columns (4) and (5) report the difference in means between filers and non-filers and the p-value from the difference in means t-test. Columns (6) and (7) report the estimated coefficient from an OLS regression of an indicator for filing on the respective characteristic, controlling for income as a percent of the FPL (n Panel E, we additionally control for the number of reasons for considering bankruptcy that the user reported). 741 users do not report gender, 4,276 do not report age, and 900 do not report race or ethnicity; these users are excluded from the respective statistics and regressions. The variables in Panels C and D are winsorized at the 99$^{\text{th}}$ percentile conditional on being non-zero. Users may select multiple race and ethnicity categories and multiple reasons for considering bankruptcy.

[1]For dollar-based variables, we apply a log transformation before estimating the coefficient. We add one before taking the log to avoid dropping zeroes.

Table 2. Estimated Effect of the Fee Waiver on the Decision to File

	(1)	(2)	(3)	(4)	(5)
Panel A: Reduced form (Filed ∼ Below 150% FPL)					
Below 150% FPL (E_i)	5.1	4.9	5.5	5.7	5.6
	(2.0)	(2.0)	(2.0)	(1.9)	(1.9)
	[0.010]	[0.013]	[0.005]	[0.004]	[0.004]
Panel B: First stage (Waiver ∼ Below 150% FPL)					
Below 150% FPL (E_i)	87.9	87.7	87.7	87.7	87.6
	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Panel C: Second stage (Filed ∼ $\tilde{Waiver}$)					
Waiver ($\hat{W}_i$)	5.9	5.6	6.3	6.4	6.4
	(2.3)	(2.2)	(2.2)	(2.2)	(2.2)
	[0.009]	[0.013]	[0.004]	[0.003]	[0.004]
R^2	0.016	0.030	0.056	0.064	0.069
Observations					
N	9,629	9,629	9,627	9,627	9,627
Controls					
State FE	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes
Demographics		Yes	Yes	Yes	Yes
Debt			Yes	Yes	Yes
Assets				Yes	Yes
Reasons for considering bankruptcy					Yes

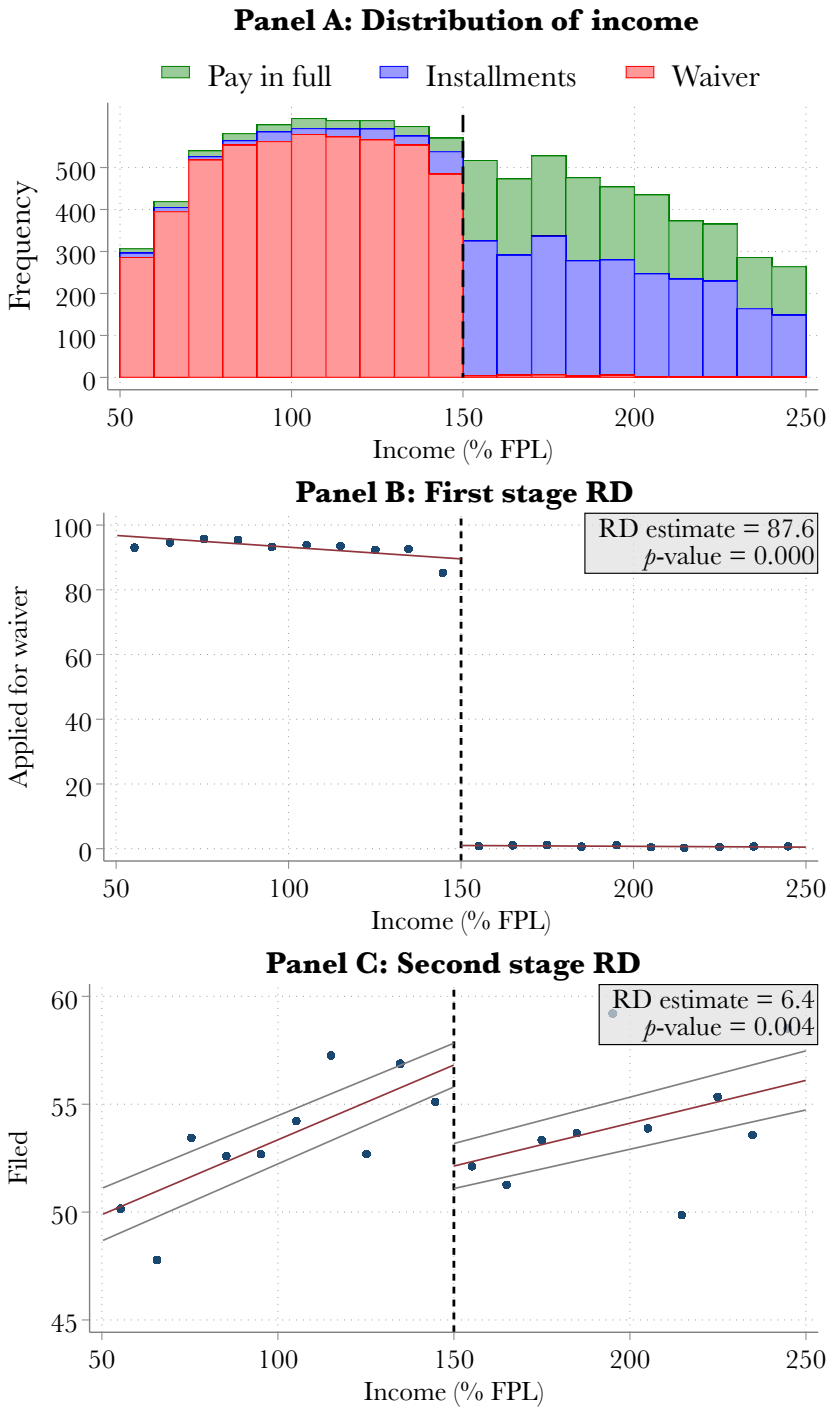
Notes: Table presents linear RD estimates from the Upsolve fuzzy RD model outlined in equations (1) and (2), using a 100-percentage-point bandwidth. All columns include state and year-month fixed effects and control for time to complete the questionnaire, and each column incrementally adds controls for demographics, debt, assets, and reasons for considering bankruptcy (these controls are outlined in Section 4). For each specification we present first-stage (Panel B) and second-stage (Panel C) estimates, as well as reduced-form estimates from the OLS regression of filing on fee waiver eligibility (Panel A). Robust standard errors and p-values are reported in parentheses and square brackets, respectively, below the point estimates. At the bottom of Panel C we present the R^2 from the second-stage model.

Table 3. Comparison of Filers and Subgroup Regressions

	Subgroup RDs							Residualized means of filers (%)			
	X=1			X=0				Eligible	Ineligible		
	β_1	p	N	β_1	p	N	Diff.	(C & AT)	(AT)	Diff.	p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: Demographics and household characteristics											
Age under 40	9.7	0.011	3,319	3.3	0.233	6,310	6.4	31.3	32.2	-1.0	0.554
	(3.8)			(2.7)							
Female	4.0	0.160	5,932	8.2	0.022	3,697	-4.1	60.9	61.2	-0.3	0.851
	(2.9)			(3.6)							
White	2.7	0.365	5,449	9.8	0.003	4,180	-7.1	56.2	56.7	-0.5	0.708
	(3.0)			(3.3)							
Has dependents	5.2	0.114	4,605	5.8	0.060	5,024	-0.6	45.9	46.1	-0.2	0.893
	(3.3)			(3.1)							
Married	5.7	0.229	2,029	6.3	0.012	7,600	-0.6	19.7	19.6	0.2	0.877
	4.7			2.5							
Government benefits	4.0	0.392	2,849	6.4	0.014	6,780	-2.5	32.7	30.1	2.6	0.029
	(4.6)			(2.6)							
Panel B: Household assets and debts											
Assets below $10K	7.2	0.019	5,280	4.8	0.148	4,349	2.4	54.4	53.5	0.9	0.508
	(3.1)			(3.3)							
Liquid assets below $200	5.4	0.082	5,032	7.2	0.028	4,597	-1.8	50.1	47.1	2.9	0.035
	(3.1)			(3.3)							
Owns vehicle	6.2	0.020	6,693	4.2	0.294	2,936	2.0	72.4	71.1	1.3	0.300
	(2.7)			(4.0)							
Debt over $50K	7.4	0.011	5,443	3.4	0.325	4,186	4.1	61.0	58.7	2.2	0.103
	(2.9)			(3.4)							
Credit card debt over $10K	8.3	0.007	4,904	2.8	0.385	4,723	5.5	58.1	58.1	0.0	0.979
	(3.1)			(3.2)							
Has auto debt	5.8	0.038	6,061	6.1	0.094	3,566	-0.3	60.3	60.7	-0.4	0.775
	(2.8)			(3.7)							
Has debt in collections	6.0	0.032	6,372	4.9	0.187	3,255	1.1	63.3	63.1	0.2	0.882
	(2.8)			(3.7)							
Has medical debt	10.4	0.005	3,032	3.7	0.183	6,595	6.7	34.7	34.8	-0.1	0.963
	(3.7)			(2.8)							
Has student debt	10.4	0.001	4,728	0.9	0.782	4,899	9.5	49.8	48.0	1.7	0.218
	(3.1)			(3.1)							
Panel C: Financial benefit from filing											
Fin. benefit over $30K	6.8	0.026	4,814	5.3	0.095	4,815	1.5	55.5	55.4	0.1	0.935
	(3.1)			(3.2)							
Observations											
N								2,924	2,249		

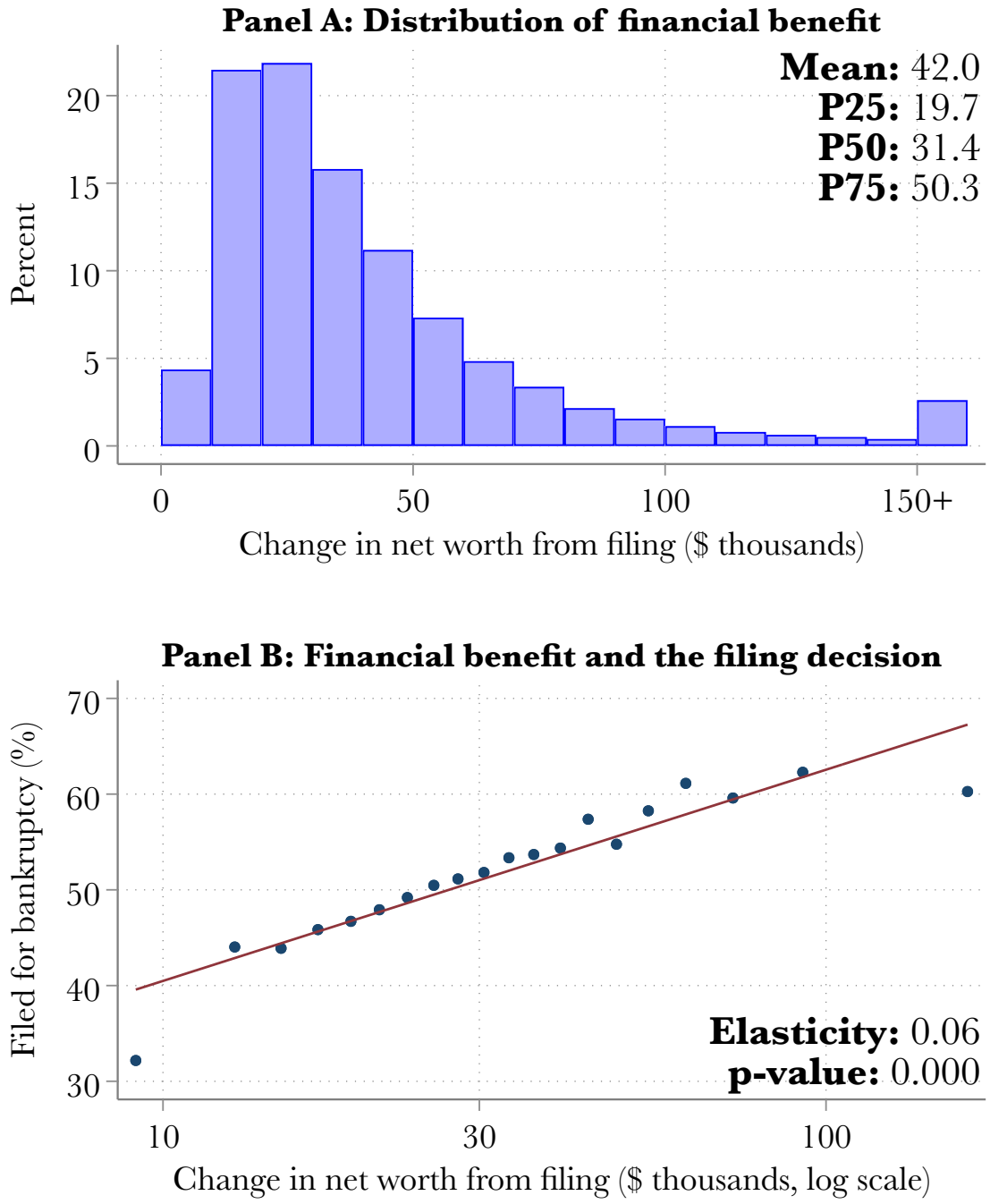
Notes: Columns (1) and (4) show the RD estimates for sub-groups based on binary characteristics defined prior to treatment, estimating with equations (1) and 2, control for state and year fixed effects and questionnaire completion time. Standard errors are reported below in parentheses, p-values are shown in columns (2) and (5), and sample sizes are shown in columns (3) and (6). Column (7) presents the difference in estimates. Columns (8) and (9) present residualized sample means for filers who are waiver-eligible (compliers ("C") and always takers ("AT")) and waiver-ineligible (always takers), respectively. Column (10) presents the difference in residualized means, and Column (11) provides the p-value from a difference in means t-test. We residualize on income as a percent of the FPL and re-add the sample mean, using the full sample of filers and non-filers. We use a linear functional form for income. All columns restrict to users within a 100 percentage-point bandwidth.

Figure 1. Distribution of Applicant Income and Regression Discontinuity Estimation



Notes: Panel A presents the distribution of income as a percent of the FPL within a 100 percentage-point bandwidth, highlighting users who applied for a fee waiver, applied to pay the fee in installments, or opted to pay the fee in full. Panel B shows the first-stage effect of fee-waiver eligibility (income below 150% FPL) on fee waiver application, and Panel C shows the second-stage effect on filing for bankruptcy. Controls for state and year-month fixed effects, questionnaire completion time, demographics, debt, assets, and reasons for considering bankruptcy (outlined in Section 4). The RD estimate and corresponding p-value is included in the top right of panel C. Dots show the mean application and filing rates for 20 quantile income bins. Solid lines are fitted values from first-order polynomials, and gray lines represent 95% confidence intervals.

Figure 2. Upsolve Financial Benefit from Filing and the Filing Decision



Notes: Figure shows the distribution of Upsolve users' financial benefit from filing (Panel A) and the relationship between the financial benefit (on a log scale) and the likelihood of filing (Panel B). The financial benefit from filing is the change in net worth one would experience if they filed for Chapter 7 bankruptcy, calculated using Equation A. The financial benefit is deflated to August 2024 prices and winsorized the at the 99th percentile. In Panel B, the binned scatterplot includes 20 quartile bins, and the red line represents a fitted line from the regression of the filing decision on log financial benefit. The estimated elasticity and p-value from this regression are in the bottom right of the plot.

A Financial Benefit from Filing

Following White (1998), we calculate the percent of US households that would benefit from filing for Chapter 7 bankruptcy using data from the Survey of Consumer Finances (SCF). The financial benefit from filing is defined as the increase in net worth that results from filing. Bankruptcy affects a household's net worth through (1) the relief of dischargeable debts, (2) the sale of nonexempt assets, and (3) the imposition of bankruptcy filing costs (the filing fee, legal costs, and required course fees). We calculate the financial benefit from bankruptcy as follows:

$$Benefit_i = max(Discharged_i - Nonexempt_i - Fee, 0)$$

Asset exemptions are set at the state level; however, 19 out of 50 states and Washington, D.C. allow filers to select between state exemptions and federal exemptions. In these states, filers cannot mix and match state and federal exemptions – they must apply the same set of exemptions across all assets. State exemptions can vary widely, with some states much more or less generous than the federal exemptions. Table A.11 shows the main exemptions that are typically included, along with the current federal limits. In the federal exemptions and in many states, married couples who file jointly may claim two sets of exemptions.

In our calculation, we apply the federal exemptions to all households because the publicly available SCF data does not include information on each respondent's state of residence. We assume that all households would use all available exemptions, including the wildcard and unused homestead exemptions. Assets can be partially exempt – in this case, the bankruptcy trustee would liquidate the asset, return the exempt portion of its value in cash to the filer, and use the remaining proceeds to repay debts. This exercise requires two assumptions about how individuals apply exemptions. First, if an individual has multiple assets in the same category, we assume that the individual would exempt the more higher-equity asset first. Second, when applying the wildcard and unused homestead exemptions, we assume individuals prioritize the following categories of assets in the following order: homestead, motor vehicles, investment properties, non-motor vehicles, actively managed businesses, jewelry, miscellaneous assets of significant value (e.g., electronics, art). Table A.12 presents an example of how we apply exemptions.

Next, we calculate dischargeable and nondischargeable debt. Dischargeable debt includes credit card debt, other consumer debt (e.g., charge cards, buy now pay later, personal loans), and secured debt associated with nonexempt assets. Nondischargeable debt includes student debt and secured debt associated with exempt assets.

Finally, we update the framework from White (1998) by showing what portion of households that would financially benefit from bankruptcy are actually eligible to file. The Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) of 2005 implemented a new means test that imposed Chapter 7 eligibility requirements on bankruptcy filers. Previously, all prospective filers could select between Chapter 7 and Chapter 13. The means test is implemented in two steps. First, if an individual's monthly income is less than their state's median monthly income for their household size, they are automatically eligible. Second, if a person fails this initial test, the user is exempt if their projected disposable income over five years (i.e., monthly income times 60 less allowable living expenses such as housing, utilities, and food) is less than 25% of outstanding nonpriority unsecured debts. Given limited data on allowable expenses, we determine eligibility using only the first step of the means test. Because state data is not available, we compare users' monthly income to the population-weighted average state median income, based on the state medians provided by US Trustee Program (2024) that align with the most months of the SCF data collection period.

The results are shown below in Figure A.1.

B Regression Discontinuity Specification and Robustness

This section investigates potential threats to our primary empirical specification and assesses robustness to alternate specifications. As described in Section 4, we use a regression discontinuity design to estimate the causal effect of the $338 filing fee on the decision to file for bankruptcy. Our running variable is income as a percent of the federal poverty line and the discontinuity is at 150% FPL, the threshold below which individuals are eligible for the fee waiver.

Figure A.9 shows the distribution of our running variable for the full sample, excluding a handful of positive outliers. The color of the stacked bars indicates who applied for a fee waiver, applied to pay the fee in installments, or opted to pay the fee in one lump-sum payment. While there is a strong discontinuity in the probability of waiver application around the threshold, it does not jump from zero to one, motivating our use of a fuzzy RD design. This imperfect compliance is unlikely to be driven by lack of knowledge about the fee waiver, because Upsolve automatically calculates eligibility and encourages eligible users to apply. However, users may wait to file after completing their questionnaire and retroactively update their income if it changes, potentially shifting eligibility for the waiver.

Equations (A.1) and (A.2) outline the first- and second-stage equations of our fuzzy RD model (equivalent to equations (1) and (2) in the main text). FPL_i denotes the running variable, income of a percent of the FPL. E_i denotes eligibility for the fee waiver, determined by $FPL_i - 150 < 0$. W_i is an indicator for fee waiver application, and F_i is an indicator for filing for bankruptcy. γ_s and δ_t are state and year-month fixed effects, respectively. X_i controls for days spent on the questionnaire, demographics, reasons for considering bankruptcy, and the log of each debt and asset category. The demographic controls include a linear term for age (along with an indicator for age missing) and indicators for gender (female, other, or missing; male omitted), race (Black, Hispanic or Latino, other, or missing; white omitted), having dependents, being married, renting housing, having unstable housing, and receiving government income.

$$W_i = \alpha_0 + \alpha_1 E_i + \alpha_2 (FPL_i - 150) + \alpha_3 E_i \times (FPL_i - 150) + \alpha_4 X_i + \gamma_s + \delta_t + \varepsilon_i \tag{A.1}$$

$$F_i = \beta_0 + \beta_1 \hat{W}_i + \beta_2 (FPL_i - 150) + \beta_3 E_i \times (FPL_i - 150) + \beta_4 X_i + \gamma_s + \delta_t + \varepsilon_i \tag{A.2}$$

In our primary specification, we use a 100 percentage-point bandwidth around the threshold. We use a uniform kernel, which applies equal weight to all observations within the bandwidth. We assume the relationship between income (% FPL) and filing has a linear functional form, and we allow the slope of this relationship to vary above and below the threshold. Under these assumptions, we estimate the fee waiver increases the probability of filing by 6.4 percentage points (12%, $p < 0.01$). Section B.1 tests robustness of our main estimate to varying each of these assumptions, and Section B.2 presents a series of tests to support our identification assumption.

B.1 Robustness to Bandwidth, Kernel, and Functional Form

Bandwidth: When setting the RD bandwidth, we face a trade-off between maximizing power and minimizing bias from observations further from the cutoff. Panel A of Figure A.6 illustrates how our RD estimate varies with bandwidths ranging from 10 to 150 percentage points, and Panel C shows how our sample size is affected. Table A.8 and Figure A.7 show regression output and RD plots for a handful of these bandwidths, including the mean squared error (MSE) optimal bandwidth calculated using the algorithm from Calonico et al. (2020). Our sample size drops off

steadily with narrower bandwidths. Our RD estimate holds steady between 5 and 7 percentage points until the bandwidth falls below 25 percentage points, after which the estimate fluctuates given the smaller sample size. As expected, the 95% confidence interval widens with narrower bandwidths, and the RD estimate loses significance at the 5% level once the bandwidth falls below 45 percentage points. The red vertical line in Figure A.6 denotes the MSE-optimal bandwidth of 46.2 percentage points, which restricts the sample to 5,043 users (33% of the full sample). While our RD estimate is robust to this bandwidth, we set the bandwidth at 100 percentage points in our baseline specification to increase precision with a larger sample size of 9,627 users (63%) while avoiding bias from users with substantially different income levels.

Kernel Weights: Another way of managing the bias-variance trade-off is to reweight observations based on their distance from the cutoff. Our baseline specification uses a uniform kernel (also called a rectangular kernel), which applies equal weight to all observations within the bandwidth. We test robustness to using a triangular kernel, which weights observations inversely proportionately from their distance from the cutoff. Compared to a uniform kernel, a triangular kernel reduces bias from observations further from the cutoff but reduces power. We select the uniform kernel in our baseline to preserve power. Panel B of Figure A.6 shows that our RD estimate is broadly robust to applying triangular kernel weights (see also Table A.8 and Figure A.7). As with the uniform kernel, the RD estimate holds steady near 6 percentage points until the bandwidth falls below 25 percentage points. The RD estimate loses significance at the 5% level once the bandwidth narrows to 55 percentage points, a bit earlier than with the uniform kernel. As a result, our RD estimate is insignificant when we apply both the MSE-optimal bandwidth (now 44.4 percentage points) and triangular kernel weights. However, because the magnitude and direction of the estimate are robust in this specification, we view this insignificance as a result of power constraints rather than poor identification.

Functional Form: As a third robustness check, we vary our assumption of the functional form between income (% FPL) and filing. Our baseline specification assumes separate linear relationships above and below the cutoff. In Table **??**, we estimate our RD with both our baseline linear specification (Panel A) and an alternative quadratic specification (Panel B). With a quadratic function form, our RD estimate declines from 6.4 to 5.2 percentage points and loses significance. We note that there does not appear to be a non-linear relationship between income (% FPL) and filing in 1, and the quadratic specification may be prone to overfitting given limited data near the threshold.

B.2 Examining Our Identification Assumption

Our main identification assumption is that within the 100 percentage-point bandwidth, users just above and below the 150% threshold are similar in all observed and unobserved characteristics, ensuring that that a discontinuous jump in filing behavior around the threshold is caused by the fee waiver rather than by other factors. If individuals manipulate their income to affect their fee waiver eligibility, this assumption will be violated. We present three pieces of evidence that suggest our identification assumption holds.

Manipulation Tests: First, we test for manipulation of the running variable at the cutoff using the tests proposed by McCrary (2008) and Cattaneo et al. (2020). These tests estimate density functions above and below the cutoff and examine whether there is a significant jump in density at the cutoff. As shown in Figure A.4, the p-values are 0.333 and 0.743, respectively, indicating

there is no significant discontinuity. These results suggest that individuals do not strategically manipulate their reported income to qualify for the fee waiver.

Covariate Balance: Second, we check for covariate balance by examining discontinuities in covariates at the cutoff. For each covariate, we estimate a linear RD with the covariate as the outcome variable, income (% FPL) as the running variable, and no fixed effects or control variables. Following our baseline model, we use a 100 percentage-point bandwidth and a uniform kernel. The results are shown in Table A.5. Among the 35 covariates, four have significant discontinuities at the 150% cutoff: marital status, receipt of government benefits, the log of liquid financial assets, and the log of credit card debt. Figure A.5 visually presents these discontinuities with RD plots. Given the large number of tests, some false positives are expected. Further, the magnitudes of these discontinuities are relatively small, so we do not believe they pose a threat to identification.

Appendix Tables

Table A.1. Summary Statistics of Upsolve Users vs. All Chapter 7 Filers

	Upsolve				FJC	
	All (1)	Non-Filers (2)	Filers (3)	∩ FJC (4)	Ch. 7 (5)	Ch. 13 (6)
Panel A: Filing characteristics (%)						
Prior filer	.	.	.	3.3	7.8	36.1
Chapter 7	.	.	99.9	99.7	100.0	0.0
Joint filing	.	.	.	0.2	14.5	17.2
Applied for waiver	58.7	59.7	57.8	57.7	.	.
Received fee waiver	.	.	.	49.5	4.1	0.0
Pro se	.	.	98.9	97.4	6.6	7.4
Panel B: Filing outcomes (%)						
Discharged	.	.	71.8	91.0	79.3	0.7
Asset case	.	.	.	4.1	5.6	99.7
Panel C: Monthly income ($)						
Monthly household income	1,996	1,952	2,037	2,024	3,734	5,149
Panel D: Assets ($)						
Total assets	13,593	12,992	14,161	14,138	84,287	168,477
Panel E: Debts ($)						
Total debt	80,237	75,143	85,053	82,439	125,547	178,609
Secured debt	8,459	8,719	8,213	8,171	57,048	128,164
Unsecured priority debt	3,714	3,389	4,022	3,746	2,361	4,445
Unsecured non-priority debt	67,309	61,999	72,328	70,072	67,050	58,698
Panel F: Region (%)						
Northeast	14.1	13.4	14.7	14.8	11.5	10.2
Midwest	24.0	25.8	22.4	22.1	27.9	22.3
South	32.8	34.0	31.7	31.5	35.5	55.9
West	29.1	26.8	31.2	31.7	24.6	9.9
Observations						
N	15,186	7,381	7,805	5,999	759,982	510,917

Notes: Table compares Upsolve filers and non-filers to individuals in the Federal Judicial Center (FJC) Integrated Database who filed for personal bankruptcy (Federal Judicial Center, 2024). We also present statistics for Upsolve filers who were successfully matched into the FJC database. The FJC sample is limited to individuals with consumer debt who filed new Chapter 7 or 13 bankruptcy cases between September 1, 2021 and September 30, 2024. Income, assets, and debts are deflated to August 2024 prices and winsorized at the 99^{th} percentile. For the Upsolve sample, monthly income, assets, and debt are as of the Upsolve interview date. For the FJC sample, data are as of the closing date if the bankruptcy case is closed, and they are as of September 30, 2024 if the bankruptcy case is still pending.

Table A.2. Summary Statistics and Predictors of Filing

	Means			t-test		Filed $\sim X_i$	
	Full sample	Filers	Non-filers	Difference	p	Coefficient[1]	p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Demographics and household characteristics							
Age (years)	41.7	42.7	40.5	2.1	0.000	0.2	0.000
Male (%)	37.4	38.0	36.8	1.2	0.122	0.8	0.332
Female (%)	61.3	60.8	61.8	-0.9	0.255	-1.5	0.066
Black (%)	29.3	29.6	28.9	0.7	0.383	0.3	0.767
Hispanic or Latino (%)	13.0	12.7	13.3	-0.6	0.304	-1.9	0.130
White (%)	59.3	59.0	59.6	-0.6	0.440	-1.7	0.036
Has dependents (%)	42.8	40.9	44.8	-3.8	0.000	-3.7	0.000
Married (%)	19.3	17.8	20.9	-3.1	0.000	-5.1	0.000
Rents housing (%)	53.2	54.5	51.8	2.7	0.001	1.7	0.039
Unstable housing (%)	3.5	2.7	4.5	-1.8	0.000	-11.8	0.000
Government benefits (%)	32.4	33.6	31.1	2.5	0.001	5.3	0.000
Monthly household income ($)	1,996	2,037	1,952	86	0.001	.	.
Panel B: Household assets							
Total assets ($)	13,593	14,161	12,992	1,170	0.000	2.3	0.000
Liquid financial assets ($)	458	494	419	75	0.000	3.1	0.000
Vehicle assets ($)	6,901	7,218	6,566	652	0.000	0.6	0.000
Panel C: Household debt							
Total debt ($)	80,237	85,053	75,143	9,910	0.000	5.3	0.000
Unsecured debt ($)	71,217	76,507	65,619	10,888	0.000	5.7	0.000
Dischargeable debt ($)	48,097	51,995	43,973	8,022	0.000	9.1	0.000
Alternative debt ($)	450	482	415	67	0.010	0.2	0.081
Auto debt ($)	13,432	12,775	14,126	-1,351	0.000	-0.6	0.000
Credit card debt ($)	17,470	20,392	14,378	6,014	0.000	2.9	0.000
Debt in collections ($)	5,852	6,017	5,677	340	0.040	-0.7	0.000
Medical debt ($)	1,964	2,129	1,789	340	0.014	1.0	0.000
Personal loans ($)	3,570	4,002	3,114	888	0.000	0.2	0.035
Priority claims ($)	3,714	4,022	3,389	634	0.028	0.5	0.000
Student debt ($)	23,500	24,728	22,201	2,527	0.000	0.0	0.611
Other debt ($)	7,947	8,144	7,739	405	0.275	0.3	0.006
Panel D: Reasons for considering bankruptcy							
Behind on bills (%)	64.0	62.3	65.8	-3.4	0.000	-2.0	0.039
Lost job (%)	37.7	37.7	37.6	0.2	0.837	3.4	0.000
Spent irresponsibly (%)	37.2	36.3	38.1	-1.8	0.021	-1.0	0.252
Medical bills (%)	24.9	23.5	26.3	-2.8	0.000	-2.0	0.052
Sick or disabled (%)	23.3	22.8	23.9	-1.0	0.140	1.0	0.314
Hours or pay cut (%)	20.0	19.9	20.0	-0.1	0.924	1.6	0.145
Wages garnished (%)	13.0	12.8	13.1	-0.3	0.613	0.1	0.933
Divorce (%)	11.6	11.1	12.0	-0.9	0.089	-1.0	0.450
Other reason (%)	48.4	48.0	48.9	-1.0	0.240	0.5	0.537
Observations							
N	15,186	7,805	7,381				

Notes: Columns (1) to (3) present summary statistics for the full Upsolve sample, those who file for bankruptcy, and those who do not file. Columns (4) and (5) report the difference in means between filers and non-filers and the p-value from the difference in means t-test. Columns (6) and (7) report the estimated coefficient from an OLS regression of an indicator for filing on the respective characteristic, controlling for income as a percent of the FPL (n Panel E, we additionally control for the number of reasons for considering bankruptcy that the user reported). 741 users do not report gender, 4,276 do not report age, and 900 do not report race or ethnicity; these users are excluded from the respective statistics and regressions. The variables in Panels C and D are winsorized at the 99$^{\text{th}}$ percentile conditional on being non-zero. Users may select multiple race and ethnicity categories and multiple reasons for considering bankruptcy.

[1]For dollar-based variables, we apply a log transformation before estimating the coefficient. We add one before taking the log to avoid dropping zeroes.

Table A.3. Composition of Assets and Exemption Status

	Covered by exemption			Distribution of non-zero assets ($)			
	Federal	State	N	Mean	P25	P50	P75
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Vehicles							
Vehicles	✓	✓	9,952	10,530	2,727	6,568	15,244
Total			**9,952**	**10,530**	**2,727**	**6,568**	**15,244**
Panel B: Other personal assets							
Books	✓	✓	2,807	135	41	90	160
Clothes	✓	✓	15,173	283	101	200	336
Collectibles			1,889	330	65	153	348
Electronics	✓	✓	14,431	842	281	589	1,137
Farm animals	✓	✓	51	247	23	112	233
Non-farm animals	✓	✓	6,110	138	10	60	123
Firearms		✓	1,468	393	157	268	467
Furniture	✓	✓	11,523	565	135	321	711
Health aids	✓	✓	2,294	207	21	63	160
Instruments	✓	✓	1,454	257	60	111	250
Mobile homes		✓	122	6,979	511	1,704	8,450
Recreational items			2,997	209	45	104	221
Tools of the trade	✓	✓	1,254	1,475	308	783	1,494
Wedding rings	✓	✓	2,093	391	68	159	501
Other jewelry	✓	✓	6,652	170	42	102	201
Other personal items			456	1,543	213	516	1,253
Total			**15,186**	**2,132**	**701**	**1,444**	**2,686**
Panel C: Liquid financial assets							
Liquid financial assets		✓	15,186	458	38	157	509
Total			**15,186**	**458**	**38**	**157**	**509**
Panel D: Other financial assets							
College savings accounts	✓	✓	44	3,584	61	405	2,366
Domestic support	✓	✓	779	18,744	2,705	9,538	25,000
Government benefits	✓	✓	44	11,372	1,088	3,352	11,552
Government payments			3,317	1,816	1,255	1,278	1,802
Health savings accounts		✓	730	401	22	112	440
Illiquid investments			653	947	21	136	615
Insurance	✓	✓	2	158,118	52,591	158,118	263,646
Intangible assets		✓	220	1,005	5	100	379
IRAs	✓	✓	641	4,570	57	347	2,743
Retirement plans	✓	✓	3,260	8,656	648	2,407	8,482
Rental security deposit		✓	4,938	1,167	518	938	1,560
Other deposits			814	267	115	206	316
Other claims			412	5,087	327	1,072	3,428
Other financial assets			7,010	53	1	1	13
Total			**11,829**	**5,039**	**276**	**1,294**	**3,452**
Observations							
N			15,186				

Notes: Table shows the number of Upsolve users with each category (in bold) and sub-category (not in bold) of assets, along with the distribution of asset values among asset holders. The "Covered by Exemptions" columns indicate whether (1) the asset sub-category is covered by the federal exemptions and (2) the asset sub-category is covered by an exemption in at least one state. Asset categories (e.g., other personal assets) and sub-categories (e.g., clothes) are winsorized at the 99^{th} percentile conditional on being positive.

Table A.4. Composition of Debt and Dischargeability

	Discharged	N	Distribution of non-zero debt ($)			
			Mean	P25	P50	P75
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Auto debt						
Secured auto debt	If collateral is surrendered	6,028	19,488	9,853	16,857	25,423
Unsecured auto debt	✓	4,892	17,668	7,911	13,507	22,911
Total		**9,228**	**21,212**	**9,697**	**17,160**	**27,838**
Panel B: Credit card debt						
Secured credit cards	If collateral is surrendered	447	2,406	292	588	1,656
Unsecured credit cards	✓	14,253	18,531	3,689	12,253	25,616
Total		**14,287**	**17,828**	**3,575**	**11,769**	**24,663**
Panel C: Debt in collections						
Debt in collections	✓	9,947	8,935	1,752	4,981	11,511
Total		**9,943**	**8,517**	**1,684**	**4,762**	**11,029**
Panel D: Medical debt						
Medical debt	✓	4,587	6,507	636	1,912	5,660
Total		**4,583**	**6,201**	**604**	**1,842**	**5,416**
Panel E: Predatory debt						
Buy now pay later	If collateral is surrendered	1,415	1,143	273	682	1,456
Lease-to-own debt	✓	817	2,957	1,111	2,130	3,624
Payday loans	✓	1,325	2,158	323	865	2,538
Total		**2,982**	**2,196**	**422**	**1,211**	**2,813**
Panel F: Personal loans						
Personal loans	✓	5,625	9,643	2,277	6,161	12,583
Total		**5,621**	**9,249**	**2,164**	**5,911**	**12,057**
Panel G: Priority claims						
Domestic support		629	15,523	843	4,788	17,025
Fines and restitution		1,493	13,873	624	1,918	6,875
Priority judgment debt		231	35,730	2,406	7,238	14,794
Past-due taxes	Older income taxes only	2,219	11,496	1,164	3,424	10,029
Other unsecured priority debt		114	9,924	1,483	5,561	13,708
Total		**3,823**	**14,165**	**1,100**	**3,847**	**12,061**
Panel I: Student debt						
Student debt		7,578	47,105	11,569	29,822	62,656
Total		**7,574**	**45,038**	**11,193**	**28,883**	**60,373**
Panel J: Other debt						
Overdrafted bank accounts	✓	726	2,041	358	799	1,836
Debt owed to peers	✓	850	12,723	2,084	5,124	10,410
Government debt	✓	356	30,830	3,689	10,695	26,114
Insurance debt	✓	241	1,667	208	423	963
Non-priority judgment debt	✓	2,483	16,241	3,883	8,294	17,058
Secured mortgages	If collateral is surrendered	113	115,188	13,382	65,778	185,529
Unsecured mortgages	✓	137	74,265	5,950	17,871	63,940
Past-due rent	✓	797	7,581	1,787	4,618	9,233
Retirement plan loans		27	4,996	1,902	3,464	6,964
Utilities debt	✓	4,447	1,979	418	1,010	2,353
Other secured debt	If collateral is surrendered	178	13,323	997	4,456	12,824
Other unsecured non-priority debt	✓	3,992	6,395	655	2,320	7,620
Total		**8,921**	**13,027**	**1,297**	**4,784**	**13,110**
Observations						
N		15,186				

Notes: Table shows the number of Upsolve users with each category (in bold) and sub-category (not in bold) of debt, along with the distribution of balances among debt holders. The "Discharged" column indicates our assumption for whether each sub-category of debt is discharged in bankruptcy. Debt categories (e.g., auto debt) and sub-categories (e.g., secured auto debt) are winsorized at the 99^{th} percentile conditional on being non-zero.

Table A.5. Test for Covariate Balance

	Means			Linear RD	
	Full sample	50-150% FPL	150-250% FPL	Estimate	p-value
	(1)	(2)	(3)	(4)	(5)
Panel A: Demographics and household characteristics					
Has dependents (%)	47.8	52.3	42.0	2.4	0.273
Age (years)	30.9	31.0	30.6	0.3	0.768
Age missing (%)	27.9	27.8	28.1	0.4	0.834
Female (%)	61.6	63.9	58.5	1.2	0.579
Other gender (%)	1.1	1.1	1.1	-0.3	0.444
Missing gender (%)	4.4	4.4	4.4	0.0	0.965
Married (%)	21.1	22.2	19.6	3.8	0.038
Black (%)	27.6	28.1	27.0	2.8	0.170
Hispanic or Latino (%)	12.1	11.8	12.5	-1.2	0.422
Other race or ethnicity (%)	5.7	5.7	5.7	-0.9	0.415
Missing race or ethnicity (%)	5.4	5.5	5.2	-1.3	0.215
Rents housing (%)	57.9	53.6	63.6	0.0	1.000
Unstable housing (%)	2.4	2.9	1.7	-0.7	0.310
Government benefits (%)	29.6	42.8	12.3	4.4	0.016
Panel B: Log assets					
Vehicle assets	6.0	5.6	6.6	0.2	0.229
Liquid financial assets	5.0	4.8	5.3	-0.2	0.015
Other personal assets	7.2	7.1	7.3	-0.0	0.541
Other financial assets	5.3	4.9	5.9	-0.1	0.526
Panel C: Log debt					
Alternative debt	1.5	1.4	1.6	-0.0	0.971
Auto debt	6.1	5.8	6.4	0.3	0.171
Debt in collections	5.5	5.6	5.4	0.0	0.897
Credit card debt	8.5	8.3	8.8	-0.3	0.020
Medical debt	2.4	2.2	2.6	0.1	0.574
Personal loans	3.3	3.0	3.6	0.1	0.661
Priority claims	2.0	1.7	2.2	-0.1	0.565
Student debt	5.0	4.8	5.3	-0.2	0.395
Other debt	4.9	4.9	4.9	0.1	0.528
Panel D: Reasons for considering bankruptcy					
Behind on bills (%)	64.5	64.0	65.1	-2.5	0.248
Lost job (%)	29.0	31.0	26.2	-0.3	0.874
Spent irresponsibly (%)	37.9	34.6	42.2	-1.7	0.428
Sick or disabled (%)	21.7	23.9	18.8	-0.4	0.837
Wages garnished (%)	15.4	16.1	14.4	0.7	0.685
Hours or pay cut (%)	21.5	21.8	21.0	-1.7	0.350
Divorce (%)	11.5	11.3	11.7	1.2	0.409
Medical bills (%)	25.4	24.0	27.2	-0.1	0.940
Panel E: Time to complete questionnaire					
Days to finish questionnaire	39.5	39.2	39.9	-4.5	0.354
Observations					
N	9,629	5,173	4,456		

Notes: Table presents summary statistics for the full Upsolve sample and users within the left and right 100-percentage point bandwidths. The four rightmost columns report coefficients on an indicator for fee-waiver eligibility (income below 150% FPL) and p-values from our baseline RD specification, using a 100-percentage point bandwidth and excluding the fixed effects and controls.

Table A.6. Top Combinations of Reasons for Considering Bankruptcy

	Behind on bills (1)	Lost job (2)	Spent irresponsibly (3)	Medical bills (4)	Sick or disabled (5)	Hours or pay cut (6)	Wages garnished (7)	Separation or divorce (8)	Other reason (9)	N (10)	(%) (11)	Filers (12)	(%) (13)	Filed (%) (14)
1.	✓		✓							982	6.5	496	6.4	50.5
2.	✓									957	6.3	528	6.8	55.2
3.	✓	✓								852	5.6	440	5.6	51.6
4.									✓	836	5.5	446	5.7	53.3
5.		✓								687	4.5	377	4.8	54.9
6.			✓							583	3.8	321	4.1	55.1
7.	✓	✓	✓							492	3.2	238	3.0	48.4
8.	✓					✓				379	2.5	197	2.5	52.0
9.	✓		✓	✓						373	2.5	182	2.3	48.8
10.	✓			✓						323	2.1	154	2.0	47.7
11.					✓					313	2.1	170	2.2	54.3
12.	✓	✓			✓					300	2.0	156	2.0	52.0
13.							✓			273	1.8	156	2.0	57.1
14.	✓				✓					272	1.8	137	1.8	50.4
15.	✓		✓			✓				248	1.6	121	1.6	48.8
16.	✓						✓			238	1.6	116	1.5	48.7
17.		✓	✓							224	1.5	132	1.7	58.9
18.	✓	✓				✓				212	1.4	110	1.4	51.9
19.	✓	✓		✓						206	1.4	107	1.4	51.9
20.						✓				205	1.3	114	1.5	55.6

Notes: Table lists the top 20 most common combinations of reasons for considering bankruptcy among Upsolve users. For users that list at least one reason from columns (1) to (8), we group users that do or do not select "other" as a reason. Columns (10) and (11) show the number of users with each combination of reasons and the share of total observations. Columns (12) and (13) show the number of users who filed with each combination of reasons and the share of total users who filed. Column (14) reports the share of users with a given combination of reasons who filed for bankruptcy.

Table A.7. Composition of Debt by Reason for Considering Bankruptcy

	Full sample (1)	Behind on bills (2)	Lost job (3)	Spent irresponsibly (4)	Medical debt (5)	Sick or disabled (6)	Hours or pay cut (7)	Wages garnished (8)	Divorce (9)	Other (10)
Total debt ($)										
Total debt	80,237	81,640	84,736	77,193	85,527	82,199	80,819	79,752	91,849	81,749
Dischargeable debt	48,097	47,686	51,544	46,222	49,527	49,575	47,921	45,390	55,172	48,662
Non-dischargeable debt	31,034	33,004	32,082	30,207	34,628	31,491	32,279	33,462	35,075	31,777
Composition of debt (%)										
Alternative debt	0.6	0.7	0.5	0.7	0.6	0.5	0.7	0.5	0.4	0.6
Auto debt	17.2	18.8	15.9	17.4	17.0	15.2	18.1	20.0	17.4	21.0
Credit card debt	22.4	19.7	24.0	23.5	15.5	22.5	22.1	11.3	9.8	25.0
Debt in collections	7.5	7.9	7.8	6.9	8.8	8.0	7.1	9.4	8.2	8.0
Medical debt	2.5	2.4	2.3	2.0	7.4	4.3	1.9	3.6	3.1	2.0
Personal loans	4.6	4.5	4.1	5.5	3.7	3.7	4.9	2.7	2.4	5.2
Priority claims	4.8	4.7	5.5	3.7	4.7	5.5	3.9	8.3	7.2	5.3
Student debt	30.2	31.8	29.4	31.9	32.7	29.7	31.7	30.3	26.4	32.9
Other debt	10.2	9.5	10.5	8.5	9.5	10.5	9.6	14.0	12.2	12.4
Observations										
N	15,186	9,721	5,720	5,646	3,779	3,544	3,034	1,968	1,758	7,357

Notes: Table presents total debt, dischargeable and nondischargeable debt, and the composition of debt by category for the full sample (column 1) and for users who select each reason for considering bankruptcy (columns 2-10). Debt categories are winsorized at the 99^{th} percentile conditional on being non-zero. Users may select multiple reasons for considering bankruptcy.

Table A.8. Robustness of RD Estimation to Kernel Weights and Selected Bandwidths

	Bandwidth selection				
	149pp	100pp	75pp	50pp	MSE Optimal
	(1)	(2)	(3)	(4)	(5)
Panel A: Uniform kernel					
Coefficient on Below 150% FPL (E_i)	88.3	87.6	86.5	85.0	84.9
(Outcome = Waiver)	(0.7)	(0.8)	(1.0)	(1.3)	(1.3)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Coefficient on Waiver ($\hat{W}_i$)	5.5	6.4	5.3	7.2	6.4
(Outcome = Filed)	(1.9)	(2.2)	(2.5)	(3.1)	(3.3)
	[0.003]	[0.004]	[0.037]	[0.021]	[0.048]
R^2	0.069	0.069	0.070	0.077	0.079
N	11,788	9,627	7,904	5,458	5,043
Panel B: Triangular kernel					
Coefficient on Below 150% FPL (E_i)	87.4	86.2	85.2	83.1	82.5
(Outcome = Waiver)	(0.8)	(1.0)	(1.2)	(1.5)	(1.6)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Coefficient on Waiver ($\hat{W}_i$)	5.9	5.9	5.9	5.6	5.3
(Outcome = Filed)	(2.0)	(2.4)	(2.8)	(3.5)	(3.6)
	[0.004]	[0.014]	[0.034]	[0.106]	[0.148]
R^2	0.068	0.070	0.074	0.081	0.083
N	11,788	9,627	7,904	5,453	5,043

Notes: Table presents RD estimates from the Upsolve fuzzy RD model outlined in equations (1) and (2), using different bandwidths around the 150% FPL threshold and different kernel weights. The bandwidth is indicated in the column header. Panel A uses uniform weights and Panel B uses triangular weights. Both panels include state and year-month fixed effects and control for questionnaire completion time, demographics, debt, assets, and reasons for considering bankruptcy (outlined in Section 4). The coefficients on "Below 150% FPL" are first-stage estimates, and the coefficients on "Waived" are second-stage estimates. Robust standard errors and p-values are reported in parentheses and square brackets, respectively, below the point estimates. The R^2 for the second-stage model and sample size are shown at the bottom of each column.

Table A.9. Comparison of Filers and Subgroup Regressions

	Subgroup RDs							Residualized means of filers (%)			
	X=1			X=0				Eligible	Ineligible		
	β_1 (1)	p (2)	N (3)	β_1 (4)	p (5)	N (6)	Difference (7)	(C & AT) (8)	(AT) (9)	Difference (10)	p (11)
Panel A: Demographics and household characteristics											
Age under 40	9.7	0.011	3,319	3.3	0.233	6,310	6.4	31.3	32.2	-1.0	0.554
	(3.8)			(2.7)							
Female	4.0	0.160	5,932	8.2	0.022	3,697	-4.1	60.9	61.2	-0.3	0.851
	(2.9)			(3.6)							
White	2.7	0.365	5,449	9.8	0.003	4,180	-7.1	56.2	56.7	-0.5	0.708
	(3.0)			(3.3)							
Has dependents	5.2	0.114	4,605	5.8	0.060	5,024	-0.6	45.9	46.1	-0.2	0.893
	(3.3)			(3.1)							
Married	.	.	.	.	.	.	.	19.7	19.6	0.2	0.877
	.			.							
Rents housing	4.5	0.128	5,576	6.7	0.049	4,053	-2.3	58.5	59.7	-1.2	0.394
	(2.9)			(3.4)							
Unstable housing	.	.	.	.	.	.	.	1.8	1.9	-0.2	0.651
	.			.							
Government benefits	4.0	0.392	2,849	6.4	0.014	6,780	-2.5	32.7	30.1	2.6	0.029
	(4.6)			(2.6)							
Panel B: Household assets and debts											
Assets below $10K	7.2	0.019	5,280	4.8	0.148	4,349	2.4	54.4	53.5	0.9	0.508
	(3.1)			(3.3)							
Liquid assets below $200	5.4	0.082	5,032	7.2	0.028	4,597	-1.8	50.1	47.1	2.9	0.035
	(3.1)			(3.3)							
Owns vehicle	6.2	0.020	6,693	4.2	0.294	2,936	2.0	72.4	71.1	1.3	0.300
	(2.7)			(4.0)							
Debt over $50K	7.4	0.011	5,443	3.4	0.325	4,186	4.1	61.0	58.7	2.2	0.103
	(2.9)			(3.4)							
Credit card debt over $10K	8.3	0.007	4,904	2.8	0.385	4,723	5.5	58.1	58.1	0.0	0.979
	(3.1)			(3.2)							
Has alternative debt	.	.	.	.	.	.	.	20.1	21.3	-1.3	0.261
	.			.							
Has auto debt	5.8	0.038	6,061	6.1	0.094	3,566	-0.3	60.3	60.7	-0.4	0.775
	(2.8)			(3.7)							
Has debt in collections	6.0	0.032	6,372	4.9	0.187	3,255	1.1	63.3	63.1	0.2	0.882
	(2.8)			(3.7)							
Has medical debt	10.4	0.005	3,032	3.7	0.183	6,595	6.7	34.7	34.8	-0.1	0.963
	(3.7)			(2.8)							
Has personal loans	4.5	0.196	3,720	6.8	0.021	5,907	-2.3	38.9	39.4	-0.5	0.717
	(3.5)			(2.9)							
Has priority claims	.	.	.	.	.	.	.	24.9	26.1	-1.3	0.304
	.			.							
Has student debt	10.4	0.001	4,728	0.9	0.782	4,899	9.5	49.8	48.0	1.7	0.218
	(3.1)			(3.1)							
Panel C: Reasons for considering bankruptcy											
Behind on bills	8.0	0.004	6,210	0.8	0.820	3,419	7.2	63.2	63.0	0.1	0.932
	(2.8)			(3.7)							
Lost job	3.6	0.388	2,788	6.4	0.016	6,841	-2.8	30.0	29.7	0.3	0.816
	(4.2)			(2.7)							
Spent irresponsibly	6.7	0.064	3,651	5.5	0.052	5,978	1.2	36.7	36.0	0.7	0.601
	(3.6)			(2.9)							
Medical bills	9.8	0.024	2,441	4.7	0.074	7,188	5.1	23.8	24.4	-0.6	0.591
	(4.3)			(2.6)							
Sick or disabled	.	.	.	.	.	.	.	21.9	21.2	0.7	0.554
	.			.							
Hours or pay cut	.	.	.	.	.	.	.	21.9	21.0	0.9	0.455
	.			.							
Wages garnished	.	.	.	.	.	.	.	15.8	15.0	0.8	0.445
	.			.							
Divorce	.	.	.	.	.	.	.	11.3	11.2	0.1	0.901
	.			.							
Other reason	5.0	0.132	4,616	6.5	0.036	5,013	-1.4	47.5	47.2	0.2	0.885
	(3.3)			(3.1)							
Observations											
N								2,924	2,249		

Notes: Columns (1) and (4) show the RD estimates for sub-groups based on binary characteristics defined prior to treatment, estimating with equations (1) and 2, controlling for state and year fixed effects and questionnaire completion time. Standard errors are reported below in parentheses, p-values are shown in columns (2) and (5), and sample sizes are shown in columns (3) and (6). Column (7) presents the difference in estimates. Columns (8) and (9) present residualized sample means for filers who are waiver-eligible (compliers ("C") and always takers ("AT")) and waiver-ineligible (always takers), respectively. Column (10) presents the difference in residualized means, and Column (11) provides the p-value from a difference in means t-test. We residualize on income as a percent of the FPL and re-add the sample mean, using the full sample of filers and non-filers. We use a linear functional form for income. All columns restrict to users within a 100 percentage-point bandwidth.

Table A.10. Comparison of Filers Using Difference Bandwidths

	Means of filers (resid on inc % FPL)											
	BW = 100pp				BW = 75pp				BW = 50pp			
	C & AT (1)	AT (2)	Difference (3)	p (4)	C & AT (5)	AT (6)	Difference (7)	p (8)	C & AT (9)	AT (10)	Difference (11)	p (12)
Panel A: Demographics and household characteristics (%)												
Age under 40	29.7	35.1	-5.3	0.001	29.5	35.2	-5.7	0.001	31.5	33.7	-2.2	0.310
Female	62.2	57.2	5.0	0.000	62.0	57.5	4.5	0.003	61.3	58.3	2.9	0.104
White	55.8	56.1	-0.3	0.843	55.7	56.0	-0.2	0.875	54.7	56.8	-2.2	0.250
Has dependents	48.3	40.3	8.0	0.000	47.4	42.0	5.3	0.001	49.7	43.1	6.7	0.000
Married	20.2	17.2	3.0	0.007	20.1	17.0	3.0	0.013	20.5	17.0	3.5	0.018
Rents housing	55.6	55.3	0.3	0.798	55.9	55.9	-0.0	0.994	55.4	56.3	-0.8	0.639
Unstable housing	2.2	3.1	-0.9	0.019	2.4	3.1	-0.6	0.132	2.5	3.0	-0.6	0.223
Government benefits	42.6	26.4	16.1	0.000	41.1	26.1	15.0	0.000	36.6	26.4	10.3	0.000
Panel B: Household assets and debts (%)												
Assets below $10K	59.0	54.7	4.3	0.002	58.9	54.6	4.4	0.004	57.9	55.2	2.8	0.132
Liquid assets below $200	54.2	47.8	6.4	0.000	54.2	47.2	7.0	0.000	52.8	47.5	5.3	0.004
Owns vehicle	69.7	68.2	1.5	0.236	70.1	68.3	1.7	0.209	70.5	68.1	2.4	0.145
Debt over $50K	58.4	60.0	-1.6	0.247	58.2	59.1	-1.0	0.527	58.6	58.3	0.3	0.863
Credit card debt over $10K	56.1	60.0	-3.8	0.006	56.0	59.0	-3.0	0.051	56.6	58.4	-1.8	0.315
Has alternative debt	19.0	20.6	-1.7	0.141	18.7	20.5	-1.9	0.138	18.4	20.2	-1.8	0.223
Has auto debt	58.4	59.6	-1.2	0.385	58.5	58.7	-0.2	0.899	59.3	58.6	0.7	0.685
Has debt in collections	64.3	62.1	2.3	0.092	64.9	62.4	2.5	0.094	63.8	63.3	0.5	0.799
Has medical debt	32.3	35.9	-3.7	0.006	33.4	35.5	-2.1	0.153	34.7	35.6	-0.9	0.601
Has personal loans	36.9	38.1	-1.2	0.378	37.2	38.6	-1.4	0.350	37.8	38.0	-0.2	0.899
Has priority claims	23.8	27.4	-3.6	0.003	23.6	27.0	-3.4	0.010	24.1	27.0	-2.9	0.068
Has student debt	48.4	49.5	-1.1	0.419	47.8	47.7	0.1	0.966	48.9	47.7	1.2	0.511
Panel C: Reasons for considering bankruptcy (%)												
Behind on bills	63.1	62.5	0.6	0.680	62.6	62.0	0.6	0.674	62.6	62.2	0.4	0.837
Lost job	31.7	38.7	-7.0	0.000	31.6	37.7	-6.0	0.000	33.3	36.5	-3.2	0.054
Spent irresponsibly	34.4	37.0	-2.6	0.052	34.4	36.9	-2.5	0.087	34.9	37.3	-2.3	0.187
Medical bills	22.7	25.2	-2.5	0.039	23.3	25.3	-2.0	0.138	23.6	24.6	-1.0	0.511
Sick or disabled	23.9	22.3	1.6	0.155	23.7	22.2	1.5	0.232	23.0	21.8	1.2	0.407
Hours or pay cut	22.6	18.7	3.9	0.001	21.8	19.0	2.9	0.022	21.6	19.1	2.5	0.103
Wages garnished	16.2	12.4	3.8	0.000	16.3	13.2	3.1	0.006	16.5	13.8	2.7	0.045
Divorce	11.3	10.8	0.4	0.620	11.2	11.1	0.1	0.883	11.7	10.8	0.8	0.477
Other reason	47.6	47.3	0.3	0.835	47.5	47.7	-0.2	0.909	46.0	47.4	-1.4	0.443
Observations												
N	2,924	2,249			2,432	1,842			1,663	1,320		

Notes: Table presents the residualized sample means for filers who are waiver-eligible (compliers ("C") and always takers ("AT")) and waiver-ineligible (always takers). We residualize on income as a percent of the FPL and re-add the sample mean, using the full sample of filers and non-filers. We use a quadratic functional form for income. Columns (1)-(2) use a 100 percentage-point bandwidth, Columns (5)-(6) use a 75 percentage-point bandwidth, and Columns (9)-(10) use a 50 percentage-point bandwidth. Columns (3), (7), and (11) present the difference in residualized means; and Columns (4), (8), and (14) provide p-values from the difference in means t-tests.

Table A.11. Bankruptcy Exemptions

Exemption	**Coverage**	**Federal Limit (effective as of) April 1, 2022**
Homestead	Equity in one's primary residence	$27,900
Vehicle	One motor vehicle	$4,450
Personal Assets	Personal items (e.g. furniture, appliances, clothing)	$14,875
Jewelry	Jewelry	$1,875
Tools of the Trade	Tools used for work (e.g., books, instruments, tools)	$2,800
Life Insurance	Life insurance policy with cash value	$14,875
Wildcard	Any assets not covered by other exemptions	$1,475
Unused Homestead	Any assets not covered by other exemptions (only available if homestead exemption was not fully used)	Up to $13,950

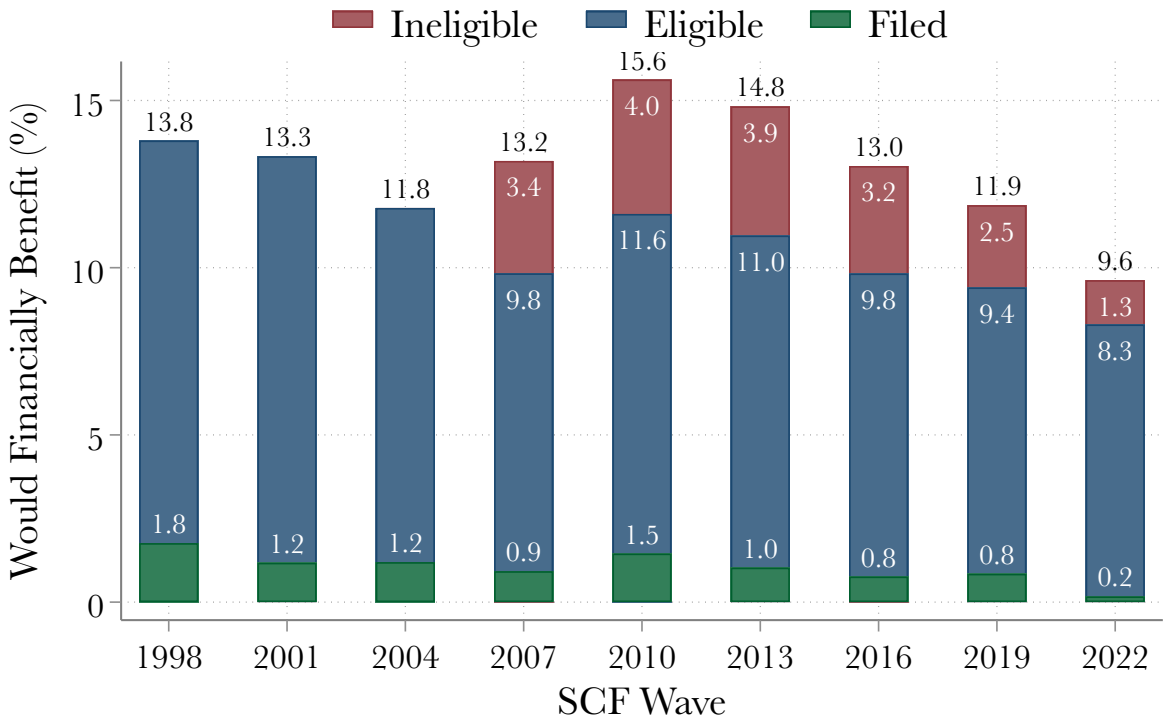
Notes: Table presents the asset exemptions provided by the federal bankruptcy code and the current dollar limits, effective as of April 1, 2022.

Table A.12. Financial Benefit Calculation Example

	Category (1)	**Equity in Assets** (2)	**Remaining Exemptions** (3)	**Explanation** (4)
1.	Homestead	Home: $10,000	Homestead: $17,900 Wildcard: $1,475 Unused Homestead: $13,950	Homestead is exempt and mortgage debt is not discharged.
2.	Motor Vehicles	Vehicle #1: $3,500 Vehicle #2: $1,200	Vehicle: $950 Wildcard: $275 Unused Homestead: $13,950	Vehicle exemption protects vehicle #1, and wildcard covers vehicle #2. Associated auto loans are not discharged.
3.	Investment Properties	None	Wildcard: $950 Unused Homestead: $13,950	
4.	Other Vehicles	Motorcycle: $2,500	Wildcard: $0 Unused Homestead: $12,400	Remaining wildcard and unused homestead exemptions protect motorcycle. Associated secured debt is not discharged.
5.	Businesses	None	Wildcard: $0 Unused Homestead: $12,400	
6.	Jewelry	Wedding Ring: $1,250 Watch: $800	Jewelry: $0 Wildcard: $0 Unused Homestead: $12,225	Ring covered by jewelry exemption, watch covered by remaining jewelry exemption and unused homestead exemption.
7.	Misc. Assets	Painting: $2,000	Wildcard: $0 Unused Homestead: $10,225	Unused homestead exemption covered painting.
8.	Life Insurance	Cash Value: $16,000	Life Insurance: $0 Wildcard: $0 Unused Homestead: $9,100	Life insurance covered by life insurance and unused homestead exemptions.
9.	Financial Assets	Checking Accounts: $8,000 Stocks $5,000	Wildcard: $0 Unused Homestead: $0	Unused homestead exemption covered all of checking accounts and $1,100 of stocks. Remaining $3,900 of stocks are non-exempt.

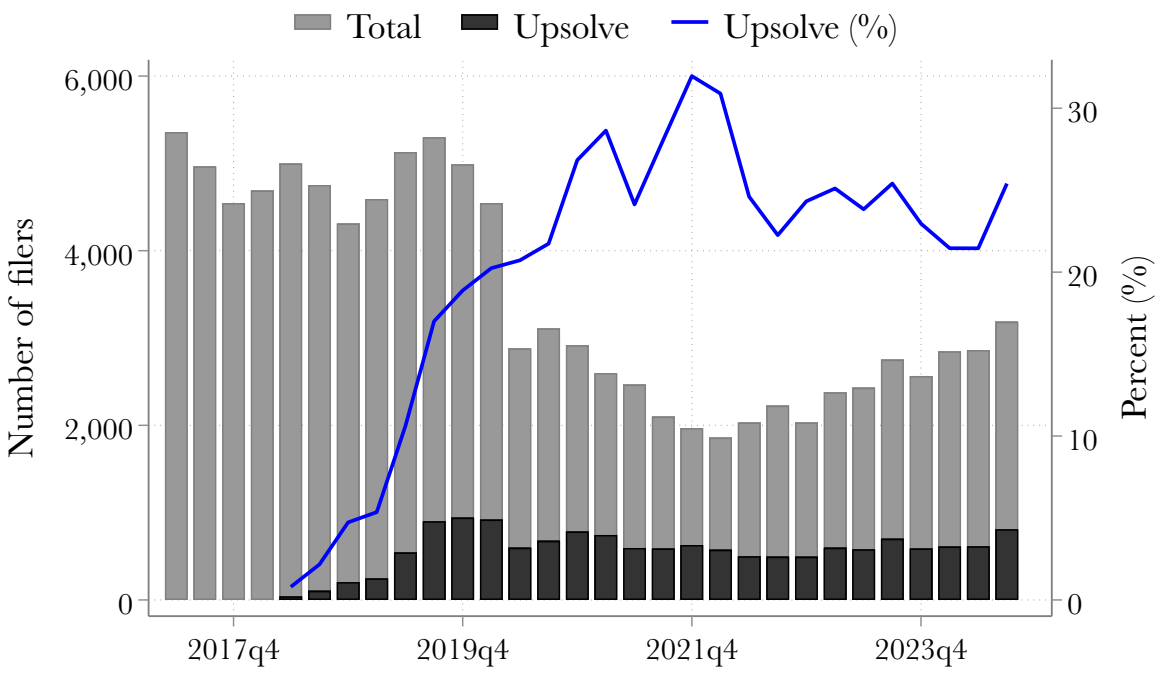
Notes: This table demonstrates a hypothetical example of how we apply bankruptcy exemptions in the SCF financial benefit calculation, as outlined in Appendix Section A. We use the 2022 federal exemptions outlined in Appendix Table A.11. The rows indicate the order in which we apply exemptions. Column (1) indicates the asset category, and column (2) lists the hypothetical individual's assets in each category and their equity in each asset. Columns (3) indicates the remaining applicable exemptions after each step, and column (4) provides an explanation. With each asset category, we first exempt the highest-value asset that fits within the combined value of the applicable exemption and the remaining wildcard and unused homestead exemptions. We repeat this process with remaining assets in the category, then move to the next category.

Figure A.1. SCF Financial Benefit Calculation



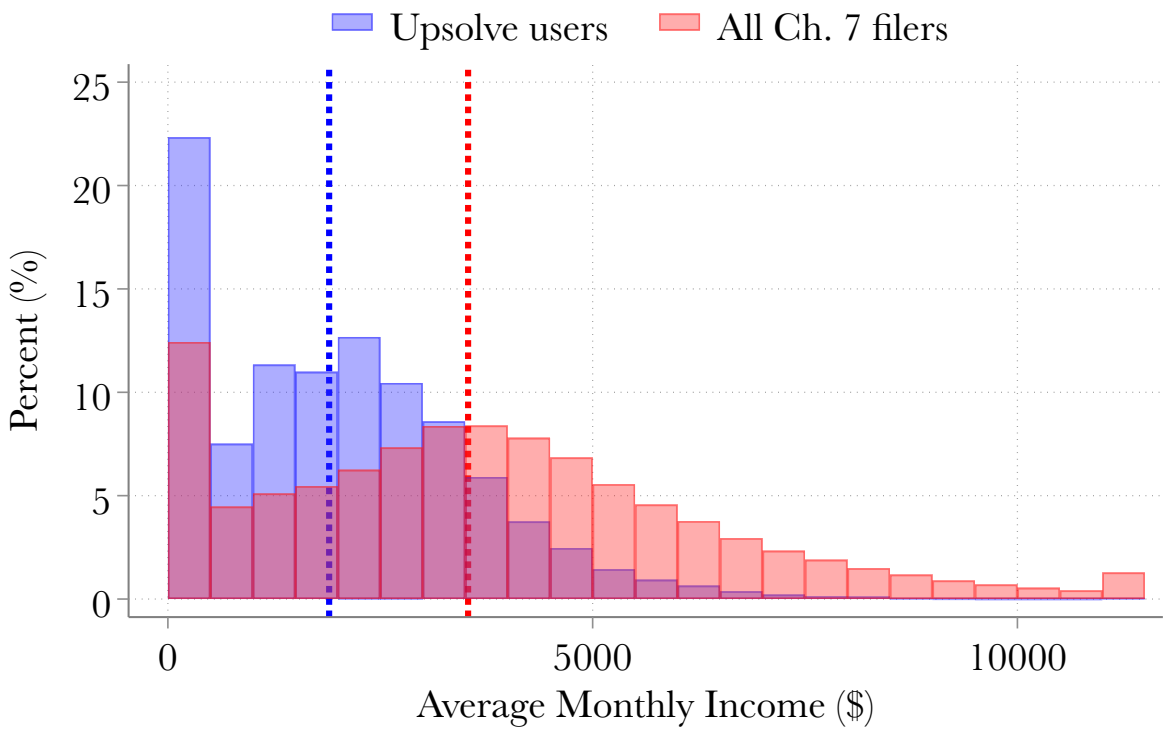
Notes: Figure shows the percentage of individuals who would benefit from filing for Chapter 7 bankruptcy across the 1998 through 2022 waves of the Survey of Consumer Finances (SCF) (Board of Governors of the Federal Reserve Board, 2023) The methodology for this calculation is outlined in Appendix A. Blue bars indicate households who would financially benefit and are eligible to file for Chapter 7 bankruptcy; red bars indicate households who would financially benefit but are ineligible. Green bars indicate households who filed within the past year.

Figure A.2. Upsolve-Eligible Chapter 7 Filings Over Time



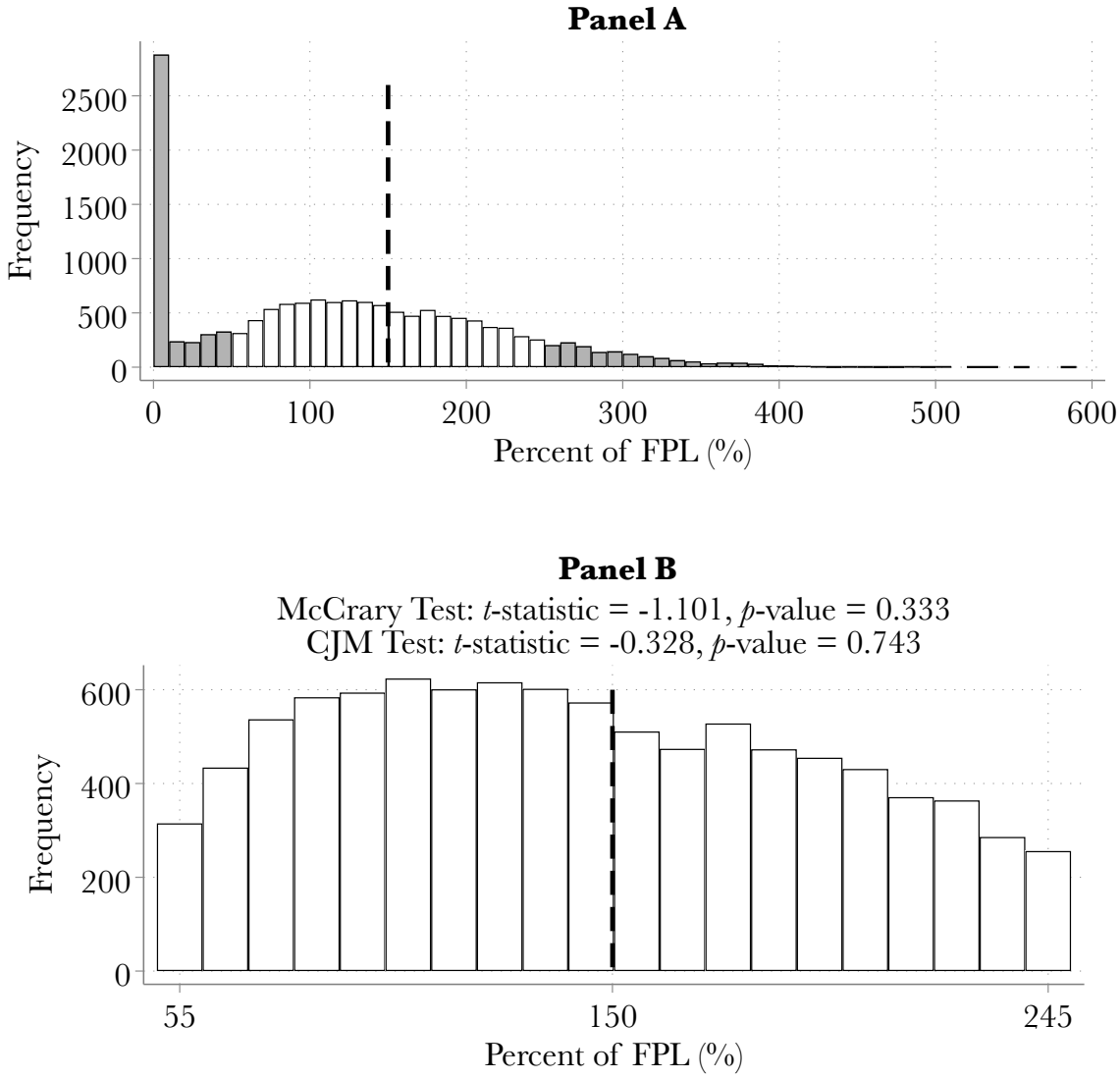
Notes: Figure shows the number of Upsolve bankruptcy filings and Upsolve-eligible filings in the Federal Judicial Center (FJC) database between 2017 Q2 and 2024 Q3 (Federal Judicial Center, 2024). The first recorded Upsolve filing is in 2018 Q2. We define Upsolve-eligible filings as non-joint Chapter 7 cases filed pro se by non-homeowners. The blue line presents the share of Upsolve-eligible filings attributed to Upsolve users, calculated by dividing the number of Upsolve filings by the number of Upsolve-eligible FJC filings.

Figure A.3. Distribution of Income for Upsolve Users vs. All Chapter 7 Filers



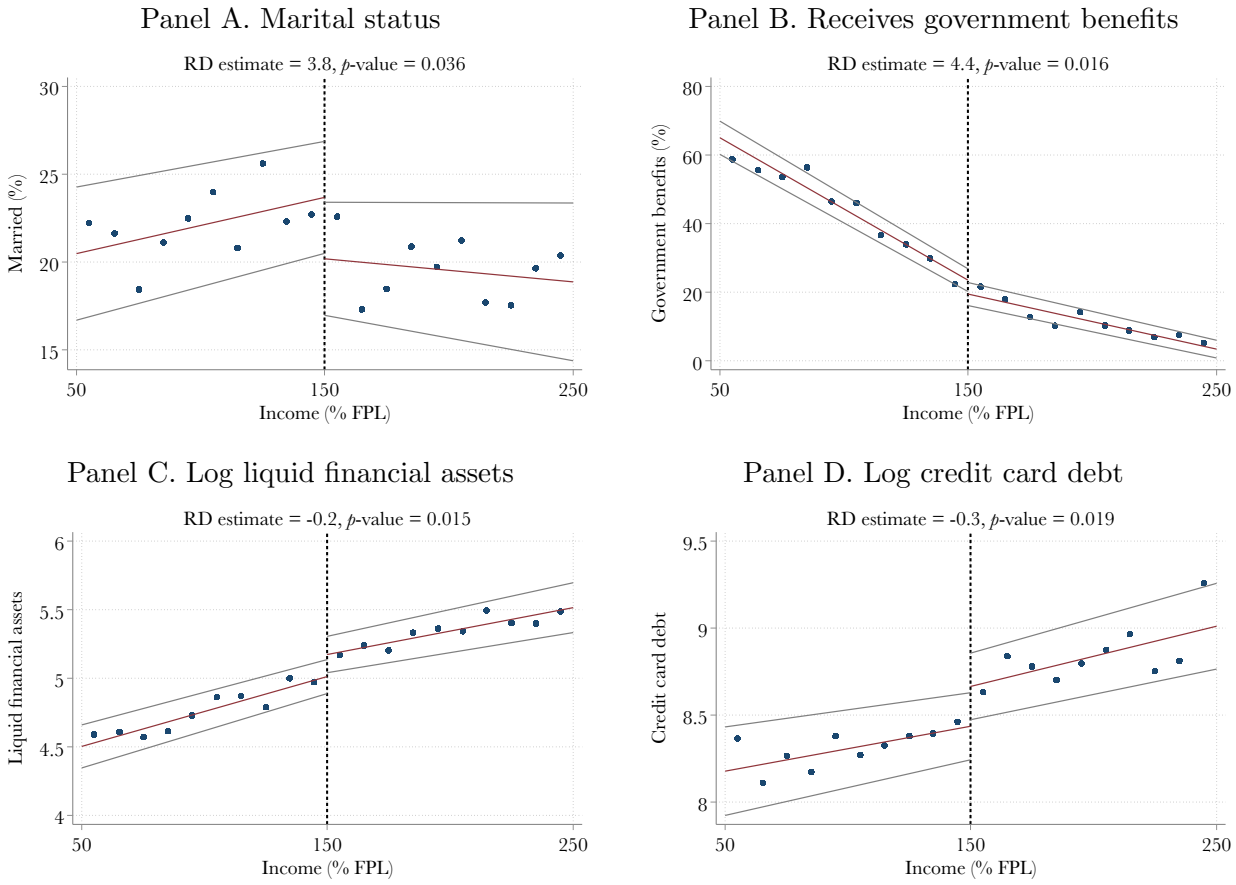
Notes: Figure shows the distribution of average monthly income for Upsolve users (filers and non-filers) and all Chapter 7 filers in the Federal Judicial Center (FJC) database between September 2021 and December 2024. Income is deflated to August 2024 prices and is winsorized at the 1st and 99th percentiles. The bars of the histogram are $500 in width, and the blue and red dashed lines represent the median income for the Upsolve and FJC samples, respectively.

Figure A.4. McCrary and CJM Tests



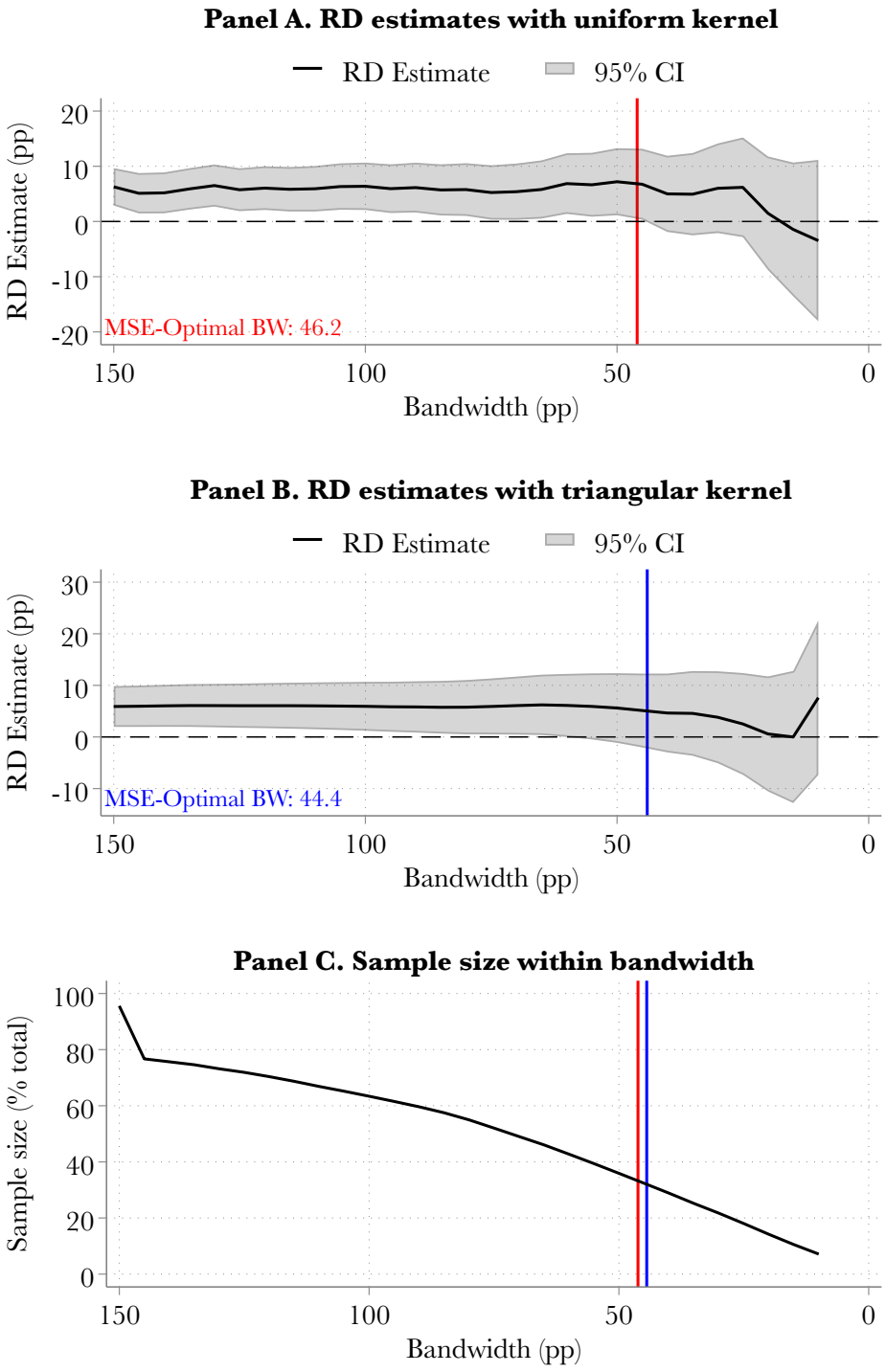
Notes: Panel A shows the distribution of applicant income, with the gray bars representing applicants outside of the 100 percentage-point bandwidth. Panel B shows the distribution of applicant income within this bandwidth and reports the t-statistics and p-values from the manipulation tests proposed by McCrary (2008) and Cattaneo et al. (2020).

Figure A.5. RD Plots for Discontinuous Covariates



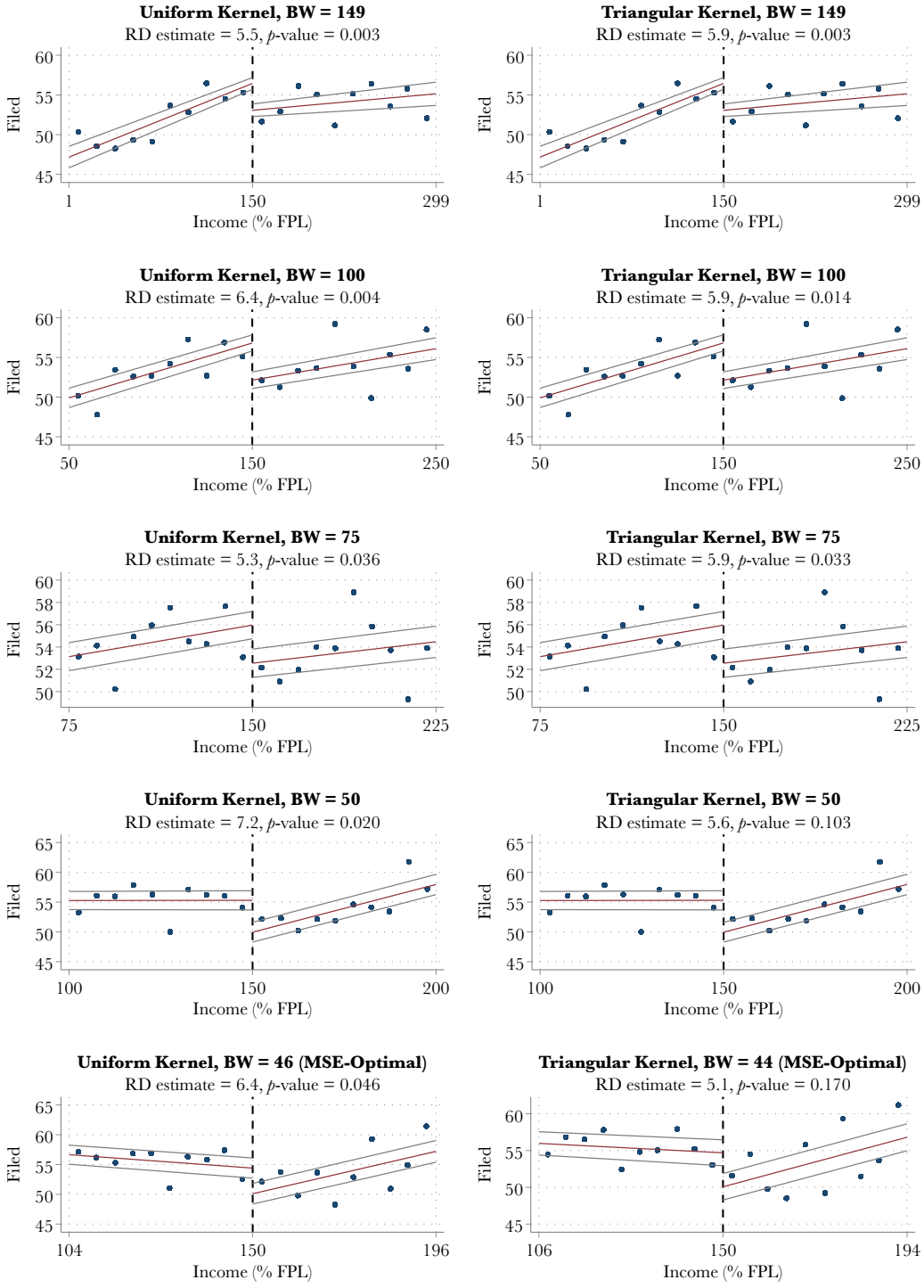
Notes: Figure presents RD plots for four covariates with significant discontinuities at the threshold: (1) whether the user is married, (2) whether the user receives income from government benefits, (3) the log of liquid financial assets, and (4) the log of credit card debt. Each sub-figure presents the mean of each covariate for 20 quantile income bins. The RD estimates and p-values are estimated using the linear RD model from equations (1) and (2), using a 100-percentage point bandwidth and no controls.

Figure A.6. Robustness of RD Estimation to Bandwidth Selection and Kernel Weighting



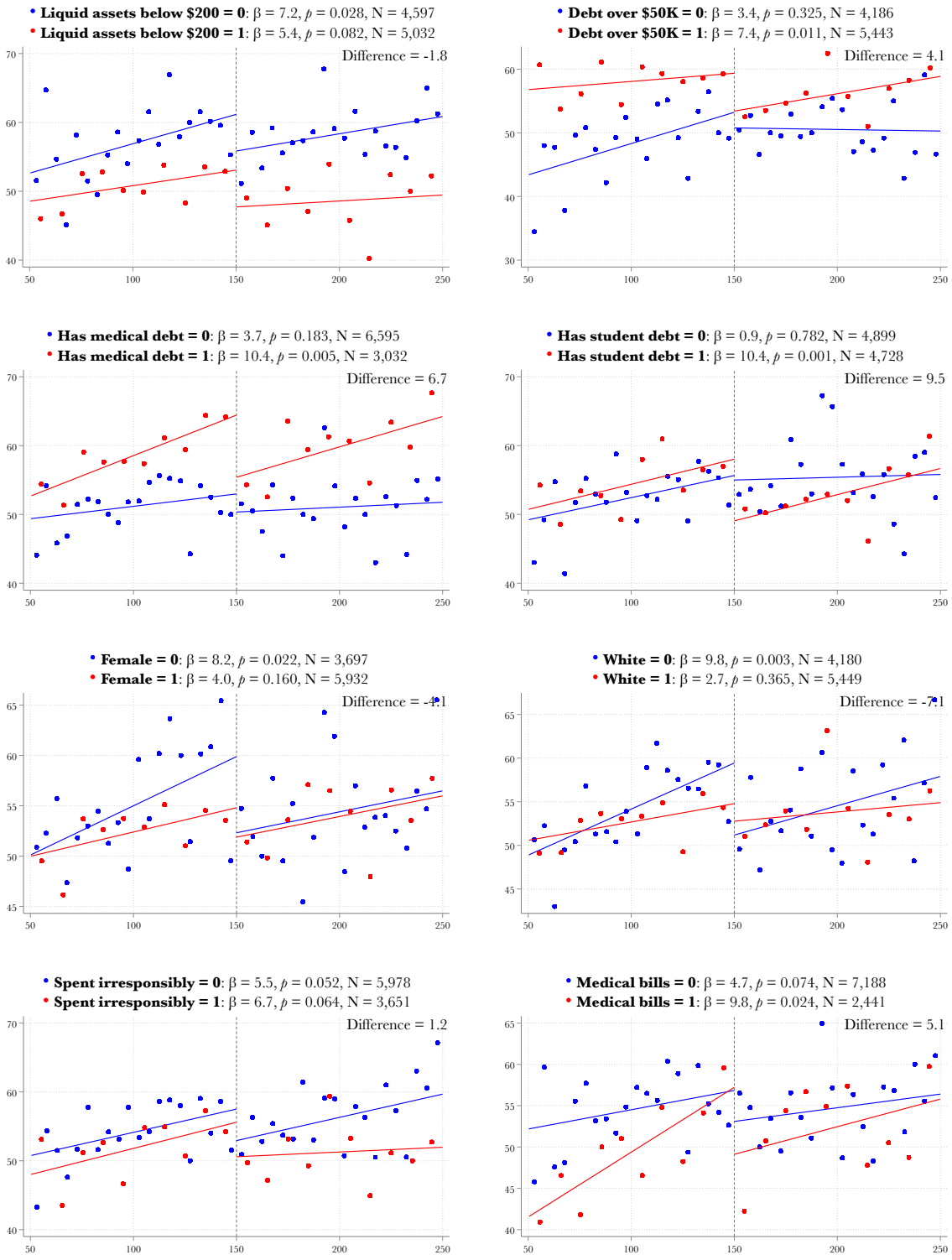
Notes: Figure shows the estimated effect of the fee waiver on filing, as estimated in the fuzzy RD model from equations (1) and (2), under different bandwidths and kernel weights. We vary the bandwidth from 10 to 150 percentage points. Panel A uses uniform kernel weights and Panel B uses triangular kernel weights. In these panels, the black line represents the RD estimate, the grey bands represent a 95% confidence interval, and the red and blue lines represent the MSE-optimal bandwidth based on the algorithm from Calonico et al. (2020). Panel C shows the share of the full sample within each bandwidth.

Figure A.7. Robustness of RD Estimation to Bandwidth Selection and Kernel Weighting



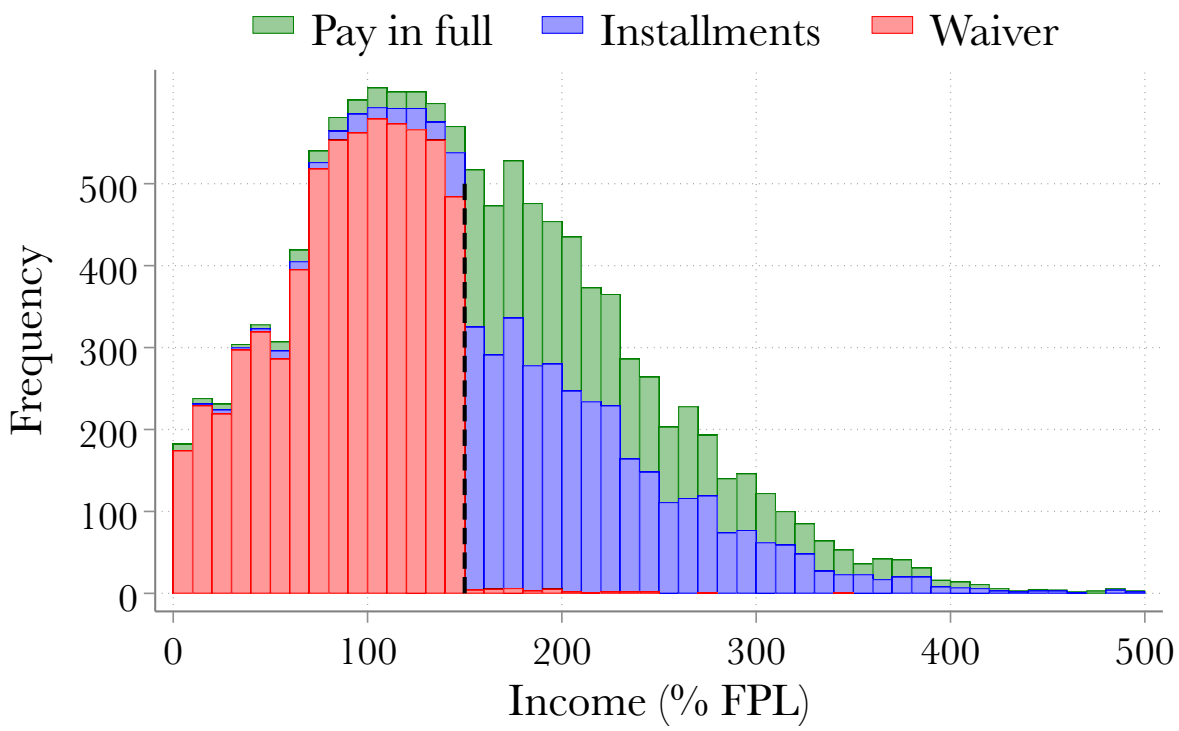
Notes: Figure shows the second-stage effect on filing for bankruptcy under different bandwidths and kernel weights. The bandwidth and kernel weighting approach is specified in the top of each plot. The bottom two plots show the MSE-optimal bandwidths (46.2 and 44.4 percentage points for the uniform and triangular specifications, respectively). Each RD plot controls for state and year-month fixed effects, questionnaire completion time, demographics, debt, assets, and reasons for considering bankruptcy (outlined in Section 4). The RD estimate and corresponding p-value is included in the top right of each plot. Dots show the mean application and filing rates for 20 quantile income bins. Solid lines are fitted values from first-order polynomials, and gray lines represent 95% confidence intervals.

Figure A.8. Heterogeneous Treatment Effects



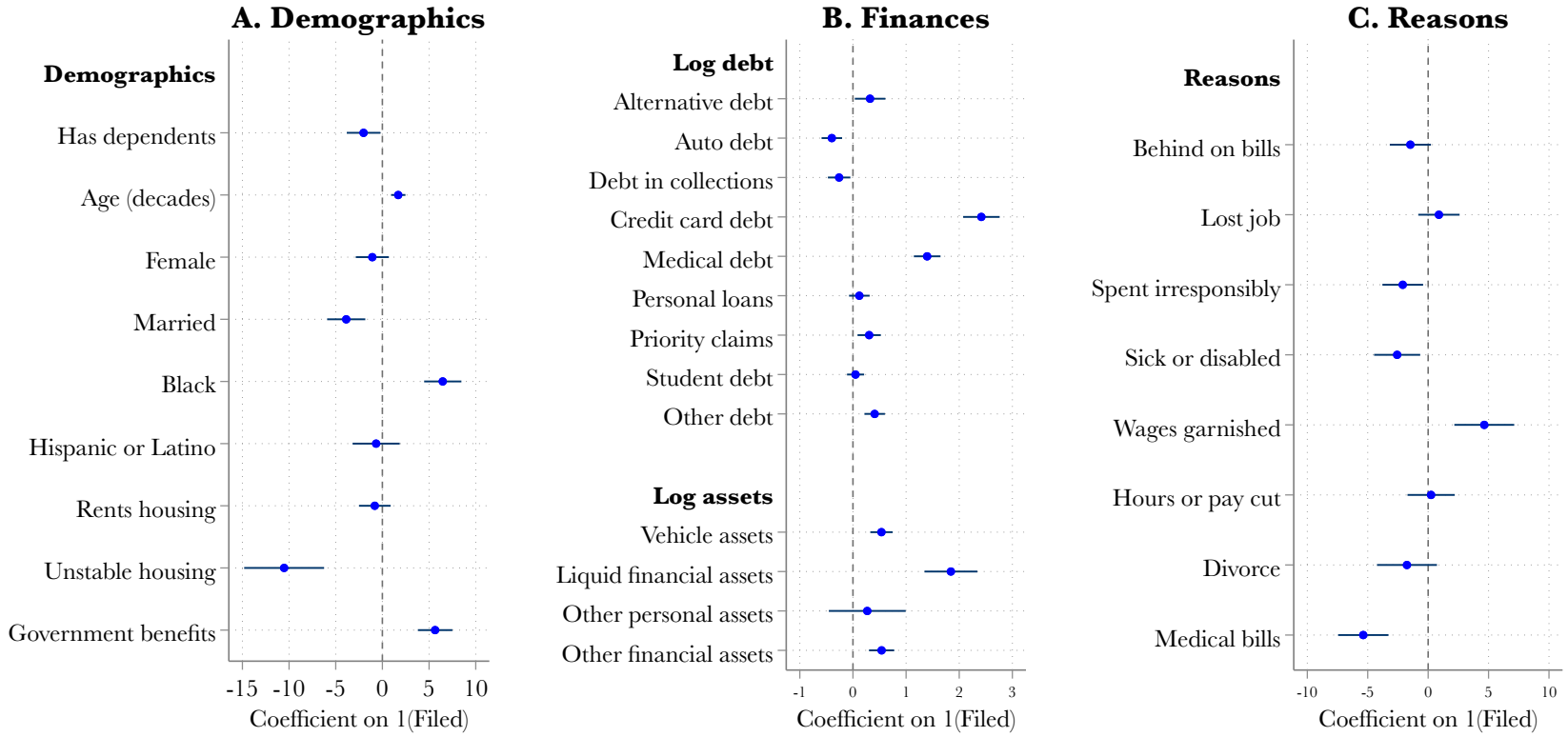
Notes: Figure plots the fuzzy RD model outlined in equations (1) and (2) for sub-groups based on binary characteristics defined prior to treatment. Uses a 100 percentage-point bandwidth, includes state and year-month fixed effects, and controls for questionnaire completion time. The RD estimates and corresponding p-values are presented in the legend next to each group label, and the difference in RD estimates is shown in the top right of the plot. Dots show the mean filing rate for 20 quantile income bins. Solid lines are fitted values from the first-order polynomials with a uniform kernel.

Figure A.9. Distribution of Applicant Income



Notes: Figure presents the distribution of income as a percent of the FPL, highlighting users who applied for a fee waiver, applied to pay the fee in installments, or opted to paid the fee in full. Excludes 18 users with income above 500% of the FPL.

Figure A.10. Multivariate Regression of Filing Status on Controls



Notes: Figure plots estimated coefficients from a multivariate regression of Upsolve users' filing decision on demographics, the log of each debt and asset category, indicators for users' primary reasons for considering bankruptcy, income (percent of FPL), questionnaire completion time, and state and year-month fixed effects. We exclude the coefficients on income, questionnaire completion time, and fixed effects from the coefficient plots. "Alternative loans" includes payday loans, cash advances, lease-to-own debt, and buy-now-pay-later (BNPL) debt. The bands around each coefficient represent 95% confidence intervals.