Eligibility Screening and Means Testing in Consumer Bankruptcy

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Abstract

Federal bankruptcy law is uniform across the United States, yet access to debt relief is not. Chapter choice is a central determinant of how much relief debtors receive, but the share filing under Chapter 7 rather than Chapter 13 varies widely across court districts. We develop a model with multiple eligibility tests that allows for geographic heterogeneity in their implementation and show that local differences in screening are a major source of this variation. Courts apply federal eligibility rules differently, so identical debtors can face substantially different bankruptcy options depending on where they file. Holding debtor characteristics fixed, differences in screening alone imply variation in the probability of filing under Chapter 7 from below 50 percent to above 75 percent, accounting for 11–22 percent of the geographic variation in chapter choice. We further show that the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA), whose means test was intended in part to standardize eligibility determinations, instead amplified cross-district disparities. Uniform federal law, when implemented locally, has failed to deliver uniform access to consumer bankruptcy relief.

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1 Introduction

In the U.S. consumer bankruptcy system, the most important decision a debtor makes is whether to file under Chapter 7 or Chapter 13. In Chapter 7, debtors obtain a quick discharge of most unsecured debts while paying nothing to unsecured creditors in nearly all cases.[1] In contrast, Chapter 13 requires a multi-year repayment plan with less debt relief and more creditor repayment.[2] Chapter choice thus determines the central tradeoff in bankruptcy – the balance between debt relief and creditor repayment – and, as a result, has been a frequent target of policy reform.[3]

Despite its centrality to bankruptcy policy, the forces that drive chapter choice remain poorly understood. Two puzzles illustrate this point. First, although bankruptcy is governed by federal law, there is widespread geographic variation in chapter choice; the share of bankruptcies under Chapter 7 ranges from less than 25% to more than 90% across the 94 judicial districts. While the variation has persisted for decades, it is largely unexplained. The variation has little correlation with prominent state laws (e.g., asset exemptions), credit market characteristics, or economic conditions (Sullivan *et al.*, 1994; Keys *et al.*, 2020). Legal scholarship attributes much of this variation to "local legal culture" – persistent differences in the interpretation of federal law – but there is little evidence on which aspects of legal culture matter most (Braucher, 1993; Sullivan *et al.*, 1994; Lawless and Littwin, 2017). Second, policies designed to influence chapter choice seem to have little effect. The flagship means test of the major 2005 bankruptcy reform, BAPCPA, aimed to shift high-income filers out of Chapter 7 (Lawless *et al.*, 2008), yet several empirical studies find little impact on the filing behavior or chapter choice of high-income filers nationally.[4] Without a clearer understanding of what drives chapter choice, longstanding policy goals of greater uniformity

[1] While Chapter 7 debtors must repay creditors with nonexempt assets, 94–96% of Chapter 7 cases have no nonexempt assets (Jiménez, 2009; Pattison, 2020).

[2] The recovery rate on unsecured debt in Chapter 13 is 13%, compared to 0.5% in Chapter 7. These statistics are for 2010–2014. The debt discharge rate in Chapter 13 is 43%, compared to 96% in Chapter 7. These statistics combine U.S. Trustee Final Reports on payments to general unsecured creditors with Federal Judicial Center data on outstanding unsecured debts. See Morrison and Uettwiller (2017) for other estimates. Additionally, the "best interest of the creditors test" requires that Chapter 13 plans pay creditors at least as much as they would have received in Chapter 7's liquidation.

[3] The 1984 Bankruptcy Act and the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act both enacted barriers to Chapter 7. Recent policy proposals, such as Senator Warren's proposed bankruptcy reform, seek to reverse these features of the 2005 Reform or even eliminate Chapter 13 as an option (Warren, n.d.).

[4] Gross *et al.* (2021) summarizes the paper's results and the empirical literature as "Overall, we find no evidence to suggest the means test had a large effect on the income composition of bankruptcy filers. This is consistent with anecdotal reports from bankruptcy attorneys (Littwin, 2016) and other evaluations of the reform and the income of bankruptcy filers (Ashcraft *et al.*, 2007; Lawless *et al.*, 2008; Albanesi and Nosal, 2018; Fisher, 2019)."

and equal access to relief will remain difficult to achieve (Commission *et al.*, 1997; Braucher, 1998; American Bankruptcy Institute, 2019).

In this paper, we investigate a critical but understudied determinant of chapter choice: eligibility screening. When a debtor files, bankruptcy trustees and judges screen the case to determine whether the debtor is eligible for the chosen chapter, and ineligible cases are dismissed or converted to the other chapter. Drawing on the evidence on local legal cultures, we develop a two-stage model of chapter choice in which screening is implemented differently across court districts. We find that heterogeneous screening is a quantitatively important determinant of chapter choice: holding debtor characteristics fixed, district differences in screening alone move the predicted Chapter 7 probability for an observationally identical debtor from below 50% to above 75%, and this variation closely tracks the persistent cross-district variation in chapter choice. Because chapter choice sets the balance between debt relief and creditor repayment, this heterogeneity means that similar debtors face systematically different outcomes depending only on where they file. We also show that BAPCPA's means test, designed in part to increase uniformity through a formulaic test,[5] actually exacerbated these disparities by reinforcing pre-existing differences in screening.

In the first stage of our model, bankruptcy filers choose between Chapter 7 and Chapter 13 using a discrete choice framework similar to existing chapter choice models (Domowitz and Sartain, 1999; Zhu, 2011; Lawless and Littwin, 2017). However, in the second stage, each case faces eligibility screening through two legal tests. The first is BAPCPA's means test, which screens higher-income filers. The second is the totality test, a discretionary test predating BAPCPA that considers the debtor's overall circumstances and leads to dismissal if bankruptcy trustees and judges deem the filing abusive or in bad faith. By estimating district-specific screening models, we allow for heterogeneity in the implementation of these tests across districts.[6] Screening heterogeneity can influence initial chapter choice decisions, as debtors and their attorneys are forward-looking and account for the probability of dismissal when choosing a chapter.

Estimating the model using data on more than two million consumer bankruptcy filings from fiscal years 2011–2015, we find substantial cross-district heterogeneity in the implementation of eligibility screening through the totality and means tests. As a result, an identical debtor faces

[5] Although the central goal was abuse prevention, two other goals of BAPCPA's means test were to create uniform standards and limit judicial discretion (Sylvester, 2009).

[6] Our screening model also flexibly captures heterogeneity in court screening practices for Chapter 13.

very different dismissal risk depending on the court district where the debtor files. Building on this striking result, we use the model estimates to examine two aspects of bankruptcy.

First, we show that these screening differences are strongly correlated with the longstanding geographic patterns in chapter choice. This link reflects the strong responsiveness of chapter choice to screening: a 1pp increase in the probability of being eligible for Chapter 7 (or a 1pp decline in the probability of being eligible for Chapter 13) raises the probability of filing under Chapter 7 by 1.84pp (elasticity 4.98). Across districts, a representative debtor who files under Chapter 7 would face a dismissal probability ranging from only 1.7% to 15.7%, depending on where the filing occurs. The range of Chapter 13 dismissal probabilities is similar. Thus, eligibility screening creates substantial differences in access to debt relief across districts. In a correlational analysis, summary measures of districts' screening practices account for 22% of the total geographic variation in chapter choice when no other covariates are included. After controlling for numerous legal, economic, demographic, and ideological covariates, these screening practices still account for 11% of the variation, which exceeds the *combined* contribution of several other legal factors prominent in the literature (asset exemptions, attorney fees, and wage garnishment laws).

Second, although BAPCPA's means test was intended in part to increase uniformity, we show that it instead amplified geographic heterogeneity in screening. Specifically, the means test had little effect on screening and chapter choice in some districts, but sharply restricted access to Chapter 7 in others, reducing the Chapter 7 share by more than 20 percentage points. Furthermore, districts with stricter totality tests also implemented the means test more strictly, reinforcing pre-existing disparities in screening and chapter choice. We validate these model-implied predictions using actual district-level changes in chapter choice around BAPCPA's implementation in 2005. The model-implied effects on chapter choice align with the observed shifts, and geographic dispersion in chapter choice rises after 2005.

Our study delivers three main findings. First, we show that eligibility screening is a major, previously unmeasured determinant of chapter choice and access to consumer bankruptcy relief. Courts do not simply apply uniform federal rules mechanically; differences in how screening criteria are implemented meaningfully shape who receives a Chapter 7 discharge. Second, in a correlational exercise, we find that geographic heterogeneity in screening practices accounts for 11–22% of the persistent cross-district variation in Chapter 7 filing rates, more than the combined contribution

of other prominent legal determinants, including attorney fees, exemption levels, and garnishment laws. Third, we estimate district-specific effects of BAPCPA's means test and document substantial heterogeneity in its impact. A reform intended in part to standardize eligibility instead amplified existing geographic disparities. More broadly, our findings illustrate how decentralized implementation can undermine the uniformity of federal law, causing identical policies to generate markedly different outcomes across locations.

This study adds to three literatures pertaining to bankruptcy in the United States. The first consists of a broad set of papers examining the determinants of bankruptcy, chapter choice, and dismissals. The paper by Eraslan *et al.* (2017) develops a structural model incorporating dismissal risk, focusing on BAPCPA's plan length restrictions within Chapter 13 and estimating the model using data from Delaware. Our paper, in contrast, focuses on chapter choice using a national sample with detailed geographic heterogeneity. The chapter-choice component of our model follows similar discrete choice bankruptcy models that examine the impact of laws and financial characteristics (Domowitz and Sartain, 1999; Gross and Souleles, 2015; Zhu, 2011; Miller, 2019). Other papers identify the impact of specific factors on chapter choice or filing decisions, such as asset exemptions (Pattison and Hynes, 2020), liquidity constraints (Gross *et al.*, 2014; Foohey *et al.*, 2016), traffic debt (Foohey *et al.*, 2020; Morrison *et al.*, 2020), payday loans (Skiba and Tobacman, 2019), attorney incentives (Lefgren *et al.*, 2010; McIntyre *et al.*, 2015), and filer race (Dickerson, 2012; Braucher *et al.*, 2012a,b), often relying on policy variation or other quasi-experimental approaches. Lastly, some papers use variation in dismissal rates across trustees to examine racial bias (Argyle *et al.*, 2023) and variation in dismissal rates across judges to identify the impact of Chapter 13 (Dobbie and Song, 2015; Dobbie *et al.*, 2017). Our model builds on this literature by incorporating realistic features of eligibility screening and geographic heterogeneity into a structural model of chapter choice.

Second, we contribute to the literature on geographic variation in bankruptcy. Prior work finds that location, not individual differences, drives substantial variation in bankruptcy (Keys *et al.*, 2020). Similarly, qualitative accounts emphasize local legal culture as a driver of chapter choice (Braucher, 1993; Sullivan *et al.*, 1994). We provide direct, quantitative evidence that district-level screening practices are a central component of this local legal culture. In our analysis of geographic variation, we provide a more detailed review of the existing literature and quantify the contribution

of screening relative to other factors.

Third, we contribute to the literature examining BAPCPA's means test. Several studies examine its impact using macroeconomic models (Athreya, 2006; Li and Sarte, 2006; Chatterjee *et al.*, 2007; Gordon, 2015; Mitman, 2016; Nakajima, 2017; Gordon, 2017), while others assess treatment effects on filings (Cornwell and Xu, 2014; Gross *et al.*, 2021; Albanesi and Nosal, 2022), health insurance (Mahoney, 2015), and mortgage default (Li *et al.*, 2011). Our results highlight how, despite being a national law change, the impact of the means test varied widely across districts.

2 Institutional Background

In the U.S., debtors choose to file for bankruptcy under either Chapter 7 or Chapter 13.[7] After the debtor chooses a chapter, a bankruptcy trustee and judge screen the debtor's case to determine whether the debtor is eligible for the chosen chapter. Ineligible cases are dismissed or converted to the other chapter, which is costly for the debtor and the debtor's attorney.

2.1 Debtor's Chapter Choice Incentives

The benefits and costs of Chapters 7 and 13 depend on the debtor's goals and characteristics. In Chapter 7, debtors obtain a quick discharge of most unsecured debts. In exchange, they must repay creditors using any nonexempt assets, although 95% of Chapter 7 debtors have zero nonexempt assets Jiménez (2009); Hynes and Pattison (2022).[8] In Chapter 13, debtors enter a three- to five-year plan during which they repay creditors out of their disposable income but can retain all of their assets. The Chapter 13 repayment plans must pay creditors at least as much as they would receive in a Chapter 7 liquidation. Chapter 13 debtors only obtain a discharge upon completion of the repayment plan. Roughly half of plans fail before completion, mostly due to the debtor missing payments, leaving the debtor without a discharge. Comparing the two chapters, Chapter 7 typically results in more debt relief and less creditor repayment, and so is preferred by most debtors.

Despite Chapter 7's advantages, Chapter 13 can be better in some situations. Debtors with

[7] Debtors can also file under Chapter 11 or Chapter 12, but these account for less than 0.5% of consumer bankruptcy filings.

[8] A combination of state and federal laws determines which assets are exempt. The largest exemptions are for home equity, and the amount protected varies across states from less than $10,000 to more than $500,000 (and is unlimited in seven states).

significant nonexempt assets may choose Chapter 13 because it allows them to retain nonexempt assets. Homeowners and debtors with secured or nondischargeable debts (e.g., tax debt or government debt) may also find Chapter 13 more attractive because it provides more options for addressing foreclosure and delinquencies on secured or nondischargeable debts (Porter, 2011; Tabb, 2020; Morrison *et al.*, 2020). Chapter 13 often has lower upfront attorney fees, which may be important to liquidity-constrained debtors (Gross *et al.*, 2014; Foohey *et al.*, 2016). Lastly, debtors may also prefer Chapter 13 if they feel an obligation to repay some of their debt (Braucher, 1993; Porter, 2011), even though this does not translate into better credit scores (Jagtiani and Li, 2015).

2.2 Eligibility Screening

After the debtor files, the bankruptcy trustee and judge review the case to determine whether the debtor is eligible for the chosen chapter.[9] There are two primary screens used to determine debtors' eligibility for Chapter 7: the means test and the totality test. Additionally, Chapter 13 cases are screened for good faith and feasibility. For this paper, the key feature of these tests is that they include discretionary components that give rise to geographic heterogeneity in how they are applied.

BAPCPA's Means Test

The means test, introduced as the flagship feature of the 2005 BAPCPA, is a formula-based, two-part test used to assess eligibility for Chapter 7. The test seeks to "ensure that debtors repay creditors the maximum they can afford" (House of Representatives, 2005) by restricting access to Chapter 7 for high-income debtors.[10] The first part of the formulaic means test compares the debtor's recent income to the state's median income for households of the same size. Below-median-income debtors automatically pass the means test. Above-median-income debtors continue to the second part of the test, which compares the debtor's income to a set of allowable expense standards. If the debtor's monthly income exceeds the standards by a specified amount, the means test creates

[9]The trustees, acting as the "watchdog over the bankruptcy process" (USTP, 2022), conduct much of the eligibility screening and, if they deem a case ineligible, they move to have the judge dismiss the case (Wells *et al.*, 1991). Judges agree with the trustee's determination in more than 98.5% of enforcement actions.

[10]There are many other provisions of BAPCPA enacted alongside the eligibility screening of the means test, such as the anti-cramdown provision affecting car loans, restrictions on plan length, and changes in how plan payments were calculated (Chakrabarti and Pattison, 2019; Eraslan *et al.*, 2017).

a "presumption of abuse" that may bar the debtor from filing under Chapter 7.

Another goal of the formulaic means test is to standardize eligibility screening across courts (Carlson, 2007). In practice, however, the means test retains a significant discretionary component that allows for heterogeneity. In particular, failing the formulaic means test creates a *presumption* of abuse. A debtor can still file under Chapter 7 if they rebut this presumption with special circumstances, such as a recent job loss, illness, or justifiable extra expenses. Rebuttals are common; trustees decline to seek dismissal in more than 60% of cases that fail the formulaic portion of the means test (USTP, 2022). Moreover, courts disagree on what circumstances are sufficient to rebut the presumption of abuse (Perez, 2013; Bartell, 2018). Some courts take a moderate approach, allowing debtors to rebut the presumption if they lack a "meaningful ability to repay," while others take a strict approach, allowing rebuttal for only the most exceptional situations (Perez, 2013). Additionally, some courts view BAPCPA's mechanical means test as too debtor-friendly and fall back to these pre-BAPCPA, discretionary screening methods to determine access to Chapter 7 (Carlson, 2007). This discretion and heterogeneous implementation allows for differences in how the means test is administered across the 94 federal court districts.

Totality Test

The second Chapter 7 screen, which we refer to as the *totality test*, deems a debtor ineligible for Chapter 7 if the case is deemed bad faith or an abuse "under the totality of the circumstances".[11] The totality test predates BAPCPA and continues to apply in the post-BAPCPA period.[12]

There are three key features of the totality test. First, the test applies to *all* Chapter 7 debtors, including those with below-median income or who otherwise pass BAPCPA's means test (Landry III, 2008; Tabb, 2020). As stated by the U.S. Trustee Program (USTP), "[e]ven if a case is not presumptively abusive under the means test, the Bankruptcy Code permits the USTP to seek dismissal based on the debtor's bad faith or the totality of the circumstances" (USTP, 2020). Second, although the Bankruptcy Code does not define "abuse", courts consistently use a debtor's

[11] Chapter 7 cases can also be dismissed for "bad faith," but we focus on the totality of the circumstances because dismissals for bad faith alone are extremely rare (Landry III, 2008).

[12] In fact, BAPCPA strengthened the totality test by lowering the bar for dismissal from "substantial abuse" to only "abuse," and by eliminating a presumption in favor of granting relief to the debtor (Landry III, 2014). Post-BAPCPA court rulings, including three appellate courts, find that the totality test still applies to debtors who pass the means test (Landry III, 2014).

ability to pay as the primary consideration (Felsenfeld, 1998; Wedoff, 2005; Pottow, 2006). Ability to pay is typically evaluated through the debtor's monthly disposable income (income less allowed expenses), which is reported in standard bankruptcy forms.

Third, since the Bankruptcy Code does not define what constitutes an ability to pay, the totality test relies largely on local practices and court discretion. Some courts scrutinize all cases exceeding a certain dollar amount of monthly disposable income, such as $100, $166, or $200–$400 (Wells *et al.*, 1991; Wedoff, 2006). Others calculate the share of unsecured debt that could be repaid over a hypothetical Chapter 13 plan, with different courts finding abuse if the debtor could repay at least some percentage of unsecured debt, ranging from 20% to 100%.[13] Additionally, some courts consider factors beyond ability to pay, including whether the bankruptcy was caused by a sudden event (e.g., job loss or illness), the reasonableness of the debtor's budget, and the debtor's recent spending behavior (Felsenfeld, 1998; Wedoff, 2005).[14] As a result of these differences, the totality test screens Chapter 7 eligibility using ability to pay, but it is not formulaic and there is significant variation across courts in how the test is applied.

Chapter 13 Screening

The totality test and other good faith requirements also restrict access in Chapter 13, although the implementation differs. In particular, the test under Chapter 13 requires that the debtor's repayment plan must be feasible, i.e., the debtor must have sufficient disposable income to fund a Chapter 13 plan and have a reasonable chance of completing the plan. Debtors with insufficient disposable income may have their case dismissed or converted to Chapter 7.[15] These tests are enforced by Chapter 13 trustees and judges, sometimes through discretionary minimum payment requirements for Chapter 13 plans (Braucher, 1993; Morrison and Uettwiller, 2017; Morrison *et al.*, 2020). As with Chapter 7, these screening practices vary across districts and may further contribute

[13]See In re Vianese, 192 B.R. 61, 71 (Bankr. N.D.N.Y. 1996) for a case that uses a 19% threshold, and In re Lipford, 397 B.R. 320 (Bankr. M.D.N.C. 2008) and In re Boule 415 B.R. 1 (Bankr. D. Mass. 2009) for a review of different court practices.

[14]Some courts use a list, known as the Green factors from 934 F.2d 568 (4th Cir. 1991), to determine abuse. In addition to ability to pay, these factors include whether the bankruptcy petition was filed due to sudden illness, calamity, disability, or unemployment; if the debtor incurred cash advances and consumer purchases beyond their ability to repay; if the proposed family budget is excessive or unreasonable; if the debtor's financial statements accurately reflect their true financial condition; and if the petition was filed in good faith (Mitchell, 1997).

[15]Chapter 13 dismissals and conversions rise sharply once monthly disposable income becomes negative (see Online Appendix Figure A1(b)).

to geographic heterogeneity in chapter choice (Commission *et al.*, 1997; American Bankruptcy Institute, 2019).

Motivating Evidence of Screening and Heterogeneity

We provide motivating empirical evidence of these screening mechanisms and their geographic heterogeneity. First, both the means test and the totality test screen Chapter 7 debtors based on their ability to pay. Consistent with this, the national average line in Figure 1(a) shows that once monthly disposable income[16] becomes positive, Chapter 7 cases are much more likely to be converted to Chapter 13 or dismissed. The risk of dismissal also affects chapter choice, as Figure 1(b) shows that the share of bankruptcies under Chapter 7 declines precipitously around the same disposable income threshold.[17] These patterns are not solely due to the means test, as the figures remain similar when the sample is restricted to only below-median-income debtors, all of whom automatically pass the means test (Online Appendix Figure A2).

Second, there is significant geographic heterogeneity. For both dismissals and chapter choice, Figure 1 also plots the 10^{th} and 90^{th} percentiles of the cross-district averages. There is extreme variation. In Figure 1(a), among cases with \$400 in monthly disposable income, the dismissal rate ranges from 1.7% in the 10^{th} percentile district to 15% in the 90^{th} percentile district. Similarly, among cases with \$400 in disposable income, the share under Chapter 7 varies from 51% in the 90^{th} percentile district to 4.6% in the 10^{th} percentile district. These patterns motivate our goal of incorporating eligibility screening and geographic heterogeneity in its implementation within a model of chapter choice.

3 Model and Empirical Strategy

This section introduces the model of eligibility screening and chapter choice, then discusses estimation and identification. Our model focuses on chapter choice conditional on filing rather than the initial decision to file for bankruptcy.[18] In the first stage, the debtor chooses to file under

[16] Disposable income is calculated as the difference between the debtor's monthly income (Schedule I) and expenses (Schedule J).

[17] In contrast, Chapter 13 dismissals and conversions rise once monthly disposable income becomes negative (see Online Appendix Figure A1).

[18] Although we do not model the filing decision, our estimates of chapter choice are consistent with the nested-logit framework used by Domowitz and Sartain (1999) and Zhu (2011). Under that framework, the probability of

Chapter 7 or Chapter 13. In the second stage, the district's trustees and judges (hereafter "the district") decide whether to permit the filing or deem it ineligible, leading to dismissal or conversion. We refer to this as *eligibility screening*. Debtors account for expected screening when making their chapter choice in stage one. Because the stage-one choice depends on the expected outcome of stage-two screening, we begin by specifying the eligibility process and then turn to chapter choice.

3.1 Eligibility Screening

The district's second-stage eligibility decision is modeled as a district-by-chapter-specific logit. We adopt a static model that allows for cross-district variation in screening but not temporal variation within districts, consistent with research showing that local legal culture is stable over time (Braucher, 1993; Sullivan *et al.*, 1994; American Bankruptcy Institute, 2019).

From the debtor's perspective, the district's eligibility decision is non-strategic and stochastic (as in Eraslan *et al.* (2017)). For a debtor with eligibility-related characteristics X^E, let the probability that the debtor will be deemed eligible for chapter $c \in \{7, 13\}$ in district d be $Q_c(X^E; \beta_d, \gamma_d)$, which takes the functional form

$$Q_c\left(X^E; \beta_d, \gamma_d\right) = \frac{\exp\left[q_c\left(X^E; \beta_d, \gamma_d\right)\right]}{1 + \exp\left[q_c\left(X^E; \beta_d, \gamma_d\right)\right]} \tag{1}$$

where

$$\begin{aligned} q_c\left(X^E; \beta_d, \gamma_d\right) = {} & \beta_0^{cd} + \beta_1^{cd}\texttt{disp\_income} + \beta_2^{cd}\texttt{pct\_repay5} + \beta_3^{cd}\texttt{inc\_drop} \\ & + \beta_4^{cd}\texttt{expense\_gap} + \beta_5^{cd}\texttt{pro\_se} + \beta_6^{cd}\texttt{joint\_file} \\ & + \gamma_0^{cd}\texttt{AMI} + \gamma_1^{cd}\texttt{AMI} \times \texttt{disp\_income} + \gamma_2^{cd}\texttt{AMI} \times \texttt{pct\_repay5} + \gamma_3^{cd}\texttt{AMI} \times \texttt{inc\_drop} \\ & + \gamma_4^{cd}\texttt{AMI} \times \texttt{expense\_gap} + \gamma_6^{cd}\texttt{AMI} \times \texttt{joint\_file} + \gamma_7^{cd}\texttt{amt\_above\_means} \end{aligned}$$

Since each chapter has distinct eligibility criteria, a debtor could be eligible for both or neither, so $Q_7 + Q_{13}$ need not equal one.

The parameters $\beta_d = (\beta^{7d}, \beta^{13d})$ and $\gamma_d = (\gamma^{7d}, \gamma^{13d})$ are chapter-specific coefficient vectors

selecting a bankruptcy chapter can be decomposed into the probability of filing and the conditional probability of choosing a chapter given filing. This allows the lower-level chapter-choice decision to be estimated separately from the upper-level filing decision (Hensher, 1986; Greene, 2003).

governing eligibility screening in district d, with β_d capturing the totality test and γ_d capturing BAPCPA's means test. A key feature of our approach is that these coefficients vary across districts, allowing the same debtor characteristics to yield different eligibility probabilities depending on where the case is filed. This cross-district heterogeneity in screening is central to our analysis.

The variables X^E capture the primary factors used in eligibility screening (Section 2). For the totality test (β_d coefficients), the main factor is ability to pay, measured by monthly disposable income (`disp_income`) or the share of debt repayable in a hypothetical five-year plan (`pct_repay5`). Secondary factors include whether bankruptcy was caused by a sudden shock (proxied by `inc_drop`, an indicator for a recent income drop exceeding $500) and reasonableness of the budget (`expense_gap`, the gap between actual and IRS standard expenses). We also include indicators for pro se filings and joint filings. Online Appendix Tables A3 and A4 provide detailed variable definitions.

BAPCPA's means test is captured by the γ_d coefficients. As discussed in Section 2, below-median-income debtors automatically pass the means test, so we identify its impact by interacting the indicator for above-median income, `AMI`, with the eligibility covariates.[19] We also interact `AMI` with `amt_above_means`, the gap between the debtor's income and the state median, to allow the means test to become more binding farther above the median. We exclude the `AMI` $\times$ `pro_se` interaction due to small cell sizes.[20] Under this interpretation, within-district screening differences between above- and below-median-income debtors are attributed to the means test. Estimating separate models for each chapter-district combination provides a check on this interpretation, since the `AMI` variables should have little effect on Chapter 13 eligibility.

3.2 Chapter Choice

In the first stage, debtors choose a chapter, taking the preceding eligibility model as given. Debtors (or their attorneys) are aware of the eligibility rules in their district (β_d, γ_d) and account for expected eligibility, $Q_c(X^E; \beta_d, \gamma_d)$, when deciding between Chapter 7 and Chapter 13. Ineligibility (dismissal or conversion) is costly, so debtors and their attorneys seek to avoid it. For debtors, the costs include delays and additional attorney fees if they wish to refile. For attorneys, the costs

[19] We apply single-person median income for single filers and two-person median for joint filers since we do not observe household size. Online Appendix C investigates robustness to other measures.

[20] Only 0.67% of cases are AMI pro se, mostly in Chapter 7. Thirty of 83 districts have fewer than 10 above-median-income pro se Chapter 13 cases, and there is complete separation in several districts.

include uncompensated work and professional repercussions.[21]

Consider the choice of a debtor in district d with characteristics $X = (X^E, X^C)$, where X^C are observed characteristics relevant for the debtor's payoffs in Chapter 7 or Chapter 13 (which may overlap with X^E). Let U_7 and U_{13} be utility from eligible filings under each chapter, and U_0 be the utility from a filing deemed ineligible. The debtor compares expected utility, accounting for expected eligibility under each chapter, and files under Chapter 7 if

$$Q_7^d(X^E)U_7(X^C) + \left[1 - Q_7^d(X^E)\right] U_0(X^C) \geq Q_{13}^d(X^E)U_{13}(X^C) + \left[1 - Q_{13}^d(X^E)\right] U_0(X^C) \quad (2)$$

where $Q_c^d(X^E) \equiv Q_c(X^E; \beta_d, \gamma_d)$. Motivated by the available data, our model reduces the outcomes after filing under Chapter c to two possibilities: an eligible filing, generating utility $U_c(X^C)$, or an ineligible filing, generating utility $U_0(X^C)$.[22] In practice, a debtor deemed ineligible for Chapter c has several options: refiling under the same chapter, converting or refiling under the other chapter, postponing bankruptcy, or exiting bankruptcy altogether. The term $U_0(X^C)$ captures the value of the best of these options (less any direct costs of being deemed ineligible), given information at the time of filing and the characteristics of the debtor X^C.[23]

The key restriction on $U_0(X^C)$ is that it does not depend on the initial chapter choice. This restriction is plausible because ineligibility is determined shortly after filing, before the initial chapter choice can meaningfully alter the debtor's circumstances. Instead, post-ineligibility options are primarily determined by debtors' characteristics X^C, such as their income, assets, and debts. Direct costs incurred (filing fees, pre-petition attorney fees) are similar across chapters (Lupica, 2013), and debtors largely face the same menu of options regardless of initial choice.[24]

A second restriction is that $U_0(X^C)$ does not vary across districts. This is defensible because the primary determinants of post-ineligibility options – income, assets, and debts – are debtor characteristics rather than local factors. Additionally, our chapter choice model partially relaxes

[21] Legal research emphasizes the close connections with the bankruptcy bar and that trustees and judges can influence or punish lawyers with clients filing under the "wrong" chapter (Sullivan *et al.*, 1994; Braucher, 1993). For example, Braucher (1993) discusses how attorneys learn the informal minimum requirements for Chapter 13 plans and then rarely file plans that do not meet these minimums.

[22] We observe whether a filing is deemed ineligible, but not the separate post-ineligibility choices or outcomes for the debtor. Those later possibilities are absorbed into $U_0(X^C)$ rather than modeled separately.

[23] Note that $U_0(X^C)$ does *not* represent the option of never filing for bankruptcy in the first place.

[24] After ineligibility, the debtor can try refiling under the same chapter, refile under the other chapter, or exit the bankruptcy system. Hynes and Pattison (2025) documents that many dismissed Chapter 13 cases attempt to refile under Chapter 13. Conversion is economically similar to dismissal followed by refiling under the other chapter.

this assumption by including district fixed effects, which capture common district-specific factors that shift the baseline attractiveness of filing under Chapter 7 relative to Chapter 13.

We parameterize these utilities as linear functions of observed characteristics X^C and unobserved factors ϵ:

$$\begin{aligned} U_7(X^C) &= X^C\delta^7, \\ U_{13}(X^C) &= X^C\delta^{13} + \epsilon \\ U_0(X^C) &= 0 \end{aligned} \tag{3}$$

where the utility of the ineligibility outcome is normalized to zero.[25]

Following existing models (Domowitz and Sartain, 1999; Lefgren *et al.*, 2010; Zhu, 2011; Lawless and Littwin, 2017), we include the primary debtor characteristics governing the chapter choice decision.[26] We specify

$$\begin{aligned} X^C\delta^c = {} & \delta_0^c + \delta_1^c\texttt{avgmnthi} + \delta_2^c\texttt{cntmnthi} + \delta_3^c\texttt{debt\_to\_income} + \delta_4^c\texttt{assets\_to\_income} \\ & + \delta_5^c\texttt{unsec} + \delta_6^c\texttt{sh\_secured} + \delta_7^c\texttt{sh\_nondischarge} \\ & + \delta_8^c\texttt{homeowner} + \delta_9^c\texttt{sh\_real} + \delta_{10}^c\texttt{pos\_equity} + \delta_{11}^c\texttt{neg\_equity} + \delta_{12}^c\texttt{nonexempt\_equity} \\ & + \delta_{13}^c\texttt{pct\_black} + \delta_{14}^c\texttt{joint\_file} + \delta_{15}^c\texttt{inc\_drop} + \delta_{16}^c\texttt{AMI}. \end{aligned} \tag{4}$$

We include a debtor's "average" (`avgmnthi`) and "current" (`cntmnthi`) monthly income. These are the two calculations of income defined in the bankruptcy code; they measure monthly income at the time of filing and monthly income over the previous six months, respectively.[27] We also include several debt and asset measures that may shift debtors toward Chapter 13. `debt_to_income` is total liabilities (secured plus unsecured debt) divided by annual income ($12 \times$ `avgmnthi`), while `assets_to_income` is total assets over the same annual-income measure. We include the level of

[25] This normalization is equivalent to assuming that the observed characteristics capture the utility difference between a successful case and dismissal, i.e., $U_7(X^C) - U_0(X^C) = X^C\delta^7$ and $U_{13}(X^C) - U_0(X^C) = X^C\delta^{13} + \epsilon$.

[26] The exact variables and functional forms vary across the models in the literature, but key aspects are the debtor's income, the breakdown between secured and unsecured credit, and homeownership. The important chapter choice variables that we lack are whether the debtor uses a specialist attorney (Lefgren *et al.*, 2010) and the amount of medical debt (Zhu, 2011).

[27] Confusingly, the Bankruptcy Code defines "current monthly income" as the average income over the last six months and "average monthly income" on Schedule I as the monthly income at the time of filing.

unsecured debt (`unsec`), the secured-debt share (`sh_secured`), and the nondischargeable-debt share (`sh_nondischarge`), where the latter two are measured as shares of total liabilities. We also include homeownership, the share of assets in real property (`sh_real`), and measures of positive, negative, and nonexempt home equity, since debtors with assets to protect may be more likely to prefer Chapter 13. Given evidence of racial steering in bankruptcy, we include the share of residents in a zip code that is Black (`pct_black`). We add eligibility variables that may also affect chapter choice: joint filing, income drop, and above-median income. The `AMI` indicator captures BAPCPA's direct effects on above-median-income debtors apart from eligibility screening.[28]

The error term ϵ represents factors that are unobserved to the econometrician but are known by the debtors and affect the value of Chapter 13 relative to Chapter 7. We assume that they consist of district-specific factors affecting all debtors, such as other aspects of local legal culture, plus an idiosyncratic error so that $\epsilon = -\delta_d - \tilde{\epsilon}$, where δ_d is a full set of district fixed effects, and $\tilde{\epsilon}$ follows a standard logistic distribution. By including district fixed effects, we expand on chapter choice models that impose a common intercept across districts (Domowitz and Sartain, 1999; Zhu, 2011). As argued in Lawless and Littwin (2017), fixed effects can capture other aspects of local legal culture that vary systematically across districts.

Applying these functional forms to the expected utility comparison in equation (2), a debtor i in district d with characteristics (X_i^E, X_i^C) chooses Chapter 7 if the following holds:[29]

$$Q_{id}(\beta_d, \gamma_d) \times X_i^C \delta^7 - X_i^C \delta^{13} + \delta_d + \tilde{\epsilon}_{id} > 0 \tag{5}$$

where $Q_{id}(\beta_d, \gamma_d) \equiv \frac{Q_7(X_i^E;\beta_d,\gamma_d)}{Q_{13}(X_i^E;\beta_d,\gamma_d)}$ is the ratio of expected eligibility in Chapter 7 relative to Chapter 13 for individual i in district d. Note that Q_{id} is interacted with each variable in X^C.

The model has two components: district-specific eligibility screening, which determines Q_7 and Q_{13}, and chapter choice, in which debtors weigh each chapter's benefits against the risk of ineligibility. Our main interest is in how variation in eligibility screening influences chapter choice, so we calculate the marginal effect of the eligibility ratio $Q_{id}(\beta_d, \gamma_d)$ on chapter choice, $\frac{\partial \Pr(c=7)}{\partial Q}$, and

[28] Post-BAPCPA, above-median-income debtors face higher attorney fees, must file five-year Chapter 13 plans, and use IRS allowable standards.

[29] This substitutes equation (3) into (2) and divides by $Q_{13}^d(X^E)$.

the corresponding elasticity, $\frac{\partial \Pr(c=7)}{\partial Q}\frac{Q}{\Pr(c=7)}$.[30] These quantities characterize how sensitive chapter choice is to eligibility screening and therefore the scope for local screening practices to shape filing patterns.

3.3 Identification and Estimation

We estimate the model by maximum likelihood in two stages.[31] First, for the eligibility screening models, we estimate separate eligibility logit models for each of 83×2 district-chapter combinations. The dependent variable is a binary indicator equal to one if a filing under Chapter c is allowed to proceed and zero if it is deemed ineligible. We estimate β_d^7 and γ_d^7 using eligibility outcomes for the subsample of Chapter 7 bankruptcy filings in district d and β_d^{13} and γ_d^{13} using the eligibility outcomes for the subsample of Chapter 13 debtors in district d.

From these estimates, we generate $Q_{id}(\hat{\beta}_d, \hat{\gamma}_d)$, the eligibility ratio for debtor i in district d. Since $Q_{id}(\hat{\beta}_d, \hat{\gamma}_d)$ depends on the parameter vector in both chapters, this step uses the Chapter 7 model to form counterfactual predictions for Chapter 13 filers, and vice versa. We thus assume exogenous selection conditional on observed covariates: there are no unobserved determinants of chapter choice correlated with the stochastic portion of eligibility screening. We observe the most salient eligibility factors, so the role of unobserved attributes affecting both chapter choice and screening outcomes should be limited.

Second, for chapter choice, we estimate a single logit model of chapter choice pooling data from all districts following equation (5). The dependent variable is a binary indicator equal to one if a debtor files under Chapter 7 and zero if the debtor files under Chapter 13. Letting $G(\cdot)$ be the cumulative distribution function of a standard logistic distribution and $X_i = (X_i^E, X_i^C)$, equation (5) implies that the probability of choosing Chapter 7 is

$$\Pr(c_i = 7|X_i, d) = G\left[Q_{id}(\beta_d, \gamma_d)X_i^C\delta^7 - X_i^C\delta^{13} + \delta_d\right]. \tag{6}$$

[30] Let $P \equiv \Pr(c = 7)$. The marginal effect from a change in the eligibility ratio is given by $\frac{\partial P}{\partial Q} = X^C\delta^7 P(1-P)$. Similarly, the elasticity of chapter choice with respect to eligibility is $\epsilon_Q = \frac{\partial P}{\partial Q}\frac{Q}{P} = X^C\delta^7(1-P)Q$. Because the elasticity of Q with respect to Q_7 is 1, and the elasticity with respect to Q_{13} is -1, ϵ_Q can be interpreted as the elasticity of chapter choice with respect to either Chapter 7 eligibility or, if multiplied by -1, Chapter 13 eligibility.

[31] Joint estimation could yield efficiency gains, but separate first-stage estimation for each district provides significant computational advantages. Given the large sample size, efficiency is not a concern.

In estimation, $Q_{id}(\beta_d, \gamma_d)$ is replaced with the predicted eligibility ratios generated from the first-stage estimates, $Q_{id}(\hat{\beta}_d, \hat{\gamma}_d)$.

The utility parameters δ^7 and δ^{13} are separately identified as long as $Q_{id}(\cdot)$ varies in the sample. If debtors were always eligible for both chapters (as assumed in existing chapter choice models), $Q_7^d = Q_{13}^d = 1$, and only $\delta^7 - \delta^{13}$ would be identified. Empirically, $Q_{id}(\cdot)$ varies across debtors (via X^E) and districts (via $\hat{\beta}_d, \hat{\gamma}_d$). Additionally, exclusion restrictions exist: some variables in X^E are not in X^C.[32] Standard errors are bootstrapped to account for the generated regressors (Online Appendix D).[33]

4 Data and Descriptive Statistics

Our data come from the Federal Judicial Center's Integrated Database (IDB), which provides information on all U.S. bankruptcy cases since fiscal year 2008. We observe each filing's outcome and debtor characteristics, but we cannot track debtors across subsequent filings or outside the bankruptcy system. Accordingly, our analysis focuses on chapter choice and eligibility outcomes at the filing level. We do not observe or separately model post-ineligibility decisions, such as refiling under a different chapter or pursuing non-bankruptcy options.

4.1 Sample Selection

The IDB includes some demographic information, financial characteristics from bankruptcy schedules, and case outcomes, making it well-suited to study eligibility screening and chapter choice. To focus on geographic variation in eligibility screening and chapter choice, we impose several sample restrictions. First, we restrict to consumer Chapter 7 or Chapter 13 cases filed in fiscal years 2011–2015. Stopping in 2015 allows us to observe whether Chapter 13 plans were successfully completed. Second, we exclude eleven federal court districts: U.S. territories (small samples) and Alabama and North Carolina, which use a different type of bankruptcy administrator (not trustees) whose screening procedures are less well documented (Wells *et al.*, 1991). Third, we exclude cases

[32] Even without exclusion restrictions, identification of both δ^7 and δ^{13} would remain because of the interaction of X_i^C with the generated regressor Q_{id} and the nonlinear functional form.

[33] There are two other technical details worth noting. District fixed effects do not create an incidental parameters problem since d is small (83) while i is large, and we impose a lower bound of 0.1 on $Q^{13}(\cdot)$ (affecting 0.00056% of observations) to prevent Q_{id} from exploding.

with missing data (5.4% of cases), extreme financial values, and Chapter 13 ineligibility due to debt limits.[34] We also exclude cases dismissed for failure to pay the filing fee or file required information.[35]

Finally, we restrict the sample to debtors with positive monthly disposable income. This restriction is central to our focus on geographic variation. Among positive-income filers, the Chapter 7 filing rate varies from less than 20% to more than 80% across districts. By contrast, negative-income filers are effectively restricted to Chapter 7, leaving almost no cross-district variation to explain (Online Appendix Figure A3).[36] The final sample contains 2,489,171 cases of which 53% filed under Chapter 7.

4.2 Key Variables and Outcomes

Our primary dependent variables are chapter choice (Chapter 7 versus Chapter 13) and eligibility screening outcomes (eligible versus ineligible). We classify a case as *ineligible* if it is dismissed or converted shortly after filing.[37] We treat early dismissals and early conversions as capturing the same underlying screening outcome, ineligibility, because dismissal and conversion are the two main responses to ineligibility.[38] Overall, 1.7% of Chapter 7 cases and 5.7% of Chapter 13 cases are classified as ineligible.

Table 1 lists the dependent and explanatory variables and reports summary statistics separately for Chapter 7 and Chapter 13 filers. To reduce the influence of extreme outliers, all financial variables are winsorized at the 99^{th} percentile. The first panel covers variables related to eligibility.

[34] We retain cases where total liabilities and assets are between \$1,000 and \$5,000,000, average monthly income and expenses are positive and below \$50,000, and debts are below Chapter 13 limits as of 2013 (approximately \$380,000 in unsecured debt and \$1.15 million in secured debt). These restrictions exclude 4.3% of cases. We also exclude outliers in monthly disposable income (outside $[-\$2{,}000, \$2{,}000]$), which removes 3.9% of cases.

[35] These dismissals reflect payment or administrative issues unrelated to the eligibility screening that is our focus. Online Appendix Table A2 reports robustness checks that retain these cases in the dismissal-model estimation.

[36] The cross-district variance in chapter choice is 40 times larger among positive-income filers. Among debtors with zero or negative disposable income, 96.8% file under Chapter 7.

[37] For Chapter 7, where cases typically last only a few months, we include any dismissal or conversion. For Chapter 13, where over half of cases are eventually dismissed (mostly due to missed payments), we include only dismissals or conversions within four months of filing. The key early proceedings occur within roughly 95 days of filing, so restricting attention to dismissals or conversions within four months helps isolate eligibility-related outcomes from later plan failure or noncompliance. We do not use the reason for dismissal, as the majority of dismissals do not specify a reason (Online Appendix Table A1).

[38] The Bankruptcy Code provides that cases deemed abusive under the totality test can be either dismissed or converted (Chapter 7, 11 U.S.C. §707(b)). Similarly, cases failing the means test can convert to Chapter 13 or be dismissed.

For the totality test, the key determinants are the debtor's monthly disposable income[39] and the share of unsecured debt that could be repaid over a five-year plan.[40] For the means test, the key factor is whether the debtor's income exceeds the state median. We construct an indicator for above-median-income (`AMI`) using a one-person household for single filers and a two-person household for joint filers, though we examine robustness to several alternatives.[41]

The second panel covers variables that affect chapter choice beyond eligibility, including the debtor's overall financial situation (debts and assets), homeownership, home equity, nonexempt assets, and the zip-code share of Black residents. For nonexempt equity, we follow Pattison and Hynes (2020) and calculate home equity net of the applicable homestead exemption.[42] Consistent with expectations, Chapter 7 filers have lower disposable income, are less likely to be homeowners, and have less nonexempt equity.

5 Results

5.1 Eligibility Model

Table 2 reports the coefficient estimates and marginal effects (MEs) for the average debtor from the eligibility model in equation (1).[43] Panel A reports the β estimates for below-median-income debtors, reflecting the totality test alone. Panel B reports the $\beta + \gamma$ estimates and MEs for above-median-income debtors, reflecting the combined effect of both tests.

As a benchmark, we begin with the Chapter 7 eligibility results from a model estimated on the full national sample (i.e., pooling all districts together). Both the totality test (applied to all debtors) and the means test (applied to above-median-income debtors) restrict eligibility in

[39] Disposable income is defined as Schedule I income less Schedule J expenses. This is the standard measure used by trustees to assess ability to pay; see Wells *et al.* (1991). We adjust for conduit districts as discussed in Online Appendix B.

[40] Calculated as $(60 \times \text{disposable income} - \text{priority unsecured debt})/\text{nonpriority unsecured debt}$.

[41] Because we do not observe household size, we classify debtors as below-median if their income falls below the minimum applicable threshold. Online Appendix C provides additional details and robustness checks.

[42] Specifically, nonexempt equity equals $\max\{\text{real property value} - \text{secured debt} - \text{homestead exemption}, 0\}$, applying the married exemption to joint filers and the federal exemption if it is higher and available. We use exemption data from Indarte (2023).

[43] The MEs are for a hypothetical debtor with an eligibility probability of $\hat{Q}_{\bar{c}} = 0.95$ for $c = 7, 13$, which approximately matches the mean eligibility rates in the full sample ($\bar{\hat{Q}}_7 = 0.956$ and $\bar{\hat{Q}}_{13} = 0.936$). These mean predicted eligibility rates are lower than the observed eligibility rates in Table 1. The difference in these means comes from the underlying sample; for each chapter, predicted eligibility is averaged over the full sample (including those who chose the other chapter), whereas the observed eligibility rates are calculated only among those who chose that chapter.

Chapter 7. The totality test primarily screens debtors based on ability to pay, measured by monthly disposable income (`disp_income`) and the percentage of debt that would be repaid over a five-year plan (`pct_repay5`). The corresponding MEs indicate that an additional $1,000 in monthly disposable income or the ability to repay 100% of unsecured debt over a five-year plan (relative to repaying 0%) reduces eligibility by 4–5 percentage points (pp), doubling the probability of ineligibility for the average filer. Among the other variables in Panel A, filing pro se is most important; it sharply reduces the probability of eligibility, consistent with some prior estimates (Norberg and Velkey, 2005). Panel B reports estimates for above-median debtors; the ability-to-pay measures are more negative, reflecting the means test, and the difference is significant at the 5% level.

Columns (3) and (4) report the 10^{th} and 90^{th} percentiles of the MEs across the 83 district-specific Chapter 7 eligibility models, revealing significant geographic heterogeneity in screening. In Panel A, the MEs of the totality test's two ability-to-pay measures vary by an order of magnitude across districts, ranging from a reduction in eligibility of 8–10pp (10^{th} percentile) to a reduction of 1pp or less (90^{th} percentile). Panel B shows similar heterogeneity for above-median debtors.

Panel C computes the overall effect of the means test on eligibility. Specifically, we report the average marginal effect (AME) of the means test, defined as the average difference in predicted eligibility when $\texttt{AMI} = 1$ compared to when $\texttt{AMI} = 0$, calculated over either the full national sample or the sample of above-median filers. For above-median filers, the means test reduces average eligibility for Chapter 7 by 6.8pp in the national model. In district-specific models, however, the AME varies from -14.6pp to -3.8pp. These *district-specific* AMEs are still computed over the *national* sample of above-median debtors, so the cross-district differences in the AMEs arise solely from heterogeneity in the estimated parameters. Thus, despite being mostly formulaic, the impact of the means test varied widely across districts.[44]

The impact of the means test in Chapter 13, reported in Panel C columns (6)-(8), serves as a falsification check: because the means test screening does not apply to Chapter 13, it should have little impact on Chapter 13 eligibility. Consistent with this, the estimated effect of the means test

[44]Our primary measure of `AMI` uses one-person households for single filers and two-person households for joint filers. In Online Appendix C, we show that results are robust to alternative measures, including different thresholds and an independent measure available for a subset of districts. District-specific AMEs of the means test are highly correlated across measures (correlations range from 0.81 to 0.92).

on Chapter 13 eligibility is essentially zero in the national model and the district-specific estimates are small and clustered around zero. The signs of other Chapter 13 coefficients also align with expectations: the ability to repay a larger share of debt is associated with *increased* eligibility under Chapter 13 in most districts, contrasting with Chapter 7 where both ability to repay and disposable income reduce eligibility.

As a supplementary external validation exercise showing that our models capture eligibility screening, we compare the model-implied district-level dismissal rates to external measures of U.S. Trustee screening enforcement activity. Online Appendix Table A5 shows that districts with higher model-implied Chapter 7 dismissal rates have more enforcement activity under §707(b), the provision related to ability-to-pay screening through the totality test and means test. There is little relationship with other enforcement actions related to procedural defects (e.g., delays, documentation) and fraud, or other categories.

5.2 Chapter Choice Model

We now turn to the results from the model for chapter choice in equation (6). We focus our discussion around two questions. First, do debtor characteristics differentially affect the benefits of filing under Chapter 7 versus Chapter 13? Second, are debtors forward-looking and do they incorporate eligibility into their chapter choice decision?

The estimates are reported in Table 3. These coefficients reflect the effect of each covariate on the utility of an eligible filing relative to ineligibility, with positive coefficients increasing the value of an eligible filing relative to ineligibility. The difference $\delta^7 - \delta^{13}$ in column (5) captures how each characteristic shifts chapter choice preferences: negative values indicate a relative preference for Chapter 13, while positive values indicate a relative preference for Chapter 7. As expected, debtors with more secured debt, nondischargeable debt, or nonexempt home equity prefer Chapter 13, consistent with its advantages for retaining collateral and restructuring obligations. The nonexempt equity effect is particularly large relative to other debt and equity variables, reflecting the strong incentive to use Chapter 13 to protect assets that would otherwise be liquidated under Chapter 7. Conversely, joint filers and those with a recent income drop show a modest preference for Chapter 7.

While the individual estimates are of interest, our primary focus is on the responsiveness of

chapter choice to changes in expected eligibility. The bottom row in Table 3 reports the AME of a change in the eligibility ratio, Q.[45] The estimate indicates that, on average, a 1pp increase in Chapter 7 eligibility increases the probability of filing Chapter 7 by 1.84pp. This effect translates to an average elasticity of chapter choice with respect to Q of 4.98, indicating that a 1% increase in Chapter 7 eligibility (or a 1% decrease in Chapter 13 eligibility) raises the probability of filing under Chapter 7 by 4.98%. Given this sensitivity to eligibility, cross-district heterogeneity in screening practices will strongly influence chapter choice.

Figure 2 shows the cross-district variation in screening and its impact on chapter choice. Figure 2(a) shows a histogram of districts' predicted eligibility ratios for a debtor with the average characteristics in the national sample, $\bar{X}$. The predicted eligibility ratio, Q, ranges from 0.954 to 1.19, indicating that some districts view this representative debtor as better suited for Chapter 13 (ratio < 1), whereas others view the same debtor as better suited for Chapter 7 (ratio > 1). This variation is due to differences in both Chapter 7 and Chapter 13 screening across districts, which we examine separately in Section 6. Figure 2(b) shows how this cross-district variation in eligibility screening affects chapter choice. The cross-district variation in the eligibility ratio changes the probability that a debtor with characteristics $\bar{X}$ files under Chapter 7 from less than 50% (when $Q = 0.954$) to more than 75% (when $Q = 1.19$).

The large response to eligibility may seem surprising because early dismissal or conversion is relatively rare; Table 1 shows that only 1.7% of Chapter 7 and 5.7% of Chapter 13 filed cases are ineligible. However, dismissals are rare, in part, because debtors strongly sort into the chapter with a lower probability of dismissal. Debtors who actually file under Chapter 7 face low dismissal risk, with a mean expected eligibility $\bar{Q}_7$ of 98.3%. In contrast, our model predicts that, if those who filed under Chapter 13 had instead filed under Chapter 7, they would have faced a higher dismissal risk, with a mean eligibility $\bar{Q}_7$ of only 89.2%.

6 Geographic Variation in Eligibility Screening and Chapter Choice

This section analyzes geographic heterogeneity in bankruptcy eligibility screening and its relationship to chapter choice. We briefly review the drivers of geographic variation in chapter choice,

[45] The formulas for the marginal effect of Q and the elasticity of chapter choice with respect to Q are in Section 3.

document the chapter-specific variation in eligibility screening, and examine the correlation between screening practices and the geographic variation in chapter choice.

6.1 Related Literature

Geographic variation in chapter choice is large and remarkably persistent. In our sample period, the cross-district Chapter 7 share, defined as the share of bankruptcies under Chapter 7, ranges from 22% to 94%. This variation in chapter choice has been largely stable for decades. As early as the 1960s, scholars documented similar cross-district differences and debated whether they reflected local practices, professional attitudes, or state laws (McDuffee, 1961; Haden, 1966). Despite major changes in economic conditions and bankruptcy law over the past twenty years, the correlation between districts' Chapter 7 share in 1990 and 2011–2015 is 0.73. The persistence of the geographic variation in chapter choice suggests the underlying causes are slow-moving, place-based factors.

A broad empirical literature examines legal, economic, and demographic determinants of bankruptcy filings and chapter choice, many of which have also been persistent over time. These studies identify the importance of legal factors such as attorney fees, exemptions, garnishment protections, and payday lending regulations (McIntyre *et al.*, 2015; Albanesi and Nosal, 2022; Fay *et al.*, 2002; Pattison and Hynes, 2020; Dawsey and Ausubel, 2002; Miller, 2019; Skiba and Tobacman, 2019). They also identify the importance of economic factors such as unemployment, medical debt, household balance sheets, and liquidity constraints (Keys, 2018; Gross and Notowidigdo, 2011; Dobkin *et al.*, 2018; Foohey *et al.*, 2020; Morrison *et al.*, 2020; Domowitz and Sartain, 1999; Zhu, 2011; Gross *et al.*, 2014; Foohey *et al.*, 2016), and demographic factors, particularly that Black debtors are more likely to file for or be steered into Chapter 13 (Dickerson, 2012; Braucher *et al.*, 2012a,b). However, most of these studies focus on cleanly identifying the causal effect of one specific factor on bankruptcy filing or chapter choice, rather than quantifying how much each factor contributes to the geographic variation in chapter choice.[46]

A smaller set of papers directly examines the correlations between these factors and the geographic variation in bankruptcy filing rates or chapter choice. Lefgren and McIntyre (2009) finds that wage garnishment restrictions and the Chapter 13 share (as a proxy for local legal culture)

[46] An exception is McIntyre *et al.* (2015), which attributes 5.4% of the cross-district variation in Chapter 13 shares to attorney fees.

statistically explain much of the cross-state variation in filing, while exemption levels play little role. Lawless and Littwin (2017) shows that race, case characteristics, and district fixed effects are the most important factors in a logit model of chapter choice. Beck *et al.* (2014) highlights the role of ideological factors, especially Evangelical and Fundamentalist shares, in explaining Chapter 13 usage and the prevalence of Chapter 13 in the South. Using a movers design to more cleanly separate person- and place-based factors driving filing patterns, Keys *et al.* (2020) finds that only wage garnishment restrictions strongly correlate with the place-based component. There is little correlation between the place-based component and exemption levels or other covariates capturing legal and economic conditions. Overall, these papers suggest that race, garnishment restrictions, and ideology are important, exemptions matter little, and that much of the variation in filing patterns remains unexplained by state laws or observable economic conditions.

This unexplained variation in chapter choice is often attributed to local legal culture, i.e., how bankruptcy professionals interpret and apply federal bankruptcy law. An early legal literature, consisting of detailed interviews with bankruptcy professionals, documented significant heterogeneity in many local rules and informal norms (Braucher, 1993; Sullivan *et al.*, 1994). Recent empirical work has begun to examine variation among legal professionals that reflects aspects of local legal culture, including judge-level heterogeneity in Chapter 13 dismissals (Dobbie and Song, 2015), attorney specialization (Lefgren *et al.*, 2010), and racial steering by attorneys (Braucher *et al.*, 2012a,b). Argyle *et al.* (2023) shows that trustee race affects Chapter 13 dismissals but not Chapter 7. This paper contributes by documenting systematic cross-district heterogeneity in one aspect of local legal culture, eligibility screening by trustees and judges, and linking it to the longstanding geographic patterns in chapter choice.

6.2 Measuring Geographic Heterogeneity in Eligibility Screening

We examine the cross-district variation in chapter-specific eligibility screening that is captured by the district-specific screening functions $Q_7^d(X^E)$ and $Q_{13}^d(X^E)$. Under these screening functions, eligibility varies across districts and with debtor characteristics. To isolate the cross-district variation in screening, apart from differences in the characteristics of debtors, we report each district's average predicted dismissal probability $(1 - Q_c^d)$ computed over the full national sample of filers. We refer to $1 - Q_c^d$ as the predicted dismissal rate. This measure isolates district-level heterogeneity

in the screening functions while keeping the composition of filers constant.

Across districts, there is substantial variation in both Chapter 7 and Chapter 13 screening. Chapter 7 predicted dismissal rates range from 1.5% (Arizona) to 15.7% (Western District of Louisiana), with a median of 5.6% and an interdecile range (10^{th}-90^{th}) of 2.7% to 9.7%. Chapter 13 dismissal rates exhibit similar dispersion, ranging from 1.2% (Colorado) to 19.6% (California Central) with a median of 4.8% and an interdecile range of 2.1% to 9.2%. As a result, otherwise similar debtors face markedly different predicted dismissal risks depending on where they file. This variation is caused by heterogeneous screening in both chapters; Online Appendix E decomposes the district-level predicted eligibility ratio and shows that cross-district variation in $\log(Q_7^d/Q_{13}^d)$ is driven by similarly sized variance in the Chapter 7 and Chapter 13 dismissal rates.

Figure 3 maps these predicted dismissal rates, showing elevated Chapter 7 dismissals in parts of the Deep South and higher Chapter 13 dismissals in parts of the West; overall, there are few clear geographic patterns. Screening stringency across chapters is only weakly correlated: the correlation between district-level Chapter 7 and Chapter 13 dismissal rates is -0.13 ($p = 0.258$). Districts that screen aggressively under one chapter do not necessarily do so under the other (Online Appendix E). Some districts (e.g., Middle and Western Districts of Tennessee) have high dismissal rates under both chapters; others have high dismissal rates in one chapter and low dismissal rates in the other (e.g., District of Connecticut and Western District of Missouri), while still others (e.g., District of Colorado) have low dismissal rates under both.

6.3 Screening and the Geography of Chapter Choice

We now examine whether the variation in eligibility screening is correlated with the persistent variation in chapter choice, controlling for a rich set of legal, economic, demographic, and ideological controls drawn from the literature.[47] The analysis is correlational and does not necessarily identify causal effects of dismissal rates or other district characteristics on chapter choice.

Figure 4(a) presents bivariate OLS estimates regressing districts' Chapter 7 shares (2011–2015) on a set of district- or state-level controls. All variables are standardized.[48] Chapter 7 predicted

[47] A complete list of variables, definitions, and data sources is provided in Online Appendix Table E1, along with summary statistics in Online Appendix Table E2.

[48] Both the dependent and independent variables are standardized to mean zero and standard deviation one, so the coefficient magnitudes are comparable across variables.

dismissal rates have the second-largest bivariate correlation with Chapter 7 share, behind only the share of Black residents. Chapter 13 predicted dismissal rates are only weakly related in bivariate specifications. Many other variables also exhibit strong bivariate correlations. The legal variables (attorney fees, homestead exemptions, wildcard exemptions, and garnishment protection), however, show little systematic relationship with Chapter 7 share.

In the multivariate regression controlling for all variables (Panel B), both dismissal rates exhibit strong, statistically significant relationships with Chapter 7 share. A one-standard-deviation increase in Chapter 7 dismissal rates is associated with a 0.19 standard deviation decrease in the Chapter 7 share ($p < 0.03$), while a one-standard-deviation increase in Chapter 13 dismissal rates is associated with a 0.20 standard deviation increase in the Chapter 7 share ($p < 0.01$). These are two of only six variables significant at the 5% level. Consistent with prior work, garnishment protection and the share of Black residents also exhibit significant associations, while exemptions matter little. These patterns are consistent with the prior literature, which emphasizes race, garnishment restrictions, and ideology in explaining geographic variation in chapter choice, while suggesting a more limited role for exemptions.[49]

To quantify the contribution of dismissal rates, we use the Lindeman *et al.* (1980) (LMG) variance decomposition, which partitions the model's R^2 into additive contributions from each group of regressors.[50] Table 4 reports results across specifications. In column (1), predicted dismissal rates, when included alone, explain 22% of the variation in Chapter 7 share. Across columns (2)-(5), the Chapter 7 dismissal coefficient shrinks but remains significant, and the Chapter 13 coefficient becomes significant once demographic or ideological controls are included.

In the full model (column 6), which matches the multivariate results in Figure 4(b), both predicted dismissal rates retain sizable and statistically significant coefficients (-0.19 for Chapter 7 and 0.20 for Chapter 13). Demographic and ideological variables account for the largest shares of overall variation (0.26 and 0.22, respectively), but dismissal rates continue to contribute nontrivially

[49] See, for example, Lefgren and McIntyre (2009), Lawless and Littwin (2017), and Beck *et al.* (2014). Our estimates line up with these papers in highlighting race, garnishment restrictions, and ideological factors, while suggesting a more limited role for exemptions.

[50] The LMG decomposition computes the average marginal contribution of each variable to R^2 across all possible orderings of variables, avoiding order-dependence issues with correlated regressors. This approach has several desirable properties: the contributions of all variables sum to the R^2 of the full model, any variable with a nonzero coefficient in the full model receives a nonzero weight, and the method avoids the negative importance weights that can arise in alternative decompositions (Grömping, 2007). It is equivalent to a Shapley value decomposition (Lipovetsky and Conklin, 2001).

(0.11). The portion attributed to dismissal rates exceeds the combined contribution of all legal variables (attorney fees, exemption levels, and garnishment protections), which together explain only 0.08 of the variation. This indicates that heterogeneous eligibility screening captures variation in local screening practices that standard legal variables do not, and that this variation is correlated with a meaningful portion of the geographic differences in chapter choice.

Online Appendix E examines how the predicted dismissal rates are related to the other observable district characteristics. Two main results emerge. First, the other observable legal, economic, demographic, and ideological variables explain only 37.1% of the variation in Chapter 7 dismissal rates and 35.8% of the variation in Chapter 13 dismissal rates, so most of the cross-district heterogeneity in screening remains unexplained by standard covariates.[51] Dismissal rates therefore appear to capture an additional institutional dimension of local legal culture beyond the standard district covariates. Second, a Gelbach decomposition shows that most of the change in the dismissal-rate coefficients from the simple model (Table 4 column 1) to the full model (Table 4 column 6) comes from demographic and ideological controls, with the share of Black residents and some ideological variables being particularly important.

7 Evaluating BAPCPA's Means Test

The 2005 bankruptcy reform, BAPCPA, was the largest change to the U.S. bankruptcy code since the 1980s. Its flagship feature, the means test, aimed to shift high-income filers out of Chapter 7 into Chapter 13 (or out of bankruptcy altogether). Identifying the means test's impact is challenging because BAPCPA was a national change that introduced numerous concurrent provisions. We address this by using our model to generate counterfactual, district-specific predictions that isolate the means test's impact, then comparing these predictions to observed changes around the 2005 implementation. Since our model is estimated using 2011–2015 data, this comparison provides an out-of-sample validation of the model-generated predictions.

[51] This is distinct from the LMG decomposition in Table 4, which asks how much each regressor group contributes to the cross-district variation in Chapter 7 share. The regressions in Online Appendix E instead ask how much of the variation in the dismissal rates themselves is explained by the observable controls, and the Gelbach decomposition asks which controls account for the change in the dismissal-rate coefficients when moving from the simple Chapter 7-share regression to the full model.

7.1 Model-Generated Impact of the Means Test

Empirical Strategy

We generate counterfactual predictions by setting $\gamma_d = 0$ (shutting off the means test), differencing with the baseline predictions to obtain district-level predicted impacts on eligibility (ΔQ_c^d) and chapter choice (ΔP_d).[52] Since our model is estimated only on filers with positive disposable income, the overall district-level effect is $\Delta P_d^O = DI_d \times \Delta P_d$, where DI_d is the share of filers with positive disposable income in district d.[53]

Results

Figure 5(a) shows that the means test reduces Chapter 7 eligibility across all districts, with a mean change of -3.1pp and significant heterogeneity ranging from -8.4pp to -0.14pp. Effect sizes are relatively modest because many filers are below the median income and, in several districts, the means test provided little additional screening beyond the pre-existing totality test. This is consistent with anecdotal reports by practitioners (Wedoff, 2005; Littwin, 2016). As expected, Chapter 13 eligibility is largely unaffected by the means test (mean change of 0.051pp).

Figure 5(b) shows that tighter Chapter 7 screening reduces the Chapter 7 share by an average of 9.6pp. However, district-level variation is substantial, ranging from less than 5pp to more than 20pp, driven by the interaction between the means test, pre-existing totality tests, and debtor characteristics.

Does heterogeneity in the means test mitigate or exacerbate geographic variation in screening? The means test may mitigate this variation if it offsets the pre-existing variation in the totality test by bringing all districts to the same standard. Indeed, increasing uniformity was one goal of the means test (Sylvester, 2009). Alternatively, the means test may complement existing screening if districts that already tightly screen access to Chapter 7 also implement the means test more

[52] At the individual level, the effect of the means test on predicted Chapter c eligibility is $Q_c(X_i; \hat{\beta}_d, \hat{\gamma}_d) - Q_c(X_i; \hat{\beta}_d, 0)$, and the effect on the predicted probability of filing under Chapter 7 is $P_7(X_i; \hat{\beta}_d, \hat{\gamma}_d, \hat{\delta}) - P_7(X_i; \hat{\beta}_d, 0, \hat{\delta})$, where $P_7(\cdot)$ denotes the Chapter 7 filing probability from equation (6). We also zero the coefficient on `AMI` (δ_{16}^c), which accounts for the means test's restrictions on above-median-income Chapter 13 plans. We then average these individual-level predictions over all filers within each district to form ΔQ_c^d and ΔP_d.

[53] We assume that debtors with negative disposable income are unaffected by the means test because 96.8% file under Chapter 7, 74.8% are below-median income, and those with above-median income would almost certainly qualify for Chapter 7 under the expense-based portion of the means test.

strictly.[54] This would exacerbate geographic variation in screening and increase disparities in chapter choice.

Our results support the "complement" hypothesis. Figure 6(a)[55] reveals a strong positive correlation (slope 0.38) between the predicted pre-means-test dismissal rates and the predicted impact of the means test: districts that already screened strictly under the totality test saw the largest increases in dismissal rates. Figure 6(b) shows that districts with stricter pre-means-test eligibility screening also have larger predicted declines in Chapter 7 filing rates once the means test is added (slope -0.54).[56] These findings suggest that the means test reinforced existing local legal cultures, thereby amplifying geographic variation in bankruptcy outcomes.

7.2 Comparison to Observed Changes

Empirical Strategy

The results above come solely from model-generated predictions of the means test's impact, with the model estimated on data from 2011–2015. To test our model's predictions, we compare these predicted impacts to the actual district-level changes in chapter choice around BAPCPA's 2005 implementation. We use the model-predicted change ΔP_d^O as a covariate in a regression using district-quarter data on nonbusiness bankruptcy filings for 2001–2019 from the Administrative Office of the United States Courts:[57]

$$\texttt{Ch.7}_{dt} = \beta_0 + \beta_1 \texttt{Post}_t \times \Delta P_d^O + \delta_d + \tau_t + \texttt{controls}_{dt} + u_{dt} \tag{7}$$

where $\texttt{Ch.7}_{dt}$ is the Chapter 7 share, $\texttt{Post}_t$ marks the post-BAPCPA era (2005Q4+), and δ_d and τ_t are district and quarter fixed effects. While perfect prediction would yield $\beta_1 = 1$, we expect some attenuation due to measurement error, unmodeled BAPCPA provisions, changes in the composition

[54] As discussed in Section 2, there remains a broad discretionary component to the means test when trustees decide whether mitigating circumstances of the debtor can rebut the presumption of abuse.

[55] In this analysis, we use predicted dismissal rates, defined as the complement of eligibility: $1 - Q_c$ for chapter c. As discussed in Section 4, ineligibility is measured using early dismissals or conversions. Predicted dismissal rates vary more visibly near zero than eligibility rates near one.

[56] The means test has little relation to heterogeneity in Chapter 13 screening. Online Appendix Figure A4 shows essentially no systematic relationship between pre-means-test Chapter 13 predicted dismissal rates and the means test's impact (slope -0.07).

[57] Excludes Arkansas (unreported districts) and the post-Covid period. Quarterly data from Table F-2. Case-level bankruptcy data published by the FJC are only available for the post-BAPCPA period.

of filers, and changes in economic conditions.

Results

Table 5 reports results. Because ΔP_d^O is negative when the model predicts that the means test reduces Chapter 7 filing, a positive β_1 means districts with larger predicted reductions experienced larger actual reductions. The baseline estimate (column 1) is $\beta_1 = 0.52$ ($p < 0.01$), indicating that a 1pp model-predicted decline in a district's Chapter 7 rate is associated with a 0.52pp actual decline in the Chapter 7 rate around BAPCPA. Columns 2–5 add controls for homestead exemptions (Morgan *et al.*, 2012), income distributions (Cornwell and Xu, 2014), attorney fees (Lupica, 2012), and pre-BAPCPA (2003–2004) Chapter 7 shares as a proxy for other aspects of local legal culture (Chakrabarti and Pattison, 2019).[58] The point estimates generally increase as we control for these factors, aligning more closely with model predictions.

Our preferred specification in column (6) allows for flexible, time-varying geographic differences by including region-by-quarter fixed effects for the four Census regions. These controls address concerns that the results are driven by broader shocks to geographic regions, such as the South, where Chapter 13 is most common. The coefficient on $\texttt{Post}_t \times \Delta P_d^O$ indicates that a 1pp model-predicted decline is associated with a 0.65pp decrease in the district's actual share of bankruptcies under Chapter 7, and we cannot reject the null that β_1 equals one at conventional levels of statistical significance. Column (7) confirms that the effect is driven by the predicted impact itself rather than simply the share of filers with positive disposable income by explicitly accounting for the share of bankruptcies with negative disposable income in each district. Recall that $\Delta P_d^O = DI_d \times \Delta P_d$, so the correlation could reflect either variation in the share of filers potentially affected by the means test (DI_d) or variation in the predicted effect among those filers (ΔP_d). The coefficient estimate is $\beta_1 = 0.47$ after controlling for DI_d, indicating that the model's predicted impact of the means test – not simply the share of filers with positive disposable income – drives the correlation.

Figure 7 plots coefficients from an event study specification.[59] Prior to 2004, there is essentially

[58] The pre-BAPCPA share under Chapter 7 is similar to a lagged dependent variable model. As such, we do not expect this covariate to be strictly exogenous, which is required given the inclusion of district fixed effects. However, the bias – referred to as Nickell (1981) bias – disappears asymptotically for large T. Because $T = 76$ in our estimation, this concern is likely negligible.

[59] Formally,

$$\texttt{Ch.7}_{dt} = \alpha_0 + \sum_{k \neq 2003Q1} \gamma_k \Delta P_d^O \times 1[t = k] + \delta_d + \tau_t + \texttt{controls}_{dt} + u_{dt}$$

no relationship between ΔP_d^O and district changes in $\texttt{Ch.7}_{dt}$, though there is slight seasonality in filings. There are large, negative coefficients in 2005Q2–2005Q4, reflecting that districts for which our model predicts a large decline in Chapter 7 filings *after* the introduction of the means test experience an increase in Chapter 7 filings immediately *before* the law went into effect. This pattern reflects the well-known rush to file under Chapter 7 and shows that it was most severe in districts where our model predicts the means test to be most binding (Morgan *et al.*, 2012). Finally, once BAPCPA is in effect, the predicted change aligns well with the actual changes, as the estimates vary from roughly 0.25 to 0.75. The timing supports the model's ability to generate out-of-sample predictions for this major policy change.

Finally, as a separate check, we test our prediction that BAPCPA's means test amplified the geographic variation in screening and chapter choice. Consistent with the model's prediction, the cross-district standard deviation in Chapter 7 filing rates increased by 10.2%, and the coefficient of variation increased by 22.4%. As shown in Online Appendix Figure A5, the timing of this increased dispersion coincides with BAPCPA's rollout. That is, the means test interacted with local legal cultures and debtor composition to reinforce, rather than offset, the long-standing geographic disparities in chapter choice in the U.S. bankruptcy system.

8 Conclusion

Despite operating under a uniform federal bankruptcy code, otherwise similar debtors face markedly different access to Chapter 7 relief depending on where they file. This paper develops a model of consumer bankruptcy chapter choice that incorporates two previously overlooked features of eligibility screening: (i) the multiple tests trustees and judges use to determine eligibility and (ii) geographic heterogeneity in how those tests are implemented. Using case-level data from 83 court districts, we estimate district- and chapter-specific screening models and uncover substantial variation in local practices. Predicted dismissal rates for an observationally identical debtor differ by roughly an order of magnitude across districts, and these screening differences are strongly associated with persistent geographic variation in chapter choice even after accounting for standard legal, economic, and demographic factors.

omitting 2003Q1 as the reference period to better display anticipation effects in 2005.

Our counterfactual analysis of BAPCPA's means test further underscores the importance of implementation heterogeneity. Although enacted as a uniform federal reform, its effects on screening and chapter choice were highly uneven across districts: some experienced little change, while others saw large reductions in access to Chapter 7. Indeed, a policy intended in part to standardize eligibility instead amplified geographic disparities because districts with stricter pre-existing screening also tended to apply the new means test more aggressively. The model's district-level predictions align with observed changes following BAPCPA, providing external validation for the framework.

More broadly, our findings provide quantitative support for what qualitative accounts of local legal culture in bankruptcy have long argued (Braucher, 1993; Sullivan *et al.*, 1994; Lawless and Littwin, 2017): local implementation can fundamentally shape the consequences of federal law. Screening practices determine who receives Chapter 7's fresh start and how repayment burdens are allocated between debtors and creditors. Achieving greater uniformity in bankruptcy outcomes therefore requires attention not only to statutory rules but also to the institutions and practices that govern their enforcement. Ultimately, uniform statutes need not produce uniform economic outcomes when implementation authority remains decentralized.

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TABLE 1
SUMMARY STATISTICS

variable	definition	Chapter 7 mean	Chapter 7 std. dev.	Chapter 13 mean	Chapter 13 std. dev.	difference
	(1)	(2)	(3)	(4)	(5)	(6)
Eligibility Variables						
elig	eligible (%)	98.3	12.8	94.3	23.2	4.0
converted_early	convert shortly after filing (%)	0.8	9.1	0.9	9.6	-0.1
dism_early	dismiss shortly after filing (%)	0.8	9.2	4.8	21.3	-3.9
disp_income	monthly disposable income ($1,000s)	0.1	0.2	0.5	0.4	-0.4
pct_repay5	debt repaid in 60-month plan (%)	13.3	23.6	64.5	37.3	-51.3
inc_drop	income drop at least $500 (%)	43.7	49.6	46.1	49.9	-2.5
expense_gap	actual exp. - IRS standards ($1,000s)	-0.4	1.3	-0.1	1.5	-0.3
pro_se	pro se filer (%)	4.9	21.6	1.5	12.2	3.4
joint_file	joint filing (%)	31.0	46.3	32.0	46.7	-1.0
AMI	income above median (%)	29.6	45.6	45.2	49.8	-15.6
amt_above_means	amount above median annual inc. ($1,000s)	5.2	11.7	12.3	19.8	-7.1
Chapter Choice Variables						
avgmnthi	average monthly income at filing ($1,000s)	3.0	1.4	3.7	1.8	-0.7
cntmnthi	avg. monthly inc. past 6 months ($1,000s)	3.2	2.1	4.0	2.7	-0.9
debt_to_income	total liabilities over annualized `avgmnthi`	4.2	4.4	4.0	3.4	0.2
assets_to_income	total assets over annualized `avgmnthi`	2.4	3.1	3.0	3.0	-0.6
unsec	unsecured debt ($1,000s)	60.1	56.3	48.0	52.9	12.1
sh_secured	share secured debt (%)	39.3	34.9	60.8	32.1	-21.6
sh_nondischarge	share non-dischargeable debt (%)	6.2	16.1	7.7	17.6	-1.5
homeowner	homeowner (%)	48.2	50.0	67.1	47.0	-19.0
sh_real	real property over total assets (%)	38.0	41.6	53.7	40.3	-15.7
pos_equity	pos. home equity ($1,000s)	4.9	18.2	8.5	25.6	-3.5
neg_equity	neg. home equity ($1,000s)	18.2	42.9	32.0	57.5	-13.8
nonexempt_equity	nonexempt home equity ($1,000s)	0.8	6.9	2.8	12.9	-2.0
pct_black	zip percent Black	13.0	19.5	23.7	27.2	-10.7
irs_expense	IRS local standard exp. ($1,000s)	3.3	0.8	3.3	0.8	0.0
Observations		1,318,558		1,170,613		

Notes: Summary statistics for the consumer bankruptcy cases in the analysis sample. Column 6 reports the difference in means between column (2) and column (4). Online Appendix Tables A3 and A4 provide detailed variable definitions.

Table 2
Eligibility Models

	Chapter 7				Chapter 13			
	National Model		District Models		National Model		District Models	
	Est.	ME	ME (10th)	ME (90th)	Est.	ME	ME (10th)	ME (90th)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A: Estimates (β) and Marginal Effects for Below-Median Inc. (AMI= 0)								
disp_income	-0.82	-0.040	-0.080	0.002	-0.44	-0.020	-0.040	0.037
	(0.035)				(0.016)			
pct_repay5	-0.97	-0.050	-0.100	-0.010	0.31	0.015	0.000	0.044
	(0.038)				(0.015)			
inc_drop	0.50	0.019	-0.010	0.030	0.54	0.020	-0.010	0.031
	(0.025)				(0.016)			
expense_gap	-0.06	0.000	-0.020	0.004	0.13	0.006	-0.010	0.013
	(0.0088)				(0.0053)			
pro_se	-1.21	-0.100	-0.270	-0.020	-2.59	-0.360	-0.520	-0.130
	(0.02)				(0.016)			
joint_file	0.09	0.004	-0.030	0.015	0.68	0.024	-0.010	0.026
	(0.022)				(0.015)			
(Intercept)	4.63				2.67			
	(0.015)				(0.012)			
B: Estimates ($\beta + \gamma$) and Marginal Effects for Above-Median Inc. (AMI= 1)								
disp_income	-1.20	-0.060	-0.100	-0.040	-0.40	-0.020	-0.040	0.016
	(0.035)†				(0.017)			
pct_repay5	-1.20	-0.060	-0.110	-0.020	0.49	0.023	0.002	0.059
	(0.044)†				(0.02)†			
inc_drop	0.12	0.005	-0.060	0.023	0.53	0.020	-0.020	0.027
	(0.033)†				(0.02)			
expense_gap	-0.09	0.000	-0.010	0.006	-0.02	0.000	-0.010	0.008
	(0.01)†				(0.0071)†			
joint_file	-0.06	0.000	-0.040	0.010	0.51	0.019	-0.020	0.026
	(0.022)†				(0.016)†			
amt_above_means	-0.04	0.000	0.000	0.000	0.00	0.000	0.000	0.001
	(7e-04)†				(0.00053)			
(Intercept)	5.01				2.57			
	(0.034)†				(0.021)†			
C: Average Marginal Effects of Means Test								
Sample: All		-0.025	-0.057	-0.010		0.000	-0.024	0.019
Sample: AMI= 1		-0.068	-0.146	-0.038		-0.007	-0.017	0.015
Observations	1,318,558				1,170,613			

Notes: Logit estimates of eq. (1) for Ch. 7 (cols. 1–4) and Ch. 13 (cols. 5–6). For each chapter, cols. 1–2 show national estimates and marginal effects (ME); cols. 3–4 report the 10th/90th percentiles from 83 district-by-chapter models. MEs are evaluated at $\hat{Q}_c = 0.95$ (sample mean). Panel A: below-median debtors (β); Panel B: above-median debtors ($\beta + \gamma$). † marks the significance of $\gamma \neq 0$ at the 5% level. Panel C reports the average ME of `AMI` (means test) for (i) full sample and (ii) above-median debtors.

TABLE 3
CHAPTER CHOICE MODEL

	Ch.7 coef. (δ_7)		Ch.13 coef. (δ_{13})		$\delta_7 - \delta_{13}$	p-value	AME
	est.	std. err.	est.	std. err.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
avgmnthi	-0.58	(0.03)	-0.57	(0.03)	-0.01	0.198	-0.01
cntmnthi	-0.38	(0.03)	-0.43	(0.03)	0.05	<0.001	0.05
debt_to_income	-0.05	(0.01)	-0.16	(0.01)	0.11	<0.001	0.11
assets_to_income	-0.03	(0.01)	0.01	(0.01)	-0.04	<0.001	-0.04
unsec	5.68	(0.69)	8.43	(0.72)	-2.75	<0.001	-2.83
sh_secured	-1.16	(0.21)	0.89	(0.22)	-2.05	<0.001	-2.12
sh_nondischarge	-0.32	(0.26)	1.35	(0.28)	-1.67	<0.001	-1.72
homeowner	8.63	(0.58)	8.22	(0.59)	0.41	<0.001	0.10
sh_real	-9.70	(0.63)	-9.57	(0.64)	-0.12	<0.001	-0.12
pos_equity	-13.40	(1.77)	-8.27	(1.81)	-5.13	<0.001	-5.29
neg_equity	-7.26	(0.55)	-2.49	(0.57)	-4.77	<0.001	-4.92
nonexempt_equity	-3.51	(3.51)	9.69	(3.58)	-13.20	<0.001	-13.59
pct_black	0.01	(0)	0.02	(0)	-0.02	<0.001	-0.02
joint_file	13.01	(0.4)	12.92	(0.41)	0.09	<0.001	0.06
inc_drop	9.26	(0.27)	9.10	(0.27)	0.16	<0.001	0.06
irs_expense	-3.60	(0.17)	-3.66	(0.17)	0.06	<0.001	0.06
AMI	2.50	(0.17)	2.68	(0.18)	-0.18	<0.001	-0.02
(Intercept)	17.90	(0.75)	16.06	(0.78)	1.84	<0.001	
AME: Eligibility Ratio $\frac{Q_7}{Q_{13}}$							1.84
Observations		2,489,171					

Notes: Estimates from chapter choice logit model (equation (5)) with an indicator for Chapter 7 as the dependent variable. The model also includes district fixed effects. Columns (1)-(4) report coefficient estimates δ_7 and δ_{13} with bootstrap standard errors (500 samples; see Online Appendix D). Column (5) reports the difference in coefficients and column (6) the bootstrap p-value. Column (7) reports average marginal effects on the probability of filing Chapter 7. "AME: Eligibility Ratio" is the average marginal effect of the eligibility ratio $Q = \frac{Q_7}{Q_{13}}$. Income variables are in thousands of dollars. The level debt and equity variables (`unsec`, `pos_equity`, `neg_equity`, and `nonexempt_equity`) are in millions of dollars, while `debt_to_income`, `assets_to_income`, `sh_secured`, `sh_nondischarge`, and `sh_real` are unit-free ratios. Percent black ranges from 0 to 100.

Table 4
Decomposition of Cross-District Chapter 7 Share

	(1) Screening only	(2) + Legal	(3) + Economic	(4) + Demographic	(5) + Ideology	(6) Full model
A: Coefficients on Dismissal Rates						
Dism. 7	-0.468***	-0.443***	-0.41***	-0.211***	-0.217***	-0.187**
	(0.117)	(0.125)	(0.107)	(0.071)	(0.079)	(0.082)
Dism. 13	0.026	0.014	0.141	0.127*	0.161**	0.199***
	(0.081)	(0.077)	(0.094)	(0.075)	(0.064)	(0.068)
B: Relative Importance of Predictor Groups (R^2 Contributions)						
Screening	0.223	0.199	0.206	0.141	0.149	0.109
Legal	0	0.11	0	0	0	0.077
Economic	0	0	0.283	0	0	0.127
Demographic	0	0	0	0.491	0	0.264
Ideology	0	0	0	0	0.45	0.22
Total R-squared	0.223	0.309	0.489	0.632	0.599	0.797

Notes: Panel A reports coefficient estimates and heteroskedasticity-robust standard errors. Panel B reports LMG decomposition of R^2, where entries are absolute contributions computed by averaging marginal R^2 improvements across all variable-group orderings. Screening variables (Chapter 7 and 13 dismissal probabilities) are included in all specifications; additional groups are added sequentially. The variables in each group are in Figure 4 with details in Online Appendix Table E1. All variables are standardized prior to estimation.

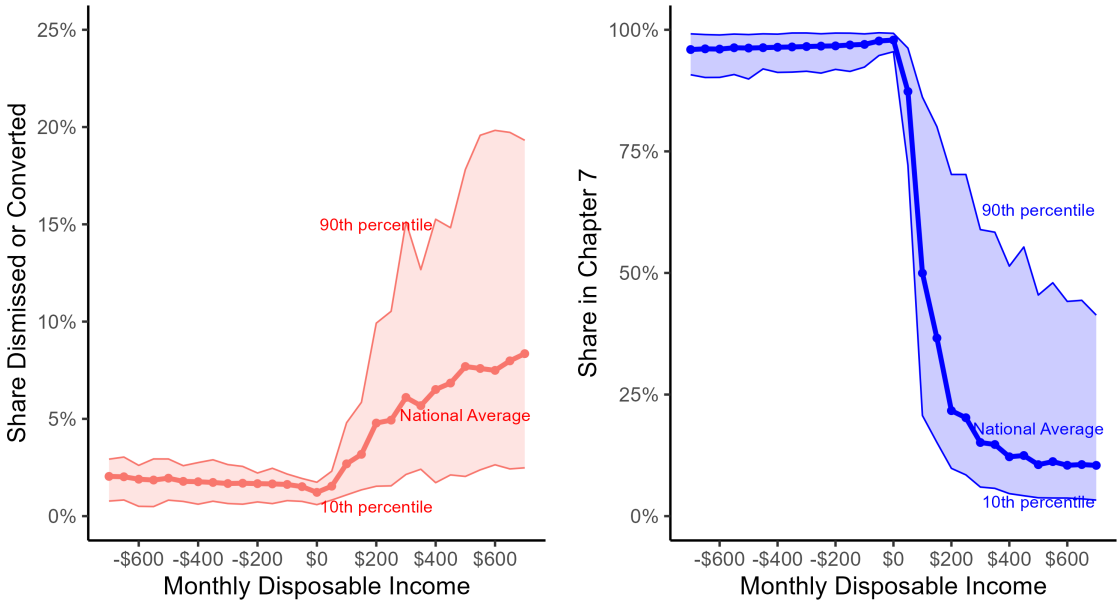
TABLE 5
TESTING VALIDITY OF PREDICTED MEANS TEST IMPACT

	Dependent variable:						
	District's Ch. 7 Share						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post × ΔP_d^O	0.520***	0.553***	0.459**	0.774***	0.732***	0.648**	0.469**
	(0.152)	(0.154)	(0.169)	(0.245)	(0.253)	(0.250)	(0.229)
unemp. rate	0.539**	0.560**	0.572**	0.455*	0.487*	0.567**	0.500**
	(0.259)	(0.259)	(0.258)	(0.261)	(0.259)	(0.236)	(0.232)
ln(HPI)	−0.042	−0.044	−0.034	−0.046	−0.042	−0.088**	−0.073**
	(0.035)	(0.035)	(0.035)	(0.034)	(0.033)	(0.035)	(0.035)
Post × homestead		−0.011			−0.012	−0.018	−0.020*
		(0.012)			(0.012)	(0.013)	(0.011)
Post × unl. exemption		0.006			0.004	0.026	0.045**
		(0.014)			(0.016)	(0.023)	(0.022)
Post × means test			−0.020		−0.025	−0.029	−0.037**
			(0.017)		(0.020)	(0.020)	(0.018)
Post × Δfee 7				0.029	0.060	0.047	0.0002
				(0.042)	(0.047)	(0.055)	(0.045)
Post × Δfee 13				−0.027*	−0.027*	−0.029*	−0.017
				(0.013)	(0.015)	(0.017)	(0.015)
Post × pre-Ch.7 sh.				−0.116	−0.116	−0.162**	−0.240***
				(0.087)	(0.080)	(0.069)	(0.054)
Post × neg. DI sh.							0.253***
							(0.067)
Mean Dependent Variable	0.71	0.71	0.71	0.71	0.71	0.71	0.71
District FE	X	X	X	X	X	X	X
YQ FE	X	X	X	X	X	X	X
Reg-YQ FE						X	X
Observations	6,156	6,156	6,156	6,156	6,156	6,156	6,156

Note: *p<0.1; **p<0.05; ***p<0.01

Notes: Table reports estimates from linear regressions on quarterly, district-level data from 2001–2019 following equation (7). Columns 2–5 add the post-BAPCPA indicator interacted with state homestead exemptions (column 2), an indicator, means test, for the states that Cornwell and Xu (2014) argues are more affected by the means test (column 3), district-level changes in attorney fees from Lupica (2012) and the pre-BAPCPA (2003–2004) Chapter 7 share, similar to Chakrabarti and Pattison (2019) (column 4), and all controls together (column 5). Column 6 adds region-by-quarter fixed effects, and column 7 adds a control for the share of debtors with negative disposable income in each district. Bootstrap standard errors are from 500 bootstrap samples in a procedure that accounts for both clustered observations at the district level and the estimated regressor ΔP_d^O. Details are in Online Appendix D.

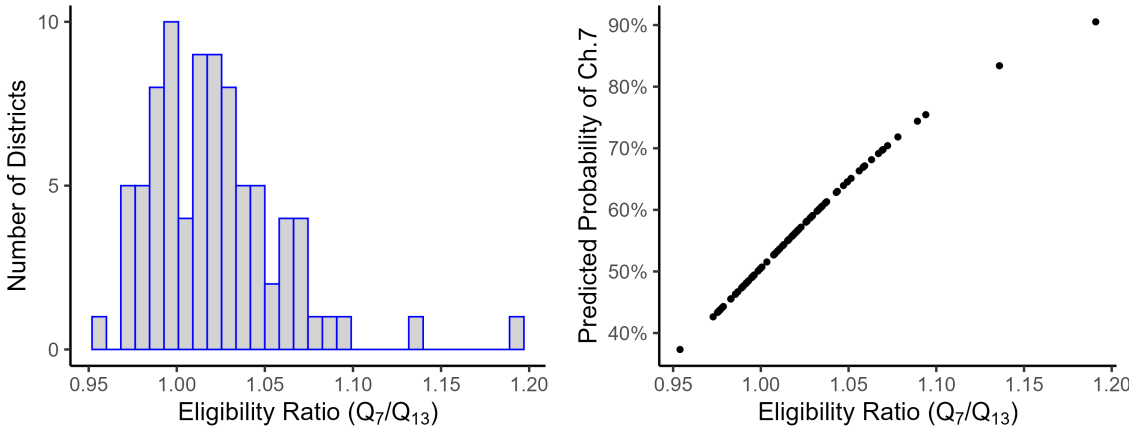
FIGURE 1
DISPOSABLE INCOME AND CHAPTER CHOICE



(A) CH.7 ELIGIBILITY (B) CHAPTER CHOICE

Sample consists of cases filed in FY2009–2019 within the 83 districts included in the main analysis. Debtors are grouped into $50 bins based on their disposable income. Panel (a) shows the share of Chapter 7 cases that were dismissed or converted in each bin. The shaded region shows the 10^{th} percentile and 90^{th} percentile of the cross-district distributions. Panel (b) shows the share of cases in Chapter 7, along with the 10^{th} and 90^{th} percentiles of the cross-district distributions in the shaded region.

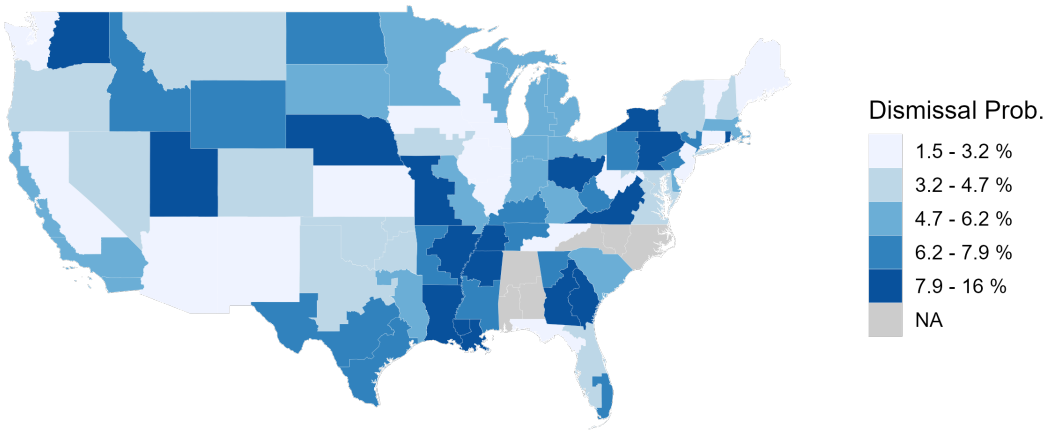
FIGURE 2
HETEROGENEITY IN SCREENING THE AVERAGE DEBTOR



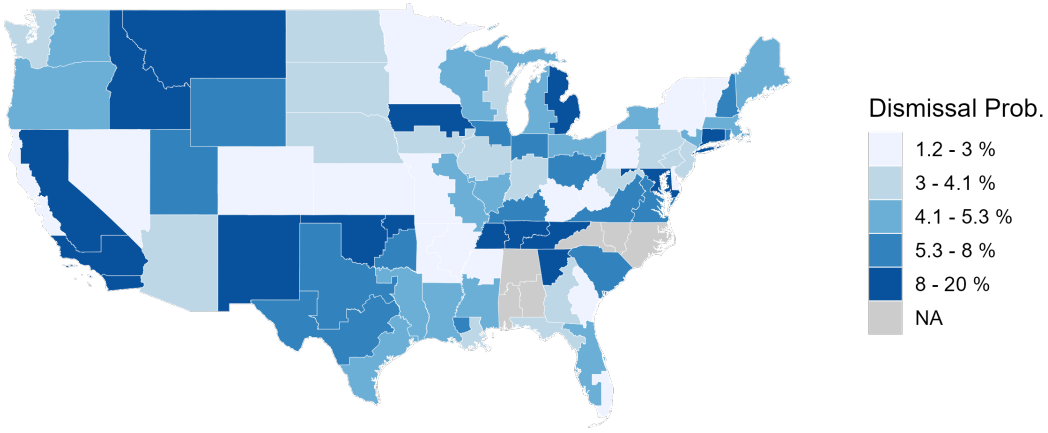
(A) ELIGIBILITY ACROSS DISTRICTS (B) CHAPTER CHOICE ACROSS DISTRICTS

These figures show, for the average filer, the heterogeneity in screening across districts and its impact on chapter choice. To generate the figures, we use the mean characteristics of debtors in the national sample, $\bar{X}$. Figure (a) shows the histogram of predicted eligibility ratios for each district. Figure (b) shows the predicted chapter choice as a function of the predicted eligibility for each district.

FIGURE 3
MAP OF PREDICTED DISMISSAL RATES



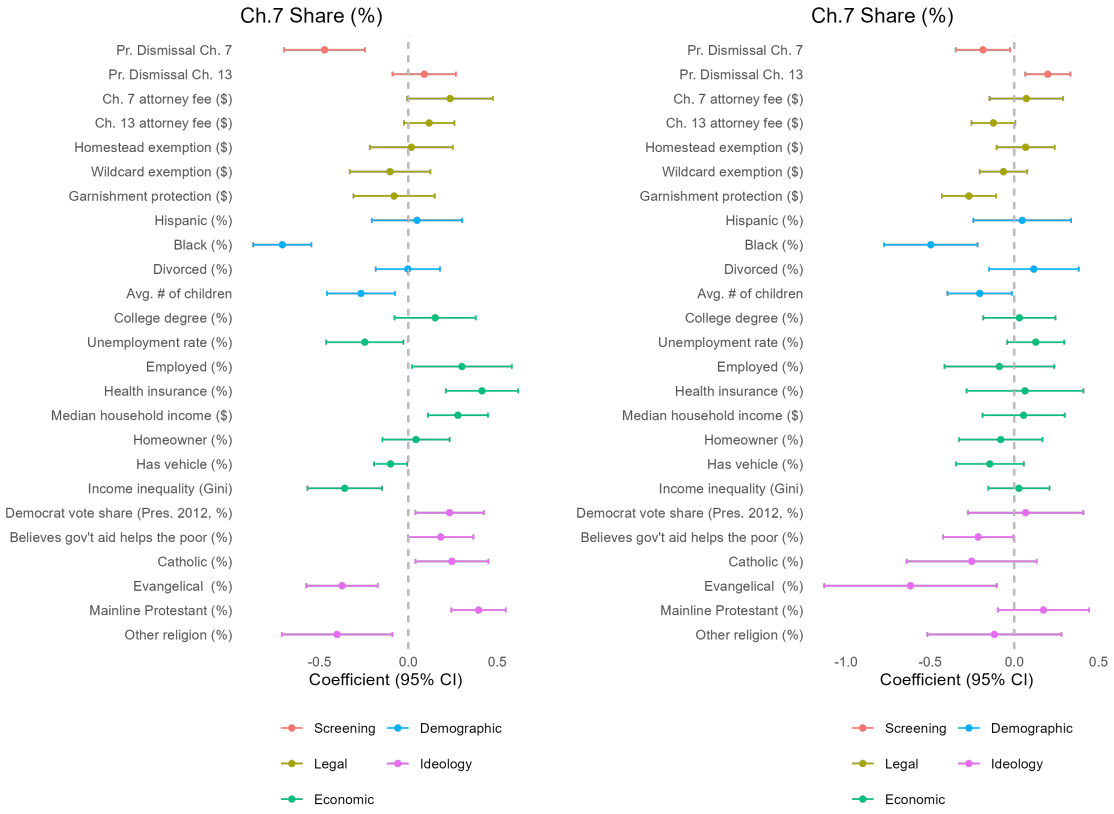
(A) MEAN PREDICTED PROB. OF CH. 7 DISMISSAL



(B) MEAN PREDICTED PROB. OF CH. 13 DISMISSAL

These maps report model-implied average dismissal probabilities for each district. The Chapter 7 probability for a district d equals one minus the average predicted Chapter 7 eligibility when using district d's eligibility model, with the average taken over all filers in the national sample. Chapter 13 probabilities are computed analogously.

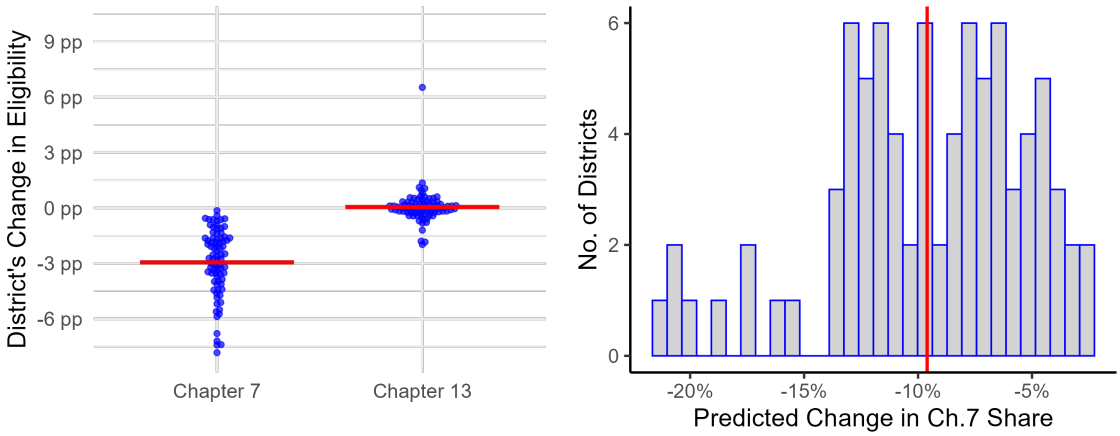
FIGURE 4
GEOGRAPHIC VARIATION IN CHAPTER 7 SHARE



(A) BIVARIATE (B) MULTIVARIATE

This figure reports two sets of standardized coefficient estimates with Chapter 7 share as the dependent variable. Panel (a) shows bivariate OLS estimates for each explanatory variable, where both the dependent variable and each regressor are standardized to mean zero and standard deviation one. Panel (b) shows coefficients from a multivariate OLS regression including all variables. Horizontal bars display 95% confidence intervals using heteroskedasticity-robust standard errors.

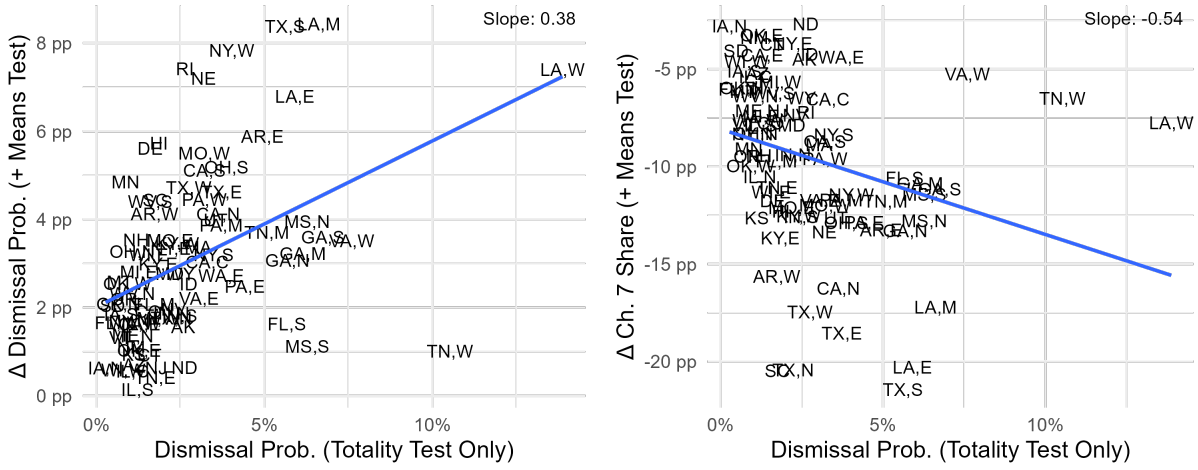
FIGURE 5
IMPACT OF BAPCPA'S MEANS TEST



(A) ELIGIBILITY (B) CHAPTER CHOICE

Notes: These figures report the model-generated predictions for the district-specific impact of BAPCPA's means test on eligibility and chapter choice. Figure (a) shows the effect of the means test on each district's average eligibility for Chapter 7 and Chapter 13 among positive-disposable-income debtors. Each point represents a district, and the horizontal bars show the means of the distributions. Figure (b) shows a histogram of the change in each district's overall share of bankruptcies under Chapter 7 (ΔP_d^O) as a result of adding the means test, with the vertical red line showing the mean change.

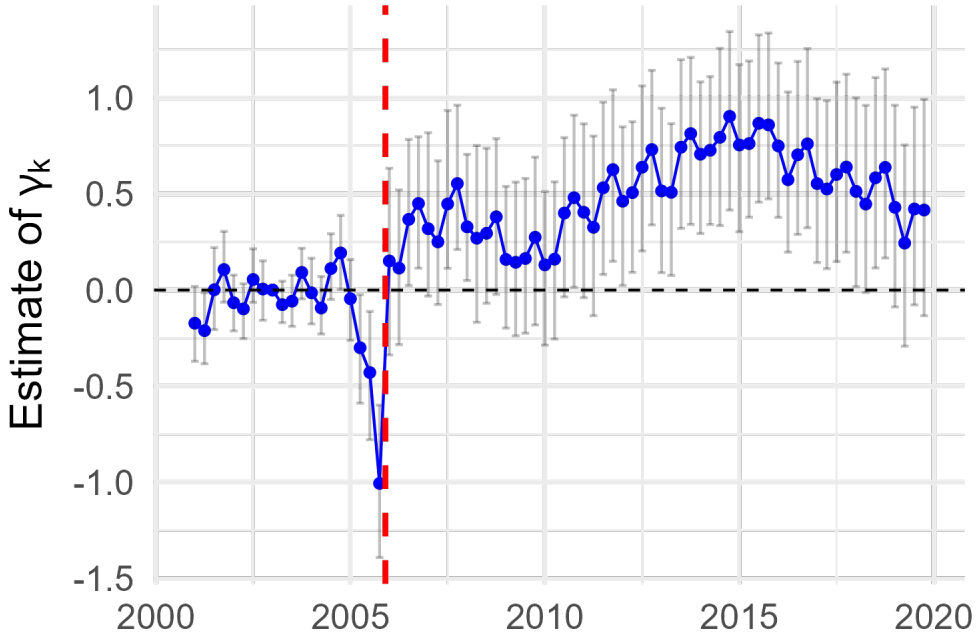
FIGURE 6
MEANS TEST IMPACT BY PRE-EXISTING SCREENING STRINGENCY



(A) CHAPTER 7 INELIGIBILITY (B) CHAPTER 7 FILING RATES

These figures report the model-generated impact of the totality test and means test for each district. The horizontal axes show each district's average predicted Chapter 7 dismissal probability with only the totality test. The vertical axis in panel (a) shows the change in each district's predicted dismissal probability when the means test is added ($\gamma \neq 0$). The vertical axis in panel (b) shows the predicted change in each district's Chapter 7 filing rate when the means test is added.

FIGURE 7
EVENT STUDY OF MEANS TEST IMPACT



Notes: This figure reports coefficients from an event study regression on quarterly, district-level data from 2001–2019. Each coefficient shows the relationship between the model's predicted impact of the means test (ΔP_d^O) and actual changes in the Chapter 7 share for a given quarter. Controls match Table 5 column (1). The vertical line marks BAPCPA's effective date in October 2005. Error bars show 95% bias-corrected bootstrap percentile intervals (Efron, 1982), using 500 bootstrap samples that account for district-level clustering and the estimated regressor ΔP_d^O. See Online Appendix D for details.

Appendix A Appendix Tables and Figures

TABLE A1
CASE OUTCOMES

Case Outcome	Disposable Income $< \$0$	$[\$0, \$100)$	$\geq \$100$
Initial Chapter 13			
Converted (Early) to Other Chapter (%)	53.21	68.85	22.77
Dismissed (%)	46.78	31.15	77.23
Failure to File Information (%)	17.16	9.31	13.26
Failure to Pay Filing Fee (%)	3.20	2.76	9.70
Abuse (%)	0.40	0.25	0.38
Other Reason (not specified) (%)	26.02	18.83	53.89
N	8,256	5,178	30,754
Initial Chapter 7			
Converted (Early) to Other Chapter (%)	14.77	20.01	54.23
Dismissed (%)	85.23	79.99	45.77
Failure to File Information (%)	14.84	10.30	9.47
Failure to Pay Filing Fee (%)	15.59	16.96	7.95
Abuse (%)	3.15	3.01	2.83
Other Reason (not specified) (%)	51.64	49.72	25.52
N	30,670	15,487	14,850

Sample: Cases filed FY2011-2015, excluding Alabama and North Carolina (the districts outside of the United States Trustee program). This table shows, for cases that were dismissed or converted shortly after filing, the distribution across conversions and reasons for dismissal. In Chapter 7, where the median case takes less than four months to receive a discharge, any dismissal or conversion is included. In Chapter 13, more than half of cases are dismissed or converted at some point during the three-to-five-year plan, mostly due to the debtor missing plan payments. To focus on dismissals and conversions related to ineligibility for Chapter 13, we include only early dismissals or conversions that occur within four months of filing. `dism_early` and `converted_early` show these rates of dismissals and conversions.

Table A2
Dismissal Model Estimates Including Administrative Dismissals

	Chapter 7				Chapter 13			
	National Model		District Models		National Model		District Models	
	Est.	ME	ME (10th)	ME (90th)	Est.	ME	ME (10th)	ME (90th)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A: Estimates (β) and Marginal Effects for Below-Median Inc. (AMI= 0)								
disp_income	-0.78	-0.040	-0.070	-0.010	-0.37	-0.030	-0.060	0.049
	(0.031)				(0.015)			
pct_repay5	-0.79	-0.040	-0.090	-0.010	0.23	0.016	0.000	0.060
	(0.032)				(0.013)			
inc_drop	0.47	0.017	0.000	0.026	0.53	0.030	0.000	0.042
	(0.021)				(0.015)			
expense_gap	-0.02	0.000	-0.010	0.005	0.14	0.010	-0.010	0.019
	(0.0077)				(0.0049)			
pro_se	-1.62	-0.150	-0.370	-0.080	-2.70	-0.470	-0.680	-0.290
	(0.016)				(0.015)			
joint_file	0.19	0.008	-0.020	0.018	0.72	0.038	-0.010	0.039
	(0.019)				(0.013)			
(Intercept)	4.33				2.50			
	(0.013)				(0.011)			
B: Estimates ($\beta + \gamma$) and Marginal Effects for Above-Median Inc. (AMI= 1)								
disp_income	-1.18	-0.050	-0.100	-0.030	-0.38	-0.030	-0.050	0.020
	(0.034)†				(0.016)			
pct_repay5	-1.11	-0.050	-0.100	-0.010	0.44	0.031	0.006	0.076
	(0.042)†				(0.019)†			
inc_drop	0.13	0.005	-0.060	0.022	0.53	0.030	-0.030	0.043
	(0.032)†				(0.019)			
expense_gap	-0.08	0.000	-0.010	0.006	-0.01	0.000	-0.010	0.011
	(0.0099)†				(0.0066)†			
joint_file	-0.02	0.000	-0.030	0.012	0.55	0.031	-0.020	0.040
	(0.021)†				(0.015)†			
amt_AMI	-0.03	0.000	0.000	0.000	0.00	0.000	0.000	0.001
	(0.00068)†				(0.00049)			
(Intercept)	4.83				2.43			
	(0.032)†				(0.019)†			
C: Average Marginal Effects of Means Test								
Sample: All		-0.023	-0.060	-0.006		0.002	-0.024	0.022
Sample: AMI= 1		-0.066	-0.151	-0.033		-0.007	-0.017	0.017
Observations	1,325,977				1,199,100			

This table re-estimates the Chapter 7 and Chapter 13 dismissal models on an alternative sample that retains cases dismissed for failure to pay the filing fee or file required information. The specification and presentation match the main dismissal-model table. The comparison is intended to show that the main results are not materially affected by excluding these administratively dismissed cases from the estimation sample.

TABLE A3
VARIABLE DEFINITIONS (1)

Variable	Definition
elig	Eligible to file under chosen chapter. Defined as not dismissed or converted shortly after filing. We treat early dismissals and early conversions as capturing the same underlying screening margin. For Chapter 7 filings, which only take a few months to complete, all dismissals and conversions are counted as indicators of ineligibility. For Chapter 13, we only count dismissals and conversions within the first four months of a case as indicators of ineligibility. This four-month cutoff is designed to capture the initial screening stage rather than later plan failure or noncompliance.
disp_income	Estimated disposable income at the time of filing, calculated as the difference between Schedule I Average Monthly Income and Schedule J Average Monthly Expenses. Average Monthly Expenses is adjusted for differential reporting in Conduit and Direct-Pay districts, as discussed in Online Appendix B.
pct_repay5	Amount of nonpriority unsecured debt that could be repaid out of disposable income over a five-year Chapter 13 repayment plan, calculated as $(60 \times \texttt{disp\_income} - \texttt{priority\_unsecured})\,/\texttt{nonpriority\_unsecured}$ and truncated between 0% and 100%.
inc_drop	Indicator for whether (average) monthly income at the time of filing (`avgmnthi`) is at least \$500 below average monthly income in prior six months (`cntmnthi`), i.e., $\texttt{avgmnthi} - \texttt{cntmnthi} < -\$500$
expense_gap	Actual monthly expenses minus IRS location-adjusted standard expenses. Actual expenses are from Schedule J, adjusted for conduit and direct-pay districts. IRS local standards are defined below in the variable `irs_expense`
pro_se	Indicator for whether the first listed debtor in the bankruptcy petition was pro se (not represented by an attorney)
joint_file	Indicator for whether the bankruptcy petition is a joint petition (by spouses)
AMI	Indicator for whether `cntmnthi` exceeds the median income of the state as defined in the means test forms at the time of filing. The two-person income threshold is used for joint filings, and the single-person threshold for single filings. Data are available here: Income standards for means testing
amt_above_means	Amount by which average annual income ($12 \times$ `cntmnthi`) exceeds the applicable means test threshold, as defined in `AMI`.

Table A4
Variable Definitions (2)

Variable	Definition
avgmnthi	Estimated monthly household income of debtor at the time of filing, reported as Average Monthly Income from Schedule I
cntmnthi	The monthly income of the household from all sources, averaged over the six months prior to filing; Current Monthly Income from form 22A for Chapter 7 debtors or form 22C for Chapter 13 debtors.
debt_to_income	Total liabilities (unsecured plus secured) over annual income. Annual income is defined as $12 \times$ `avgmnthi`
assets_to_income	Total assets over annual income ($12 \times$ `avgmnthi`)
unsec	Sum of nonpriority and priority unsecured debt
sh_secured	Secured debt divided by total liabilities
sh_nondischarge	Nondischargeable debt divided by total liabilities; nondischargeable debt consists of domestic support obligations, taxes and certain debts owed to the government, student loan obligations, some other legal debts, and obligations to pension or profit-sharing programs.
homeowner	Indicator for whether the debtor owns real property
sh_real	Real property value divided by total assets
pos_equity	Positive home equity, defined as $\max\{\text{equity}, 0\}$, where equity is defined as real property value minus total reported secured debt; See Pattison and Hynes (2020) for evidence that this accurately measures home equity.
neg_equity	Negative home equity, defined as $\max\{-\text{equity}, 0\}$
nonexempt_equity	$\max\{equity - exemption, 0\}$, where exemption is the maximum of the state and, if applicable, federal homestead exemption at the time of filing. Married homestead exemptions are used for joint filings, and single homestead exemptions for single filings. Exemption data are from (Pattison and Hynes, 2020), which also validates this measure of nonexempt equity.
pct_black	Share of residents in the debtor's home zip code who are Black, from 2018 five-year ACS estimates
irs_expense	Sum of the IRS local and national standards for housing expenses (mortgage and non-mortgage), transportation expenses (operation and ownership), household expenses (food, housekeeping, apparel and service, personal care, miscellaneous), and out-of-pocket expenditures. We use two-person standards for joint-filings and one-person standards for single filings. The IRS standards depend on the debtor's location of residence (MSA or state) and the filing date. Data available here: IRS standards for means testing

TABLE A5
CORRELATION WITH TRUSTEE ENFORCEMENT ACTIONS

Panel A: Formal Enforcement Actions per 1,000 filings

	§707(b): Totality / Means Test		§707(a): Procedural Cause		Other Enforcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Dismissal Prob. Ch. 7 (SD)	0.937**	1.392***	0.171	0.592	−0.206	0.177
	(0.419)	(0.402)	(0.452)	(0.472)	(0.261)	(0.290)
Dismissal Prob. Ch. 13 (SD)	−0.011	0.074	−0.168	−0.210	0.066	0.071
	(0.154)	(0.140)	(0.291)	(0.450)	(0.296)	(0.275)
Chapter 13 Share		−4.993***		−4.449		−3.895*
		(1.282)		(3.339)		(2.128)
Div. FE		X		X		X
Mean of DV	2.8	2.8	2.3	2.3	3.5	3.5
Observations	83	83	83	83	83	83
R^2	0.133	0.406	0.003	0.151	0.004	0.153

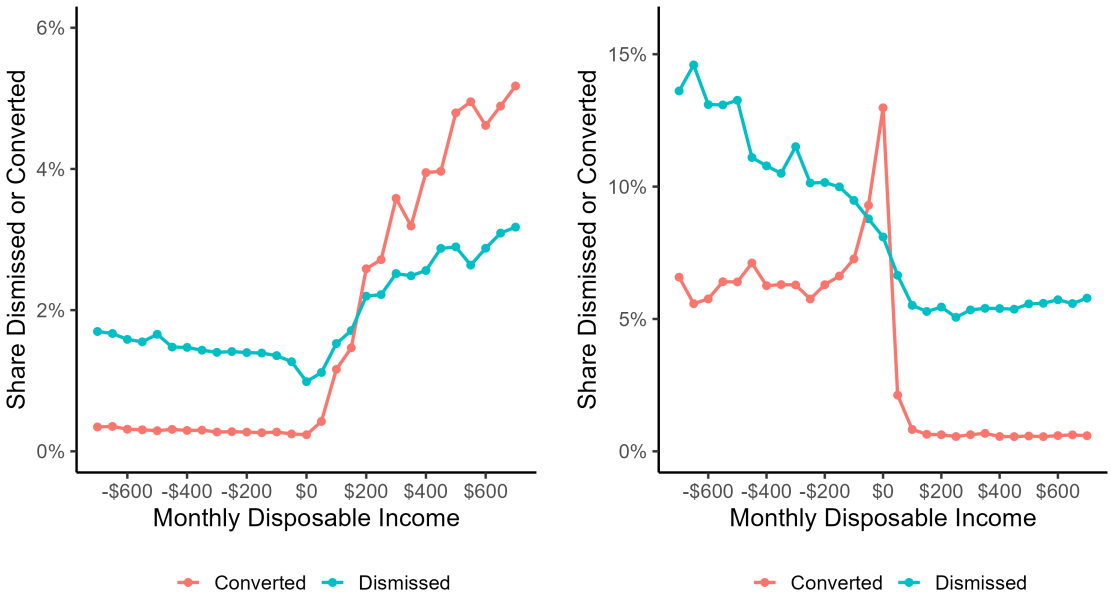
Panel B: Informal Enforcement Actions per 1,000 filings

	§707(b): Totality / Means Test		§707(a): Procedural Cause		Other Enforcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Dismissal Prob. Ch. 7 (SD)	2.517**	3.381***	1.498	2.210	0.211	0.907
	(1.088)	(1.064)	(1.573)	(2.096)	(0.632)	(0.746)
Dismissal Prob. Ch. 13 (SD)	−0.188	0.205	−0.089	−0.477	0.428	−0.259
	(1.062)	(1.030)	(0.193)	(0.510)	(0.645)	(0.714)
Chapter 13 Share		−17.842***		−9.401		−7.915**
		(5.861)		(7.836)		(3.863)
Div. FE		X		X		X
Mean of DV	17.4	17.4	2.1	2.1	8.5	8.5
Observations	83	83	83	83	83	83
R^2	0.065	0.344	0.060	0.174	0.005	0.232

Note: *p<0.1; **p<0.05; ***p<0.01

Notes: Table reports district-level correlations between trustee enforcement activity and the estimated dismissal rates. Enforcement data come from a FOIA request to the Executive Office for the U.S. Trustee Program and cover fiscal years 2011–2015. Formal actions are filed by Program personnel in bankruptcy court; informal inquiries are documented communications regarding compliance. The dependent variables are counts per 1,000 consumer Chapter 7 and Chapter 13 filings combined, aggregated to the district level over fiscal years 2011–2015. Within each panel, pairs of columns correspond to three enforcement-action types: eligibility-related screening under §707(b) (totality and means tests), procedural dismissal reasons under §707(a), and a residual "Other" category. The Chapter 7 and Chapter 13 dismissal-rate regressors are constructed by applying each district's estimated screening function to the full national sample and are standardized to mean zero and standard deviation one prior to estimation. Odd-numbered columns include only the two dismissal-rate measures. Even-numbered columns add division fixed effects and the district Chapter 13 filing share. Heteroskedasticity-robust standard errors are reported in parentheses.

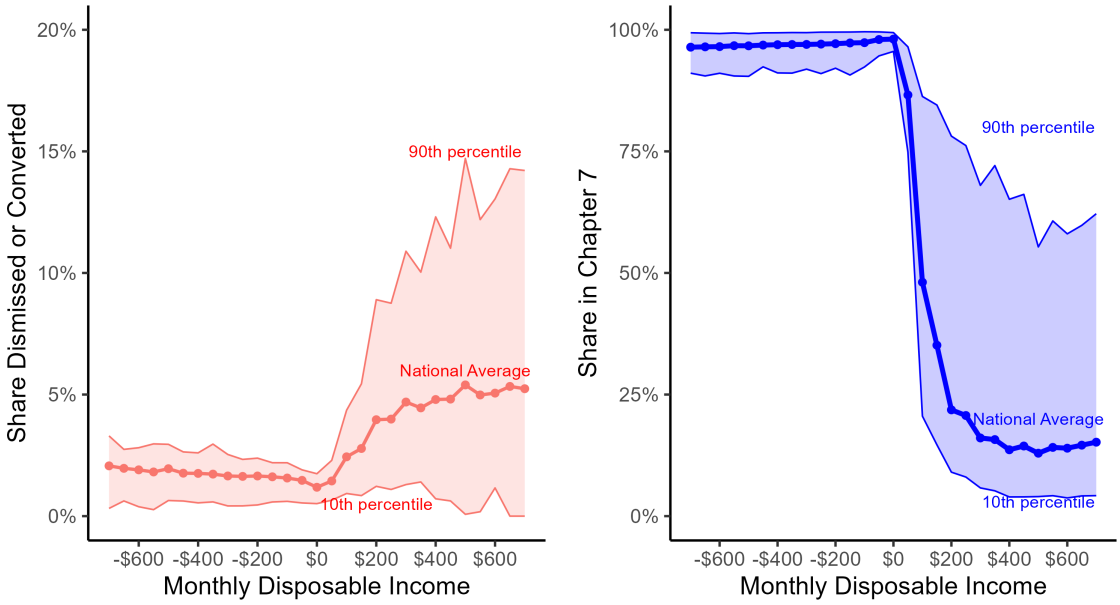
FIGURE A1
DISMISSALS/CONVERSIONS AND DISPOSABLE INCOME BY CHAPTER



(A) CHAPTER 7 CASES (B) CHAPTER 13 CASES

Sample consists of cases filed in FY2009-2019 within the 83 districts included in the main analysis. Debtors are grouped into $50 bins based on their disposable income. Panel (a) shows the share of Chapter 7 cases that were dismissed or converted in each bin. Panel (b) shows the share of Chapter 13 cases that were dismissed or converted in each bin.

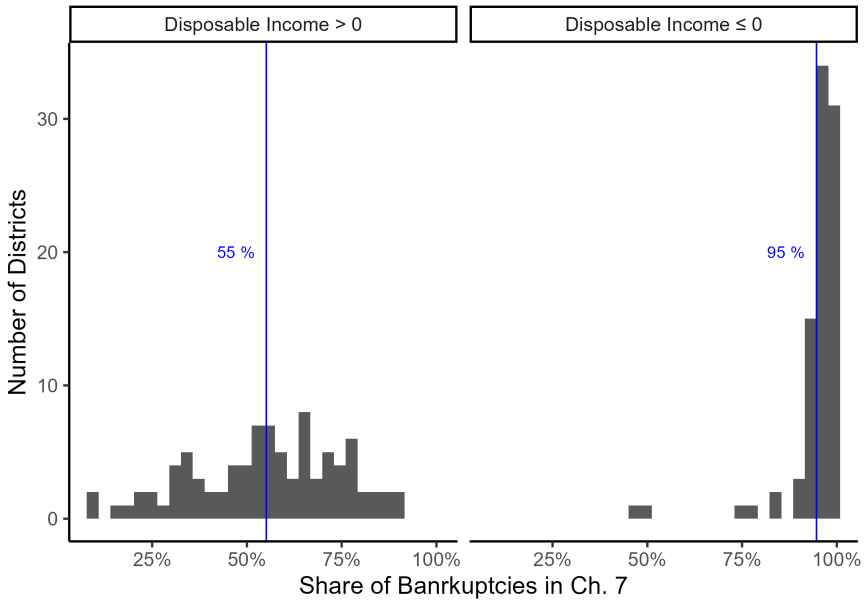
Figure A2
Disposable Income and Chapter Choice
(Below-Median-Income Debtors)



(a) Ch.7 Dismissals and Conversions (b) Chapter Choice

Sample consists of cases filed by below-median-income debtors in FY2009-2015 within the 83 districts included in the main analysis. Debtors are grouped into $50 bins based on their disposable income. Panel (a) shows the share of Chapter 7 cases that were dismissed or converted in each bin. The shaded region shows the 10^{th} percentile and 90^{th} percentile of the cross-district distributions. Panel (b) shows the share of cases in Chapter 7, along with the 10^{th} and 90^{th} percentiles of the cross-district distributions in the shaded region.

Figure A3
Cross-District Variation by Disposable Income



The figures above show the distribution of districts' Chapter 7 bankruptcy share for debtors with positive disposable income (left histogram) and with non-positive disposable income (right histogram). The blue line marks the mean across districts.

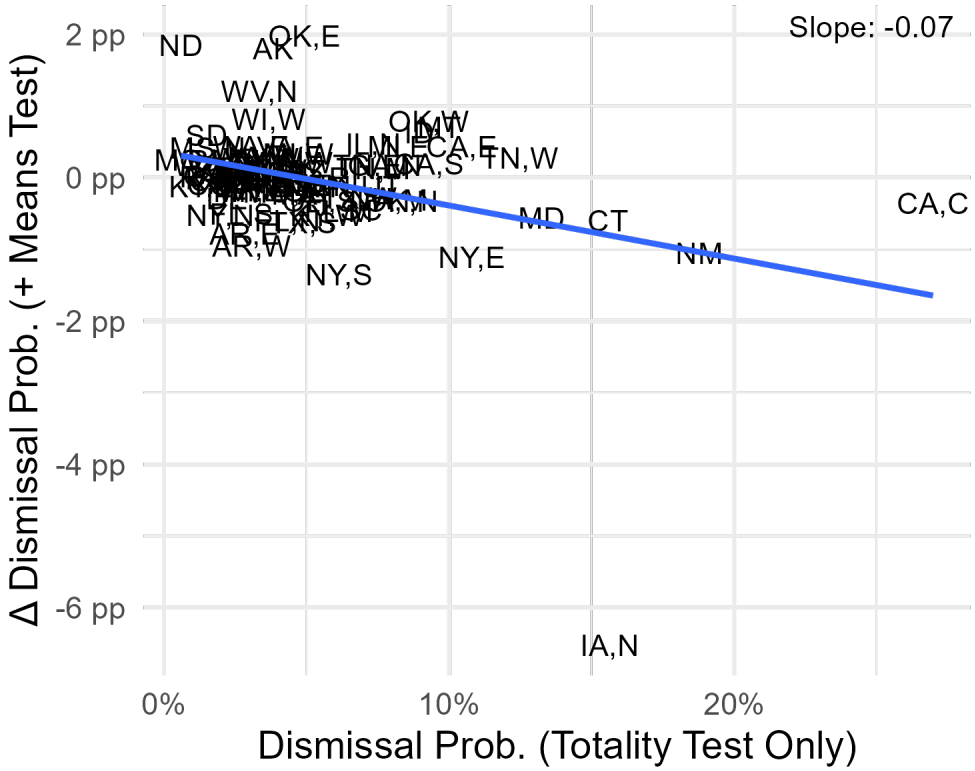
Appendix B Adjusting Disposable Income for Conduit Districts

We adjust a key variable, disposable income, to account for differences in how mortgage payments are reported in some districts. Specifically, in a subset of districts that use conduit Chapter 13 plans (defined below), mortgage payments are not reported as expenses on Schedule J. Because disposable income equals reported income less expenses, this makes disposable income artificially high for Chapter 13 debtors with mortgage payments in these districts. To correct this, we approximate mortgage payments and subtract the amount from reported disposable income. The remainder of this section provides more detail on this procedure.

Some districts use conduit plans, in which mortgage payments are made through the Chapter 13 plan, or direct payment plans, in which debtors with a mortgage pay the lender directly.[60] For our purposes, this matters because (i) conduit districts typically exclude mortgage payments

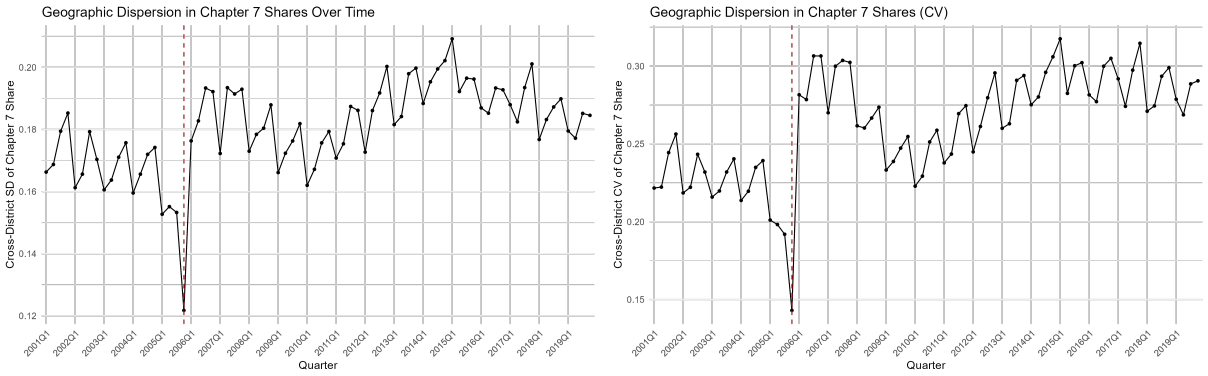
[60] In many conduit districts, this is implemented through the local Chapter 13 plans or the practices of the local trustee. In some places, only a subset of Chapter 13 cases will be conduit plans (e.g. unless the court allows direct payment, or depending on whether a prepetition arrearage exists) (American Bankruptcy Institute, 2019).

Figure A4
Impact of the Means Test on Chapter 13 Predicted Dismissal Probabilities



The figure shows each district's average Chapter 13 predicted dismissal probability without the means test (horizontal axis) and the change in the predicted dismissal probability once the means test is implemented (vertical axis).

Figure A5
Cross-District Dispersion in Chapter 7 Shares



(a) Standard Deviation (b) Coefficient of Variation

Notes: Panels plot quarterly cross-district dispersion, measured by the standard deviation and coefficient of variation, in Chapter 7 shares computed from district-level data, 2001–2019. The vertical line marks BAPCPA's implementation in 2005Q4. Chapter 7 shares are defined as consumer Chapter 7 filings divided by total consumer filings.

from Chapter 13 filers' Schedule J expenses, and (ii) these reported Schedule J expenses enter our calculation of disposable income. We adjust for this different treatment of Chapter 13 filers with mortgages in conduit districts.

We first classify conduit districts and direct payment districts using the Chapter 13 Trustee Final Reports from 2008-2019. If ongoing mortgage payments account for at least 10% of total Chapter 13 disbursements, we classify that district as a conduit district. Districts in which ongoing mortgage payments make up less than 10% of total Chapter 13 disbursements are classified as direct payment districts.[61] Among conduit districts, ongoing mortgage payments average 29.2% of Chapter 13 total disbursements in the average district. Among direct-payment districts, ongoing mortgage payments average 1.8% of Chapter 13 total disbursements in the average district.

Conduit districts typically exclude mortgage payments from Schedule J expenses for Chapter 13 mortgage holders and, as a result, the bankruptcy forms overstate these debtors' disposable income. Only mortgage holders in Chapter 13 are affected by conduit reporting in these districts. To illustrate, Figure B1 compares the disposable income share, i.e. the share of income that is disposable, across those with and without mortgages in direct-payment and conduit districts.[62] The distributions of disposable income shares are similar across direct-payment and conduit districts, except for Chapter 13 filers with a mortgage. But, in conduit districts, Chapter 13 filers with a mortgage report higher disposable income (bottom-right figure). This difference in the empirical CDFs reflects that conduit districts exclude mortgage payments from Schedule J expenses.

To adjust for the different treatment of mortgage payments among Chapter 13 debtors in conduit districts, we estimate their monthly housing payment and add the amount to their monthly expenses. We compute each filer's expected monthly mortgage payment, assuming that the principal at origination equaled the reported real property value less a 6% down payment, and that the filer took out a 30-year mortgage with an annual interest rate of 7%.[63] We then adjust Schedule J expenses by adding these expected mortgage payments to all Chapter 13 filers in conduit districts

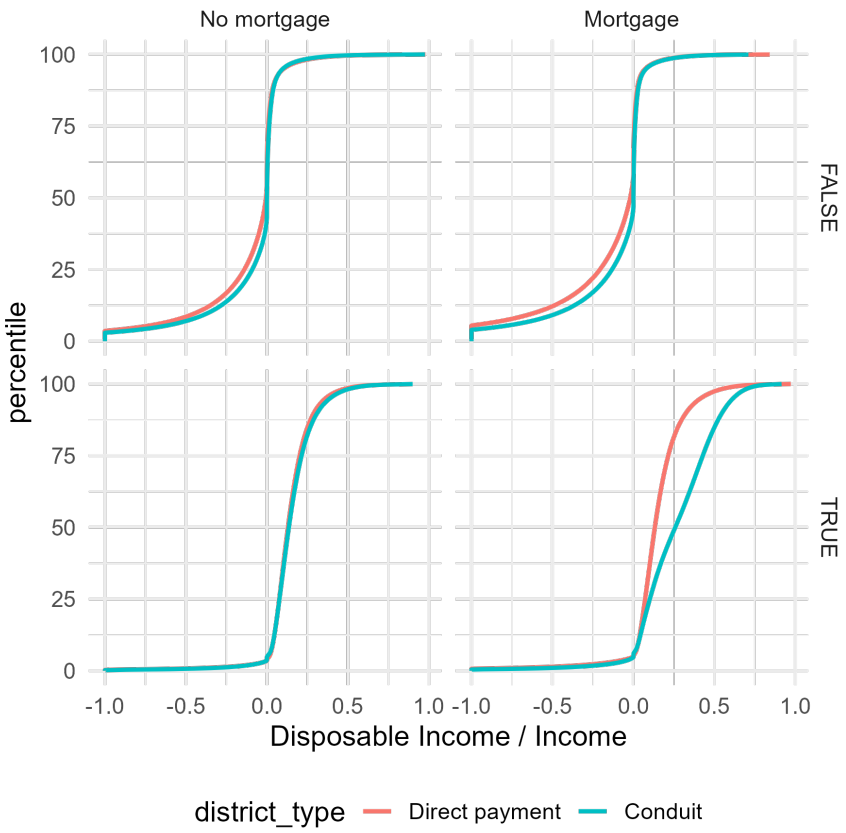
[61] Alabama and North Carolina are not present in the Trustee Final Reports. We classify Alabama as a direct payment district and North Carolina as a conduit district, based on the similarity of Schedule J expenses to the districts we classify using the Final Reports.

[62] Disposable income is defined as the difference between Schedule I average monthly income and Schedule J average monthly expenses.

[63] The 6% down payment is the average down payment (see `https://www.rocketmortgage.com/learn/what-is-the-average-down-payment-on-a-house`). The 7% interest rate equals the presumptive interest rate applied to installment debt in many Chapter 13 districts at that time (see `https://www.mssb.uscourts.gov/rulesorders-procedures/presumptive-interest-rate/`.)

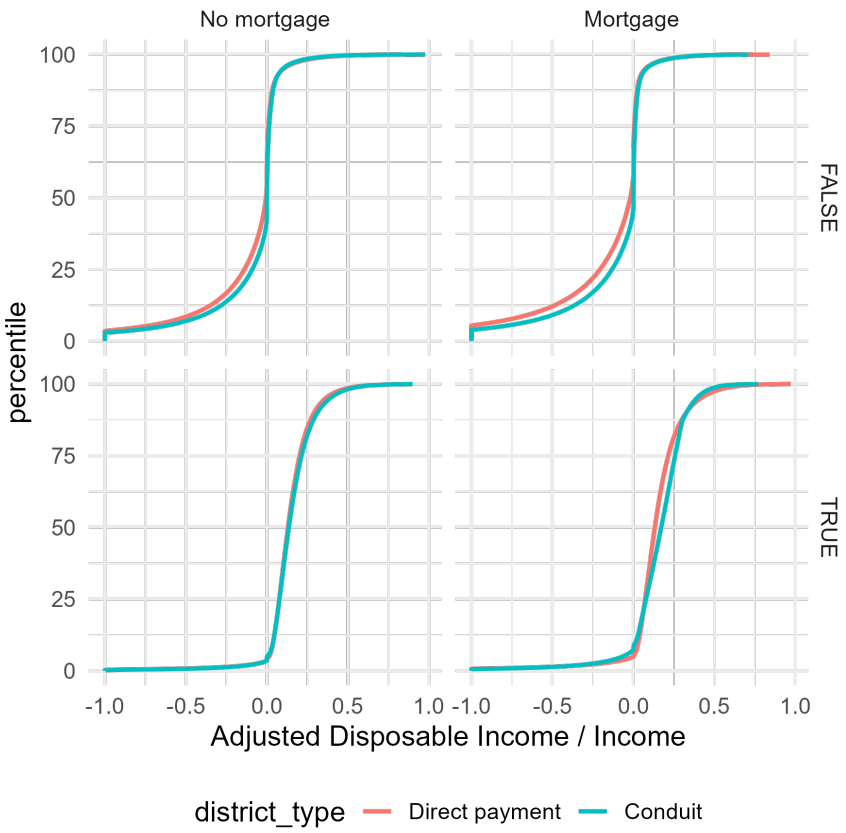
with a disposable income share of at least 30%. Figure B2 plots the empirical CDFs of the disposable income shares after making this adjustment. After adjustment, the distributions of disposable income are much more similar across conduit and non-conduit districts.

FIGURE B1
BEFORE ADJUSTMENT: DISPOSABLE INCOME OF DIRECT-PAYMENT AND CONDUIT DISTRICTS



The figure plots the empirical cumulative distribution functions of the share of income that is disposable. Shares below -1 are assigned a value of -1. The sample excludes filers with less than $500 in reported monthly income.

FIGURE B2
AFTER ADJUSTMENT: DISPOSABLE INCOME OF DIRECT-PAYMENT AND CONDUIT DISTRICTS



The figure plots the empirical cumulative distribution functions of the share of income that is disposable, adjusted for housing expenditures for Chapter 13 filers with mortgages in conduit districts. Shares below −1 are assigned a value of −1. The sample excludes filers with less than $500 in reported monthly income.

Appendix C Measuring Above-Median Income

In this section, we discuss and investigate the sensitivity of our results to different measures of above-median-income status. Above-median status is particularly important for our analysis, because it is the variable that allows us to identify the effect of BAPCPA's means test, which applies only to above-median-income debtors.

Legally, the means test applies if a debtor is above their state's median income *adjusted for household size*. We do not observe the household size, and instead, our primary measure assumes that each household has zero non-filing members and so treats all single filers as single-person households and all joint filers as two-person households. This applies the lowest possible median income threshold for each household. As a result, it creates one-sided measurement error because we will apply too low of a median-income threshold to the households with non-filing household members, and so may mistakenly count them as above-median-income when they are not.

Appendix C.1 Support for Primary Measure of Above-Median Status

First, we provide evidence about the accuracy of our primary measure of above-median-income status. If a debtor's income exceeds the median, the debtor faces additional restrictions in both Chapter 7 and Chapter 13 that may discourage filings in both chapters. Consistent with the accuracy of our measure, we find a sharp, discontinuous decline in both Chapter 7 and Chapter 13 filings exactly once debtors' incomes exceed our measure of the applicable median income (Online Appendix Figure C1). Using our main measure and counting both Chapter 7 and Chapter 13 filings, there are 8,018 cases with a reported income gap in the range of $[-\$199, \$0]$, but only 6,361 cases with reported incomes in the range $[\$1, \$200]$, a discontinuity of 1,657 cases.

The primary measure assumes filers have zero non-filing household members and so applies the one-person median income threshold for single filers and the two-person threshold for joint filers. We refer to this as Threshold 1. For comparison, we also show the discontinuities if we assume each filer has one non-filing household member (Threshold 2) or two non-filing household members (Threshold 3). If we use Threshold 2, the discontinuity is 656 cases and if we use Threshold 3, the discontinuity is 689 cases. These discontinuities are smaller than those using Threshold 1, suggesting that our main measure captures the relevant means test threshold for most households.

As a separate test, we collect an alternative measure of debtors' above-median-income status by searching each case's court dockets for the presence of specific bankruptcy forms that are filed only by above-median debtors. Specifically, there are certain bankruptcy forms (Form 122A-2 in Chapter 7 and Form 122C-2 in Chapter 13) that debtors need to complete only if they report above-median income. A few districts report whether the filer has submitted these forms on their bankruptcy court dockets. In many courts, this docket information from 2013 to the present has been scraped and made publicly available.[64] We are able to identify 20 districts that consistently report the presence of these forms for above-median-income debtors between 2015 and 2019.[65] In these districts, 41.2% of cases we identify as above-median income have dockets with these forms, while 3.05% of cases we identify as below-median income do.[66] Thus, this independent measure corroborates our main measure of above-median-income status.

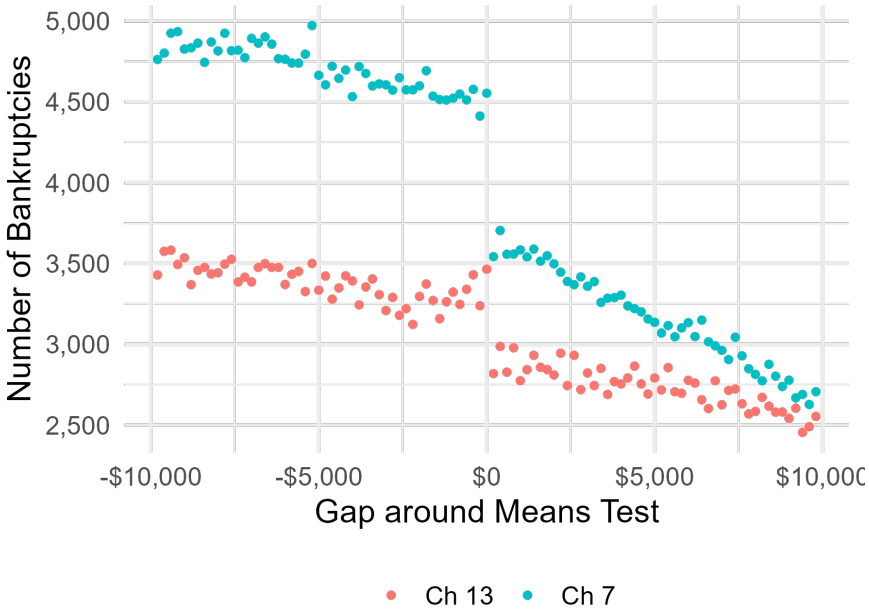
The model estimates of Section 5 also indicate that our measure accurately captures the means test. The means test restricts eligibility for Chapter 7 but not Chapter 13. Consistent with this, the AME estimates of the means test reported in Table 2 show a strong effect of the means test in Chapter 7, but virtually no effect in Chapter 13. Similarly, in the counterfactual policy analysis, our structural model is able to accurately predict changes in chapter choice that came with the introduction of the means test (Figure 5).

[64] Journalist Matt Clark made these data available here link

[65] To do so, we search the text of each docket entry for the strings "22A-2" or "22C-2". In some courts, dockets contain these entries regardless of whether the debtor actually fills out these forms. To identify districts where these forms provide a good measure of above-median status, we (i) require that over 98% of the cases in our FJC sample are matched to dockets, (ii) at least 5% of the cases marked as above-median income in the FJC data have docket entries listing the forms, and (iii) cases marked above-median income in the FJC have at least 4 times as many reported forms as cases marked below-median income in the FJC.

[66] These "false positives" may come from measurement error in this alternative measure or from mistakes or updates to income as reported in the FJC database.

Figure C1
Discontinuity around Means Test Income Threshold



Number of filings in main sample, grouped into $200-wide bins based on the difference between the reported current monthly income (CMI) and the applicable means test income threshold. For single filers, we apply the single-person household median income for the state at the time of filing, and for joint filers we apply the two-person household threshold.

Appendix C.2 Robustness to Alternative Measures of Above-Median Status

We also examine the sensitivity of our estimates to using alternative measures of above-median status. Our primary measure assigns median income as if all debtors have zero non-filing household members. We examine three alternative measures, detailed in Table C1, which use alternative thresholds when determining the means test (Measures 1 and 2) or use the independent measure based on the docket reports as described above.

Under each measure of above-median-income status, we reestimate the district-specific eligibility models of equation (1). We then compare the estimated effect of the means test as measured by the means test's average marginal effect (AME). We report the correlation coefficient between the primary and alternative district-specific AMEs in Table C1, and show the estimates graphically in Figure C2. When using alternative thresholds, the average marginal effects of the means test on eligibility remain similar to those of the primary (Baseline) measure. In Chapter 7, the district-specific AMEs are highly correlated across the measures. The correlation coefficient between the baseline estimate and the alternative measures is 0.92 when assuming one non-filing household member, and 0.81 when assuming two non-filing household members. In Chapter 13, the AMEs remain tightly clustered around zero.

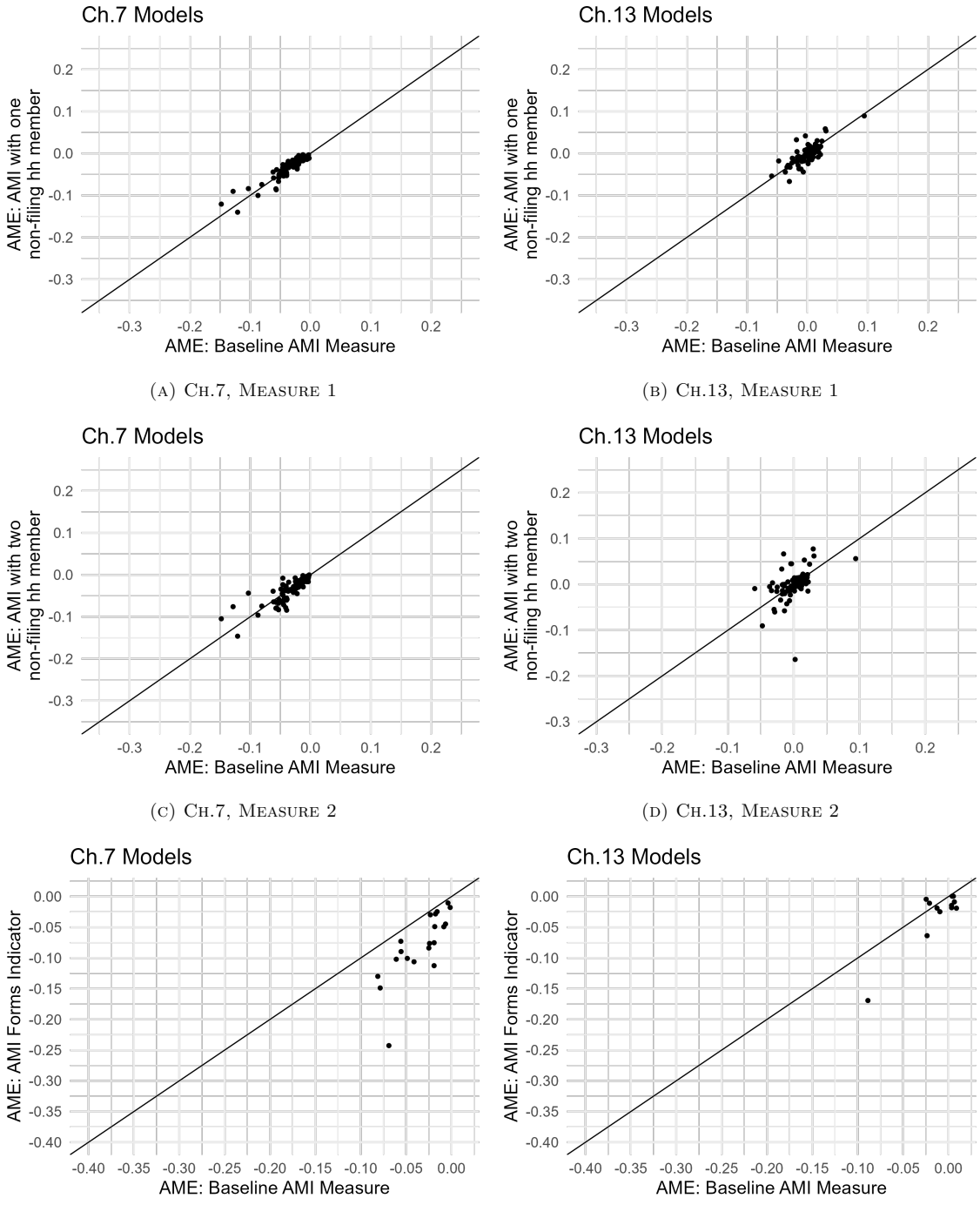
We also compare estimates when using the third alternative measure based on the presence of specific bankruptcy forms in the dockets, and find similar patterns. This alternative forms measure of above-median status is only available for a subset of districts for the years 2015-2019. For our comparison, we reestimate the main model on the years 2015-2019. Again, the correlation is high at 0.85. To summarize, we estimate similar district-specific effects of the means test regardless of exactly how we measure above-median-income status.

Table C1
Alternative Measures of Above-Median Status

Measure (1)	Definition (2)	Correlation with Baseline AME (Ch.7) (3)
Baseline	Median Income Threshold 1. `AMI` as defined in Table A3. Compares current monthly income as reported in the FJC data at the time of filing to the state median income adjusted for household size. Assumes **zero** non-filing household members when assigning the applicable state median income.	1
Measure 1	Median Income Threshold 2. Compares current monthly income as reported in the FJC data at the time of filing to the state median income adjusted for household size. Assumes **one** non-filing household member when assigning the applicable state median income.	0.92
Measure 2	Median Income Threshold 3. Compares current monthly income as reported in the FJC data at the time of filing to the state median income adjusted for household size. Assumes **two** non-filing household members when assigning the applicable state median income.	0.81
Measure 3	Forms indicator. Examines case dockets and identifies above-median debtors based on whether the case includes either Form 122A-2 or Form 122C-2, which are filed only by above-median-income debtors. This measure is available only for a subset of districts and during the period 2015-2019. For comparison with the baseline estimates, we re-estimate the baseline model on these districts using the same 2015-2019 sample of cases. Column (3) compares the average marginal effect from this reestimated baseline model to the model estimated using Measure 3.	0.85

Table reports the Baseline and three alternative measures of above-median-income status used for the robustness checks. Column (3) reports the correlation of the district-specific average marginal effects (AMEs) from the Chapter 7 models using the alternative measures. We do not report the correlation for the Chapter 13 models because nearly all AMEs are clustered near zero, but the AMEs are shown in the second column of Figure C2.

FIGURE C2
ALTERNATIVE MEASURES OF ABOVE-MEDIAN INCOME



(A) CH.7, MEASURE 1

(B) CH.13, MEASURE 1

(C) CH.7, MEASURE 2

(D) CH.13, MEASURE 2

(E) CH.7, MEASURE 3

(F) CH.13, MEASURE 3

Figure plots the estimated district-specific AMEs of the means test when using alternative measures of above-median status (vertical axis), plotted against the AMEs from the baseline measure (horizontal axis).

Appendix D Bootstrap Procedure

We first detail the main bootstrap procedure used to obtain standard errors, p-values, and confidence intervals for the chapter choice model and the decomposition estimates. We then discuss a second bootstrap procedure used to account for clustering in the difference-in-differences model of equation (7).

Main Bootstrap Procedure We form our main bootstrap samples and estimates using the following procedure:

1. Let N_d denote the number of observations from district d in the original sample. For each district d, we randomly draw a bootstrap sample, with replacement, of N_d observations from the original sample.

2. Using the bootstrap sample, we then estimate

   - **Eligibility Models** Using the bootstrap sample, we estimate the district-chapter-specific eligibility models following the specification in equation (1). In some bootstrap samples, a small number of district-specific models do not converge. In these cases, we drop those districts from the remaining chapter choice and means test analysis.
   - **Chapter Choice Models** Using the predicted eligibility from the bootstrap-sample models estimated in the prior step, we use the same bootstrap sample to estimate the chapter choice model in equation (5).
   - **Counterfactual: Means Test** Using the bootstrap sample and bootstrap-estimated eligibility and chapter choice models, we generate the predicted change in each district's chapter choice caused by the means test, ΔP_d^b, as discussed in Section 7.1 and where b denotes that this predicted change is generated using bootstrap sample b. We then form $\Delta P_d^{O,b} = DI_d \Delta P_d^b$ to create the predicted change in the chapter choice of district d. The share of positive income debtors, DI_d, is the same across all bootstrap samples because the bootstrap procedure resamples from our main estimation sample, which includes only debtors with positive disposable income.

To summarize, for the bootstrap sample b, we obtain estimates of (i) the parameters in each district-chapter-specific eligibility model, (ii) the parameters of the chapter choice model, and (iii) the counterfactual change in each district's share under Chapter 13 caused by removing the means test.

3. We repeat this procedure for $b = 1, \ldots, 500$.

Bootstrap standard errors and p-values Let $B = 500$ be the number of bootstrap samples, $\hat{\theta}$ be a parameter estimated in the main sample, and $\hat{\theta}^*(b)$ be the same parameter estimated using bootstrap sample b. Following Hansen (2022), we estimate the bootstrap variance as

$$\hat{V}_{\hat{\theta}}^{\text{boot}} = \frac{1}{B-1} \sum_{b=1}^{B} \left(\hat{\theta}^*(b) - \bar{\theta}^* \right) \left(\hat{\theta}^*(b) - \bar{\theta}^* \right)'$$

$$\bar{\theta}^* = \frac{1}{B} \sum_{b=1}^{B} \hat{\theta}^*(b).$$

For the estimator $\hat{\theta}$, the *bootstrap standard error* is the square root of the bootstrap estimator of variance:

$$s_{\hat{\theta}}^{\text{boot}} = \sqrt{\hat{V}_{\hat{\theta}}^{\text{boot}}}.$$

We report bootstrap p-values for the null hypothesis that the parameter $\theta_0 = 0$ as

$$p^* = \frac{1}{B} \sum_{b=1}^{B} \mathbb{1} \left\{ |\hat{\theta}^*(b) - \hat{\theta}| > |\hat{\theta} - \theta_0| \right\}.$$

We also report bias-corrected (BC) percentile intervals of Efron (1982) as described in Hansen (2022).

Bootstrapping for Clustered Observations in BAPCPA Regression For the district-quarter level regressions in equation (7) and reported in Table 5, we adjust the bootstrap procedure to account for both the estimated regressor ΔP_d^O and the clustering of observations at the district level. Specifically, we combine a pairs cluster bootstrap for the district-quarter level observations and the earlier bootstrap procedure for ΔP_d^O outlined above.

- **Pairs Cluster Bootstrap** The original sample used to estimate equation (7) contains observations from 81 districts and each quarter from 2001-2019. To form bootstrap sample b, we randomly draw, with replacement, 81 districts. Because we draw with replacement, some districts will appear in the sample multiple times. For each district in the bootstrap sample, we include all quarterly observations from 2001–2019.

- **Bootstrap Estimated Regressor** To account for the uncertainty in the estimated regressor, ΔP_d^O, we merge each district with its bootstrap-estimated parameter $\Delta P_d^{O,b}$. As discussed above, the variation in this parameter across bootstrap samples reflects the variation in both the eligibility models, the chapter choice models, and the distribution of variables in the sample.

- The bootstrap sample b combines the pairs cluster bootstrap with the earlier bootstrap procedure generating $\Delta P_d^{O,b}$. We use this sample to estimate equation (7) and form bootstrap estimates of the coefficient of interest β_1^b and the other model parameters.

- Bootstrap standard errors and p-values are calculated as described above.

We use this same procedure to calculate standard errors for the event study estimates reported in Figure 7.

Appendix E Geographic Variation in Chapter Choice and Dismissal Rates

Appendix E.1 Variables and Summary Statistics

Table E1
Variable List

Variable	Group	Geo. Level	Definition	Source
Ch. 7 attorney fee	Legal	State	Post-BAPCPA average Ch. 7 attorney fee	[1]
Ch. 13 attorney fee	Legal	State	Post-BAPCA average Ch. 13 attorney fee, including pre- and post-petition fees	[1]
Homestead exemption	Legal	State	2011 state homestead exemption (max of state and federal if federal available). Unlimited exemptions are coded as the maximum of all other states' exemptions.	[2]
Wildcard exemption	Legal	State	2011 state wildcard exemption (max of state and federal if federal available)	[2]
Garnishment protection	Legal	State	Weekly wages protected from garnishment for a minimum-wage full-time worker who heads a 4-person household	[3]
Hispanic	Demo.	District	Share of total population identifying as Hispanic	[4]
Black	Demo.	District	Share of total population identifying as Black	[4]
Divorced	Demo.	District	Share of population age 15+ that is divorced	[4]
Avg. # of children	Demo.	State	Average number of children in a household	[5]
College degree	Economic	District	Share of population age 18+ with at least a BA degree	[4]
Unemployment rate	Economic	District	Average unemployment rate (2010–2015)	[6]
Employed	Economic	District	Share of working-age population (25–64) that is employed	[4]
Health insurance	Economic	District	Share of individuals age 18+ with health insurance	[4]
Median household income	Economic	State	Median household income	[5]
Homeowner	Economic	District	Share of households that are owner-occupied	[4]
Has vehicle	Economic	District	Share of households with at least one vehicle	[4]
Income inequality (Gini)	Economic	State	State Gini coefficient on household income	[5]
Democrat vote share	Ideology	State	Democrat vote share in the 2012 presidential election	[7]
Believes gov't aid helps the poor	Ideology	State	Share agreeing that "government aid to the poor does more good than harm"	[8]
Catholic	Ideology	State	Share Catholic	[8]
Evangelical	Ideology	State	Share in Evangelical Protestant Tradition	[8]
Mainline protestant	Ideology	State	Share in Mainline Protestant Tradition	[8]
Other religion	Ideology	State	Share in other religion (excluding None and DK/Refused)	[8]

This table lists the heterogeneity variables used in the analysis of geographic variation in Chapter 7 and Chapter 13 dismissal rates and Chapter 13 filing shares. The columns report the variable name, group (Legal, Economic, Demographic, Ideology), geographic level (State or District), definition, and data source.

Sources: [1] Lupica, Lois (2013). *The Consumer Bankruptcy Creditor Distribution Study.* SSRN 2480170.
[2] Indarte, Sasha (2021). *Moral Hazard Versus Liquidity in Household Bankruptcy.* Working paper.
[3] National Consumer Law Center (2019). *Still No Fresh Start: How States Allow Debt Collectors to Push Families into Poverty.* [4] NHGIS ACS 2011–2015. [5] IPUMS USA (Ruggles et al.), Version 16.0.
[6] Bureau of Labor Statistics, Local Area Unemployment Statistics. [7] MIT Election Data and Science Lab (2017). *U.S. President 1976–2020.* Harvard Dataverse. [8] Pew Research Center (2014). *Religious Landscape Study.*

Table E2
Variable Summary Statistics

Variable	Mean	SD	Min	Max
Ch.13 Share (%)	29.0	17.0	6.0	78.4
Ch.7 Share (%)	71.0	17.0	21.6	94.0
Pr. Dismissal Ch. 7	5.9	2.9	1.5	15.7
Pr. Dismissal Ch. 13	5.6	3.2	1.2	19.6
Ch. 7 attorney fee ($)	801.2	207.8	449.0	1251.0
Ch. 13 attorney fee ($)	2545.2	640.3	1360.0	6410.0
Homestead exemption ($)	153623.0	210368.8	5000.0	550000.0
Wildcard exemption ($)	1558.7	2667.4	0.0	11000.0
Garnishment protection ($)	364.4	182.3	217.5	750.0
Hispanic (%)	16.5	16.8	1.2	66.4
Black (%)	15.0	13.9	0.6	53.3
Divorced (%)	11.5	1.5	7.4	14.3
Avg. # of children	0.7	0.1	0.5	1.0
Homeowner (%)	65.6	5.6	39.1	73.9
College degree (%)	25.1	5.7	10.0	39.5
Has vehicle (%)	91.9	5.4	52.7	96.3
Health insurance (%)	85.5	4.6	72.8	95.9
Unemployment rate (%)	6.9	1.5	3.0	11.8
Employed (%)	71.6	4.8	54.8	81.7
Median household income ($)	52814.2	7963.4	39016.0	73800.0
Income inequality (Gini)	0.5	0.0	0.4	0.5
Democrat vote share (Pres. 2012, %)	48.1	9.5	24.7	70.1
Believes gov't aid helps the poor (%)	49.4	5.3	32.5	62.0
Catholic (%)	19.0	8.6	4.2	42.2
Evangelical (%)	27.3	11.1	6.6	52.1
Mainline Protestant (%)	15.8	5.6	5.6	32.0
Other religion (%)	14.8	7.7	2.7	59.7

This table reports summary statistics for the heterogeneity variables used in the analysis of geographic variation in Chapter 7 and Chapter 13 dismissal rates and Chapter 13 filing shares. The columns report the variable name, mean, standard deviation, minimum, and maximum.

Appendix E.2 Chapter-Specific Geographic Heterogeneity in Screening

This subsection provides additional evidence on the chapter-specific screening measures underlying the geographic analysis in Section 6. We first summarize the cross-district distributions of predicted Chapter 7 and Chapter 13 dismissal rates. We then decompose the district-level predicted eligibility ratio to show how cross-district variation in $\log(Q_{7d}/Q_{13d})$ reflects similarly sized variation in the Chapter 7 and Chapter 13 dismissal-rate measures. Finally, we report the corresponding district-level scatterplot.

Table E3
Chapter-Specific Screening Summary

Statistic	Chapter 7	Chapter 13
Mean	5.9	5.5
Median	5.6	4.8
10th pct.	2.7	2.1
90th pct.	9.7	9.2
Min	1.5	1.2
Max	15.7	19.6
Corr. across districts	-0.126	
Corr. p-value	0.258	

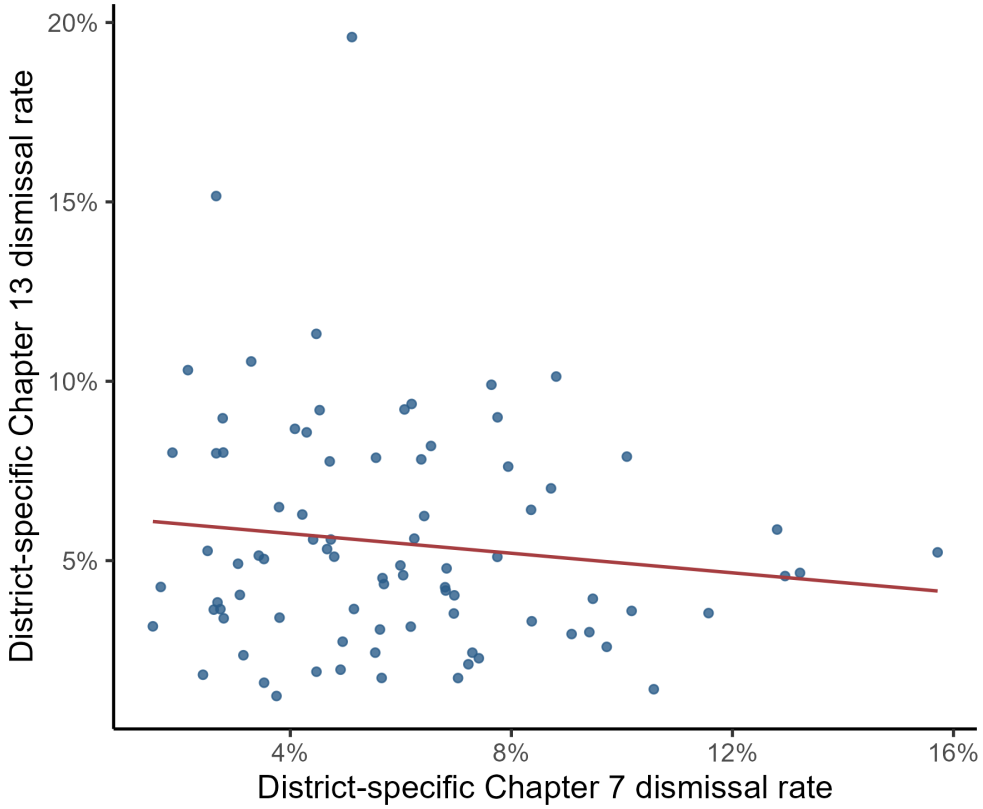
This table summarizes district-level predicted dismissal probabilities separately for Chapter 7 and Chapter 13. For each district, the dismissal rate equals one minus the average predicted eligibility when that district's estimated screening model is applied to the full national sample of filers. The final two rows report the cross-district correlation between the Chapter 7 and Chapter 13 dismissal rates and the associated p-value.

Table E4
Decomposition of the District-Level Predicted Eligibility Ratio

Component	Value	Share (%)
Var(log(Q7/Q13))	0.0025	
Var(log Q7)	0.0010	40.4
Var(log Q13)	0.0012	48.4
Cov(log Q7, log Q13)	-0.0001	
-2 Cov(log Q7, log Q13)	0.0003	11.2

This table decomposes cross-district variation in the log predicted eligibility ratio, $\log(Q_{7d}/Q_{13d})$, where Q_{7d} and Q_{13d} denote district-average predicted eligibility for Chapter 7 and Chapter 13, respectively. The table reports the variance of the log ratio, the variance of $\log(Q_{7d})$, the variance of $\log(Q_{13d})$, and the covariance term implied by the identity $\mathrm{Var}[\log(Q_{7d}/Q_{13d})] = \mathrm{Var}[\log Q_{7d}] + \mathrm{Var}[\log Q_{13d}] - 2\mathrm{Cov}[\log Q_{7d}, \log Q_{13d}]$. The final column expresses each component as a share of total cross-district variation in the log ratio.

Figure E1
Cross-District Correlation in Chapter 7 and Chapter 13 Dismissal Rates



Each point is a bankruptcy district. The horizontal axis reports the district's predicted Chapter 7 dismissal probability and the vertical axis reports the district's predicted Chapter 13 dismissal probability, where both are computed by applying each district's estimated screening model to the full national sample. The figure is intended to show whether districts that screen more aggressively in one chapter also tend to screen more aggressively in the other.

Appendix E.3 Correlates of Dismissal Rates

This section examines which district and state characteristics are correlated with the geographic variation in Chapter 7 and Chapter 13 dismissal rates. To do so, we examine the relationship between district-level Chapter 7 and Chapter 13 dismissal rates and the set of legal, economic, demographic, and ideological variables from the literature.

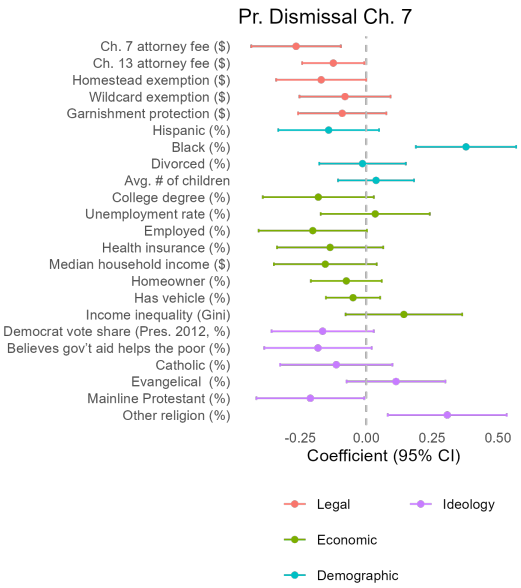
First, Figure E2 reports the bivariate (panels a and b) and multivariate (panels c and d) correlations between each explanatory variable and the dismissal rates. Both the dependent and independent variables are standardized, so the magnitudes are comparable across variables. No clear patterns emerge. In the bivariate analysis, Chapter 7 dismissal rates are strongly positively correlated with the share of Black residents, suggesting that heterogeneity in dismissal rates may help explain the well-documented racial differences in chapter choice. They are also weakly negatively correlated with several economic indicators, including employment, income, and insurance coverage. Across the ideological variables, there is heterogeneity but no clear pattern. Chapter 13 dismissal rates exhibit a different structure: they are positively associated with Hispanic population shares and the number of children, and negatively associated with health insurance coverage and Mainline Protestant affiliation. Legal variables show little systematic relationship with Chapter 13 dismissal risk. In the multivariate analysis, few variables retain statistically significant associations once all controls are included.

First, Figure E2 reports the bivariate (panels a and b) and multivariate (panels c and d) correlations between each explanatory variable and the dismissal rates. Both the dependent and independent variables are standardized, so the magnitudes are comparable across variables. No clear patterns emerge. In the bivariate analysis, there is a strong positive correlation between Chapter 7 dismissal rates and the share of Black residents. This suggests that heterogeneity in dismissal rates may help explain the well-documented racial differences in chapter choice. There are weak negative correlations with several economic indicators, including employment, income, and insurance coverage. Lastly, there is heterogeneity but no clear pattern across the ideological variables. Chapter 13 dismissal rates exhibit a different structure. They are positively associated with Hispanic population shares and with the number of children, and negatively associated with health insurance coverage and Mainline Protestant affiliation. Legal variables show little systematic

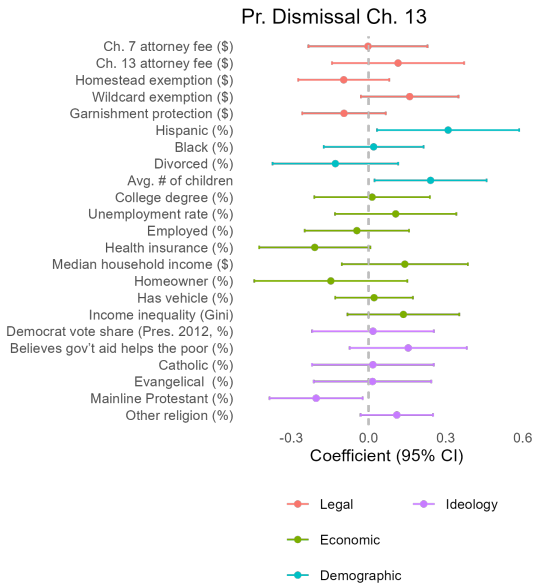
relationship with Chapter 13 dismissal risk. In the multivariate analysis, few variables retain statistically significant associations with dismissal rates once all other variables are included.

Table E5 reports the LMG decomposition for both dismissal rates. Focusing on the full model (column 5), no single category dominates. For Chapter 7, demographic and ideological variables each explain roughly 0.16–0.17 in the single-group models, with legal and economic variables contributing more modestly. For Chapter 13, economic and demographic variables explain comparable portions. In the full model, all groups contribute, with no dominant predictor. In both chapters, the total R^2 is 0.36–0.37, indicating that most of the variation in dismissal rates remains unexplained by these covariates. This diffuse pattern reinforces treating dismissal rates as distinct institutional measures rather than as derivatives of standard covariates.

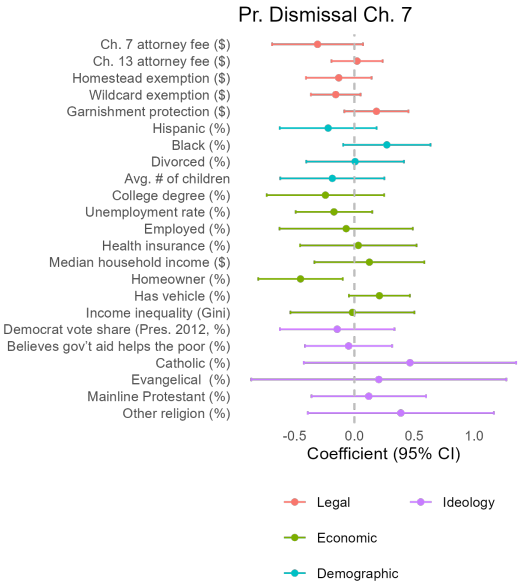
Figure E2
Correlates of Dismissal Rates



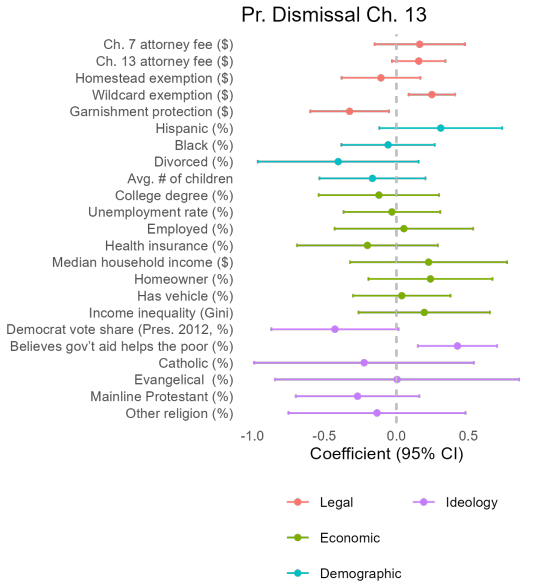
(a) Bivariate



(b) Bivariate



(c) Multivariate



(d) Multivariate

Panel (a) shows bivariate OLS estimates between district-level Chapter 7 dismissal rates and each explanatory variable, where both the dependent variable and each regressor are standardized to mean zero and standard deviation one. Panel (b) shows bivariate OLS estimates between Chapter 13 dismissal rates and each explanatory variable. Panels (c) and (d) repeat these analyses using multivariate OLS models with all explanatory variables. Horizontal bars display 95% confidence intervals using heteroskedasticity-robust standard errors.

Table E5
Decomposing Dismissal Rates

Group	Legal (1)	Economic (2)	Demographic (3)	Ideology (4)	Full model (5)
A: Decomposing Ch. 7 Dismissal Rates					
Legal	0.117	–	–	–	0.078
Demographic	–	–	0.155	–	0.113
Economic	–	0.084	–	–	0.078
Ideology	–	–	–	0.169	0.101
Total R-squared	0.117	0.084	0.155	0.169	0.371
B: Decomposing Ch. 13 Dismissal Rates					
Legal	0.06	–	–	–	0.105
Demographic	–	–	0.111	–	0.086
Economic	–	0.124	–	–	0.090
Ideology	–	–	–	0.085	0.077
Total R-squared	0.06	0.124	0.111	0.085	0.358

This table reports the Shapley (LMG) decomposition of the model's R^2 for Chapter 7 Dismissal Rates (Panel A) and Chapter 13 Dismissal Rates (Panel B). Screening variables (the Chapter 7 and Chapter 13 dismissal probabilities) are included in all specifications. Additional groups (Legal, Economic, Demographic, Ideology) are added one at a time, with the final column reporting the full model containing all groups. Entries are absolute contributions to R^2, and the final row reports the total R^2 for each specification. Each value represents the contribution of the corresponding group of variables to the model's explained variation in the dependent variable, computed by averaging marginal improvements in R^2 across all possible group orderings. All variables are standardized prior to estimation. The final row reports the full model's R^2.

Appendix E.4 Gelbach Decomposition of Dismissal Rate Variables

Table 4 Panel A, which decomposes the geographic variation in districts' Chapter 7 shares, shows that the coefficients on the two dismissal rates change as other variables are included. Moving from the simple regression (column 1) to the full model (column 6), the coefficient on the Chapter 7 dismissal rate goes from -0.47 to -0.19, and the coefficient on the Chapter 13 dismissal rate goes from 0.03 to 0.20. This subsection uses the Gelbach (2016) decomposition to clarify which observed district characteristics account for these changes. Whereas Table E5 above asks how much the covariates explain variation in dismissal rates themselves, the Gelbach decomposition asks a different question: which groups of controls explain why the estimated relationship between dismissal rates and chapter choice changes when those controls are added.

Let y_d denote district d's Chapter 7 share, D_d the vector of the two dismissal rates, and X_d the vector of legal, economic, demographic, and ideology controls. We compare the "simple" regression

$$y_d = \alpha^S + D_d'\beta^{simple} + u_d^S$$

to the "full" regression

$$y_d = \alpha^F + D_d'\beta^{full} + X_d'\gamma + u_d^F.$$

For each dismissal-rate coefficient, the total change is

$$\Delta\beta = \hat{\beta}^{simple} - \hat{\beta}^{full},$$

and the Gelbach decomposition expresses $\Delta\beta$ exactly as the sum of contributions from the added covariates. Specifically, for each added variable $x_k \in X_d$, we estimate the auxiliary regression

$$x_{kd} = a_k + D_d'\pi_k + v_{kd},$$

where π_k captures the projection of control x_k onto the two dismissal rates. Let $\hat{\gamma}_k$ denote the coefficient on x_k in the full regression. Then the contribution of control x_k to the change in dismissal-rate coefficient j is

$$C_{jk} = \hat{\pi}_{jk}\hat{\gamma}_k,$$

and the exact decomposition satisfies

$$\Delta\hat{\beta}_j = \sum_{k \in X} C_{jk}.$$

For the grouped decomposition, we sum these variable-level contributions within each group $g \in$ {Legal, Economic, Demographic, Ideology}:

$$C_{jg} = \sum_{k \in g} C_{jk},$$

and report each group's signed share as $C_{jg}/\Delta\hat{\beta}_j$. Table E6 reports the grouped contributions, while Table E7 reports the corresponding variable-level terms.

The results indicate that demographic and ideological variables account for most of the changes in the dismissal-rate coefficients. For the Chapter 7 and Chapter 13 dismissal coefficients, the Demographic and Ideological variables explain virtually all of the change in the dismissal coefficients. Examining the variable-level contributions in Table E7, for the Chapter 7 dismissal coefficient, the share Black is the largest single contributor, accounting for 68.5% of the change, followed by Evangelical share (25.7%) and Mainline Protestant share (15.0%). For the Chapter 13 dismissal coefficient, the number of children (29.8%), Mainline Protestant share (23.7%), Black share (20.9%), and beliefs about government aid (16.3%) are among the largest contributors. Legal and economic variables contribute relatively little to the change in dismissal-rate coefficients, and in some cases offset the changes.

Table E6
Gelbach Decomposition by Variable Group

Dismissal-rate coef.	Legal (1)	Economic (2)	Demographic (3)	Ideology (4)	Total $\Delta\beta$ (5)
Panel A: Contributions to $\Delta\beta$					
$\Delta\beta$ on Pr. Dismissal Ch. 7	0.014	0.021	-0.216	-0.101	-0.282
$\Delta\beta$ on Pr. Dismissal Ch. 13	-0.004	0.028	-0.089	-0.108	-0.173
Panel B: Share of $\Delta\beta$ (%)					
$\Delta\beta$ on Pr. Dismissal Ch. 7	-5.1%	-7.3%	76.7%	35.7%	100.0%
$\Delta\beta$ on Pr. Dismissal Ch. 13	2.1%	-15.9%	51.6%	62.3%	100.0%

This table reports an exact Gelbach decomposition of the change in the standardized coefficients on the Chapter 7 and Chapter 13 dismissal rates in the district-level Chapter 7 share regression. The decomposition compares a simple model containing only the two dismissal rates with a full model that adds the complete set of legal, economic, demographic, and ideology controls. For each dismissal-rate coefficient, the total change is $\Delta\beta = \hat{\beta}^{simple} - \hat{\beta}^{full}$. Panel A reports each group's contribution to that total change, and Panel B reports each group's signed share. The final column reports the total coefficient change itself. All variables are standardized prior to estimation.

Table E7
Gelbach Decomposition by Variable

Group	Variable	Ch. 7 contrib.	Ch. 7 share (%)	Ch. 13 contrib.	Ch. 13 share (%)
Legal	Ch. 7 attorney fee ($)	-0.019	6.9%	-0.003	1.6%
Legal	Ch. 13 attorney fee ($)	0.014	-4.9%	-0.012	7.2%
Legal	Homestead exemption ($)	-0.013	4.5%	-0.008	4.7%
Legal	Wildcard exemption ($)	0.004	-1.4%	-0.010	5.7%
Legal	Garnishment protection ($)	0.029	-10.2%	0.030	-17.1%
Economic	College degree (%)	-0.006	2.0%	-0.000	0.2%
Economic	Health insurance (%)	-0.011	3.8%	-0.015	8.5%
Economic	Unemployment rate (%)	0.006	-2.2%	0.014	-8.3%
Economic	Employed (%)	0.019	-6.7%	0.007	-3.8%
Economic	Median household income ($)	-0.008	2.7%	0.007	-3.9%
Economic	Homeowner (%)	0.008	-2.8%	0.013	-7.5%
Economic	Has vehicle (%)	0.007	-2.5%	-0.002	1.3%
Economic	Income inequality (Gini)	0.004	-1.6%	0.004	-2.5%
Demographic	Hispanic (%)	-0.005	1.7%	0.014	-8.0%
Demographic	Black (%)	-0.193	68.5%	-0.036	20.9%
Demographic	Divorced (%)	-0.004	1.3%	-0.015	8.9%
Demographic	Avg. # of children	-0.015	5.2%	-0.052	29.8%
Ideology	Democrat vote share (Pres. 2012, %)	-0.011	4.0%	-0.000	0.2%
Ideology	Believes gov't aid helps the poor (%)	0.035	-12.6%	-0.028	16.3%
Ideology	Catholic (%)	0.029	-10.2%	-0.000	0.2%
Ideology	Evangelical (%)	-0.072	25.7%	-0.019	11.2%
Ideology	Mainline Protestant (%)	-0.042	15.0%	-0.041	23.7%
Ideology	Other religion (%)	-0.039	13.8%	-0.018	10.6%

This table reports the variable-level Gelbach decomposition corresponding to Table E6. Each row gives the contribution of an individual control variable to the change in the standardized coefficient on the Chapter 7 or Chapter 13 dismissal rate in the district-level Chapter 7 share regression when moving from the simple dismissal-rate-only model to the full model. The share columns report each variable's signed share of the total coefficient change, where $\Delta\beta = \hat{\beta}^{simple} - \hat{\beta}^{full}$. Variables are ordered by the same groups used in the heterogeneity analysis: Legal, Economic, Demographic, and Ideology. All variables are standardized prior to estimation.