

# Who Files for Bankruptcy? The Heterogeneous Impact of State Laws on a Household's Bankruptcy Decision

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*This paper examines the heterogeneous impact of state exemption laws and state garnishment laws on bankruptcy. Using a new household level dataset, the empirical specification simultaneously examines the impact these laws have on a household's bankruptcy decision as well as the impact they have on a household's assets and unsecured debts. High exemption laws are found to have a positive impact on the probability of bankruptcy that is increasing in assets. Furthermore, high garnishment rates are found to have a positive impact on bankruptcy that is decreasing in income. I also show that high exemption laws and high garnishment rates increase a household's assets but do not affect unsecured debts. I examine the policy implications of standardizing exemption levels and garnishment rates. Understanding the heterogeneous effects of state laws is crucial as they suggest that a household with a given set of financial characteristics will seek bankruptcy relief if it resides in one state but will have to use alternative consumption smoothing measures if it lives in a different state.*

Using different methodologies, a large literature has examined the impact of state exemption laws and state garnishment laws on bankruptcy. Some works use individual level data to regress a household's bankruptcy decision on a set of state level variables, thus estimating the average impact of laws on a household's bankruptcy decision (for example, see Dawsey and Ausubel, 2004; Agarwal, Liu and Mielnicki, 2003; Lin and White, 2001).<sup>1</sup> Others use aggregate data to regress filing rates on a set of state level variables, thereby examining the impact of laws on the average household (for example, see Lefgren and McIntyre, 2009; White, 1987; Apilado, Dauten and Smith, 1978). But regardless of their methodology, the majority of papers found that while high exemption levels do not have a significant impact, high garnishment rates have a positive impact on bankruptcy.

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<sup>1</sup> One notable exception is Fay, Hurst and White (2002), which instead of directly include a set of state level variables, regress a household's filing decision on the "financial benefit" of bankruptcy where the financial benefit is defined as the debt that can be discharged less nonexempt assets a debtor loses by filing.

This paper shows that because state laws have a heterogeneous effect across households, prior papers have understated their impact. For example, because the median household has \$25,000 in home equity, the difference between an exemption of \$40,000, \$100,000, or even an unlimited amount is meaningless--- in other words, exemption laws are immaterial to the median household. Thus, it should not be surprising that prior works have largely found that high exemption laws do not have a significant impact on bankruptcy. By focusing instead on the heterogeneous impact of exemption laws, this paper shows the large impact they have on households with high assets. For example, using a new household level dataset, I find that while the median household is almost equally likely to file for bankruptcy in a state with high or low exemption levels, households with \$250,000 in home equity (the 90<sup>th</sup> percentile) are 1.3 times more likely to file for bankruptcy in a state with a high exemption level.

Additionally, this paper shows that garnishment rates have a heterogeneous impact across households. Specifically, I show that garnishment rates have a negligible impact on households with high levels of income--- whether their wages can be garnished at the maximum federal rate of 25 percent, 15 percent, or not at all, is trivial for households with high income levels. However, garnishment rates are of great consequence for households with lower levels of income. For example, I find that while high income households (such as households at the 90<sup>th</sup> percentile, earning \$135,000 in income) are equally likely to file for bankruptcy in a state with a high or low garnishment rate, households earning \$15,000 (the 10<sup>th</sup> percentile) are 1.7 times more likely to file for bankruptcy in a state with a high garnishment rate.

The empirical specification simultaneously examines the impact of state laws on a household's probability of filing for bankruptcy as well as its assets and debts. Thus, this paper also builds on the work of Hintermaier and Koeniger (2016), Mitman (2016), Cao (2014), Mankart (2014), Grant (2010), Pavan (2008), Athreya (2006), Lin and White (2001), Berkowitz and Hynes (1999), Repetto (1998), and Gropp, Schultz and White (1997), which examined the impact of state laws on a household's balance sheet. I find that while high exemption laws and high garnishment rates are not found to impact a household's unsecured debts, both increase a household's assets.

The large cross-state differences in homestead exemption laws has been hotly debated, with many arguing that they should be standardized to promote fairness (for example, see White, 2007 and Axelrod, 2015). Regression estimates suggest that if every state enacts a high exemption level, protecting at least \$40,000 of home equity (the median amount), approximately 26,000 fewer

households will file each year as a result of both the impact this law would have on the probability of bankruptcy and the impact it would have on households' assets and debts. Given that the average household discharges approximately \$50,000 of unsecured debt upon filing for bankruptcy (Report of Statistics Required by the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Tables 1X), this policy change would lead to a \$1.3 billion decreases in the amount of debt discharged each year. On the other hand, if every state enacts a high garnishment rate, allowing wage garnishment, approximately 82,000 additional households would file for bankruptcy each year. Based on the statistic above, this policy change would lead to an additional \$4.1 billion dollars of debt being discharged each year.

In acknowledging their heterogeneous impact, this paper shows that state laws play a significant role in determining *which* households file for bankruptcy. The public policy implications are significant. These findings suggest that a household with a given set of financial characteristics will seek bankruptcy relief if it resides in one state but will have to use alternative consumption smoothing measures if it lives in a different state. To be sure, it is not clear whether bankruptcy is the most desirable form of consumption insurance—although it is costly, it provides households with a fresh start and encourages participation in the work force. And while determining the optimal exemption and garnishment laws is left for future research, for the first time, this paper shows that by changing its garnishment or exemption laws, states significantly impact *which* households file for bankruptcy.

Furthermore, examining the heterogeneous impact can explain the largely ignored cross-state differences in the characteristics of bankrupt households. For example, in 2016, the average bankrupt household in Tennessee had an annual income of \$32,016 and assets of \$55,723. But in adjacent North Carolina, the average bankrupt household had an annual income of \$41,027 and assets of \$260,646 (2016 Report of Statistics Required by the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Tables 1X and 2X).

## **I. Institutional Background**

The United States has two primary procedures for personal bankruptcy--- Chapter 7 and Chapter 13.<sup>2</sup> In a Chapter 7 bankruptcy, households liquidate assets in excess of state exemption levels. Thus, households with assets above the state's exemption level, must surrender their assets.

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<sup>2</sup> While Chapter 11 is available, less than 1 percent of consumers file for bankruptcy under this chapter.

Once the assets are sold, households receive cash equal to the exemption level, and the remaining proceeds are distributed amongst the households' creditors. On the other hand, households with assets below the exemption levels can keep all their assets. State exemption levels are grouped into two categories: homestead exemption levels, which protect home equity, and personal exemption levels, which protect personal property such as cash, vehicles, jewelry and appliances. As seen in Table 1, both homestead and personal exemption levels vary significantly across states.<sup>3</sup> For example, six states (Florida, Iowa, Kansas, Oklahoma, South Dakota, and Texas) have unlimited homestead exemptions, protecting an unlimited amount of home equity from seizure by creditors while two states (Delaware and Maryland) protect no home equity.<sup>4</sup> Once all the household's nonexempt assets are liquidated, the household's remaining unsecured debts are discharged (forgiven).<sup>5</sup> Under Chapter 7 of the Bankruptcy Code, the household may keep all of its future earnings.<sup>6</sup>

On the other hand, in a Chapter 13 bankruptcy, households retain all of their assets and instead agree to repay some of their debts from future earnings.<sup>7</sup> Debtors pay their projected monthly disposable income (the difference between their monthly income and monthly budgeted living expenses) into the Chapter 13 repayment plan. After making payments for three to five years, the case is closed, and any remaining debts are discharged.<sup>8</sup> This repayment plan must compensate creditors at least as much as they would receive under Chapter 7.<sup>9</sup>

For households facing serious debt, there are many advantages to filing for bankruptcy. First, as mentioned above, households are able to discharge much of their unsecured debt. Second, the filing of a bankruptcy petition creates an "automatic stay" that immediately pauses all

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<sup>3</sup> Exemption levels and garnishment rates collected from Lefgren and McIntyre (2009).

<sup>4</sup> It should be noted that exemption laws protect households against involuntary liens or unsecured debts. However, they do not protect households against voluntary liens or consensual secured debts. Thus, exemption laws do not protect households against foreclosure.

<sup>5</sup> Most unsecured debts, including credit card debts, installment loans, medical debts, unpaid rent and utility bills, tort judgments, and business debts, can be discharged under Chapter 7.

<sup>6</sup> Under the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) of 2005, households with income above the state median are generally prohibited from filing for bankruptcy under Chapter 7--- instead these households generally must file for bankruptcy under Chapter 13. For a discussion of the "means test" see for example, White (2007).

<sup>7</sup> In 2007, less than 40 percent of cases were filed under Chapter 13 of the Bankruptcy Code. As mentioned in the text, the major benefit of filing a Chapter 13 is asset retention. But, compared to Chapter 7, Chapter 13 is an extensive and lengthy process--- under Chapter 13, households must make monthly payments for three to five years. In contrast, Chapter 7 cases typically last less than six months. As shown in Lefgren, McIntyre and Miller (2010), the best observable predictor of chapter choice is the consumer's attorney; households are likely to file under Chapter 13 if they consult a bankruptcy lawyer who specializes in Chapter 13 cases.

<sup>8</sup> A household with income below the state's median income level must make payments within a three-year period (unless ordered otherwise by the Court), while a household with income above the state's median income level must make payments within a five year period.

<sup>9</sup> Under the so-called "best interests of creditors test," a court may not confirm a chapter 13 plan unless it finds that the plan will provide unsecured creditors with at least as much as they would receive if the debtor were "liquidated under chapter 7." See 11 U.S.C. § 1325(a)(4).

collection efforts including wage garnishment and foreclosure proceedings.<sup>10</sup> The Federal Consumer Credit Protection Act (CCPA) states that 75 percent of wages or 30 times the federal minimum wage per week (whichever is higher) is protected from garnishment.<sup>11</sup> However, the CCPA allows states to enact their own garnishment laws, provided that these laws protect a greater portion of wages than the federal share. As seen in Table 1, six states--- Alaska, Florida, New Hampshire, Pennsylvania, South Carolina, and Texas--- have either explicitly or implicitly eliminated effective wage garnishment except for debts related to taxes, child support, federally guaranteed student loans, court-ordered fines or restitution for a crime the debtor committed. An additional 22 states have thresholds that are higher than the federal law.

Yet regardless of the financial benefits, bankruptcy is a costly endeavor. In addition to the nearly \$300 filing fee, the median attorney fees for a Chapter 7 and Chapter 13 bankruptcy are \$1,078 and \$3,000 respectively (U.S. Government Accountability Office, 2008). Moreover, there are non-pecuniary costs to bankruptcy, including the stigma of bankruptcy and future restrictions from the credit market. Furthermore, filing for bankruptcy eliminates the option of doing so again for the next several years.<sup>12</sup> And finally, households must either forfeit a portion of their assets (as they do in a Chapter 7 bankruptcy) or a portion of their future income (as they do in a Chapter 13 bankruptcy).

## II. Literature Review

To be sure, numerous papers have explored the impact of state laws on bankruptcy. However none have explicitly studied their heterogeneous impact. For example, using aggregate data, many papers regressed state (Fisher, 2001; Weiss, Bhandari and Robins, 2001; Shiers and Williamson, 1987; and Apilado, Dauten and Smith, 1978), district (Buckley and Brinig, 1998), county (White, 1987), or zip code (Lefgren and McIntyre, 2009) filing rates on legal variables. While most of these papers found a positive relationship between wage garnishment and

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<sup>10</sup> Garnishment can be taken for any type of debt--- common examples include defaulted child support, taxes, court fines, and student loans. Wages, salaries, commissions, bonuses, and income from retirement programs can all be garnished if a household fails to repay its debts.

<sup>11</sup> On February 1, 2007, the federal minimum wage was \$5.15. Thus, at the time my sample was collected, at least \$154.50 (30 x \$5.15) of weekly wages was exempt from garnishment. When an employee's weekly wages exceeded \$154.50 but were less than \$206.00, only the amount over \$154.50 could be garnished. For example, if an employee earned \$165 in a particular week, only \$5.50 could be garnished. When an employee's earnings were \$206.00 or more in a given week, up to 25 percent of those earnings could be garnished. For an employee earning \$250.00 a week, 25 percent of his earnings (or \$62.50) could be garnished while \$187.50 had to be paid to the employee.

<sup>12</sup> For a Chapter 7 bankruptcy, debtors are not eligible to receive another discharge if they received a discharge from a Chapter 7 case within the past 8 years or a Chapter 13 case within the past 6 years. For a Chapter 13 bankruptcy, debtors are not eligible for a discharge if they received a discharge from a Chapter 7 case within the past 4 years or a Chapter 13 case within the last 2 years. See Miller and Miller (2008) for a discussion of repeat bankruptcy filings.

bankruptcy, they have not found a statistical relationship between exemption laws and bankruptcy.<sup>13</sup> This methodology however can only examine the impact of state laws on the average household; aggregate data lack the degrees of freedom to estimate the heterogeneous impact of laws across households. Additionally, using household level data, other studies (such as Dawsey and Ausubel, 2004; Agarwal, Liu and Mielnicki, 2003; and Lehnert and Maki, 2002) regressed a household's bankruptcy decision on state laws. While high exemption levels were found to increase the probability of bankruptcy, a consensus was not reached as to the impact of garnishment rates. These studies, however, understated the impact of state laws, examining their average impact rather than their heterogeneous impact across households.

One exception is Fay, Hurst and White (2002) that found that the "financial benefit" of bankruptcy has a positive and significant impact on the probability of bankruptcy. Financial benefit is defined as the debt that can be discharged less nonexempt assets a debtor loses by filing. Although their result nods at the heterogeneous impact of exemption laws, with this definition, the impact of exemption laws is not explicitly disentangled from additional units of debts. In other words, their result may indicate that high exemption laws encourage high asset households to file for bankruptcy, or it could also indicate that households are more likely to file for bankruptcy if they have high levels of debt. The purpose of this paper is to explicitly disentangle these two forces. An additional exception is Mankart (2014) who built a model of the credit card puzzle in which heterogeneous agents simultaneously accumulate assets and debts. Then, upon filing for bankruptcy, these agents discharge their debts and keep assets up to the exemption level. The model does not show a strong relationship between exemption levels and default rates, except at low levels of exemptions. However, the author shows that borrowers who default in the model do not own much wealth and therefore are minimally affected by increases in the exemption level. Again, Mankart's (2014) result suggests that state laws have a heterogeneous impact across households.

This paper also contributes to the large literature which examines the impact of state exemption laws on households' balance sheets. High exemption levels have been found to increase the interest rate on unsecured credit (for example, Mitman, 2016; Athreya, 2006), increase the

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<sup>13</sup> One notable exception is White (1987) which found that high exemption levels were correlated with high bankruptcy rates. However, because the analysis is performed at the county level, and the author did not correct the standard errors for clustering within states, Lefgren and McIntyre (2009) note that it is likely that the precision of the estimates is overstated.

probability of being denied an unsecured loan (for example, Lin and White, 2001) and decrease the supply of unsecured debt (for example Grant, 2010; Gropp, Schultz and White, 1997).<sup>14</sup> Finally, Hintermaier and Koeniger (2016), Cao (2014), Mankart (2014), Pavan (2008), Athreya (2006), and Repetto (1998) show that high exemption laws increase households wealth. However, none of these papers has examined the impact of state exemption *and* garnishment laws on households' balance sheets.

### III. Conceptual Framework

While it is beyond the scope of this paper to construct a dynamic model of bankruptcy, this section outlines a household's optimization problem to highlight the heterogeneous effect of state laws. Similar to Lefgren and McIntyre (2009), the financial benefit of filing for Chapter 7 and Chapter 13 bankruptcy at time  $t$  are approximated by:

$$\text{Financial Benefit } 7_{it} = \max[D_{it} - \max(A_{it} - E_{it}, 0), 0] \text{ if } \text{Garnish}_{it} = 1 \quad (1)$$

$$\text{Financial Benefit } 13_{it} = \max[D_{it} - \alpha Y_{it}, 0] \text{ if } \text{Garnish}_{it} = 1 \quad (2)$$

$$\text{Financial Benefit } 7_{it} = \text{Financial Benefit } 13_{it} \text{ if } \text{Garnish}_{it} = 0 \quad (3)$$

where  $D_{it}$  represents the household's unsecured debts,  $A_{it}$  represents the household's assets,  $E_{it}$  represents the state's exemption level, and  $Y_{it}$  represents the household's income.

As seen in equation (1), the financial benefit of a Chapter 7 bankruptcy is the amount of debt discharged less any nonexempt assets that a household must liquidate, as long as this value is positive and the household is at risk of wage garnishment. Equation (2) indicates that the financial benefit of Chapter 13 is the amount of debt discharged less repayment made through the court mandated repayment plan, as long as this value is positive and the household is at risk of wage garnishment. As discussed above, the court mandated repayment plan requires households to use a portion of their income ( $\alpha$ ) to repay their debts and thus, the amount repaid is denoted by  $\alpha Y_{it}$ .<sup>15</sup> If, however, the household's income is not at risk of being garnished, the financial benefit of filing for bankruptcy at time  $t$  is 0, regardless of chapter.<sup>16</sup>

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<sup>14</sup> A parallel literature examines the impact of state exemption laws on secured borrowing. The purpose of this paper is to examine the heterogeneous impact of state laws on a household's bankruptcy decision. As shown in equation (4) below, the primary specification includes unsecured debt and assets (measured by home equity). Thus, this paper does not distinguish between the value of the home and the amount of the mortgage on the home. Therefore, the large literature which examines the impact of state laws on secured debts is not discussed in detail here. See for example, Berkowitz and Hynes (1999), Lin and White (2001) and Chomsisengphet and Elul (2006), to name a few. Also see Athreya (2002), Chatterjee et al. (2007) and Livshits, MacGee, and Tertilt (2007) for models examining welfare implications.

<sup>15</sup> Lefgren and McIntyre (2009) approximate  $\text{Financial Benefit } 13_{it} = (1 - \alpha_{it})D_{it}$  if  $\text{Garnish}_{it} = 1$  where  $\alpha_{it}$  is the fraction of debts a household must repay if filing a Chapter 13 bankruptcy.

<sup>16</sup> It should be noted that even if the financial benefit is zero, households may experience a utility benefit from filing for bankruptcy due to relief from creditor harassment.

These equations highlight the heterogeneous impact of state laws on the financial benefit of bankruptcy. As seen in equation (1), for a fixed portfolio, the financial benefit of bankruptcy is decreasing in assets. This effect, however, is weaker in states with high exemption levels. In other words, the marginal effect of assets (i.e., the slope) is smaller in states with high exemption levels. Meaning that high exemption levels increase the financial benefit of filing for bankruptcy only if a household has high levels of assets.

Furthermore, equation (2) shows that for a fixed portfolio, the financial benefit of bankruptcy is decreasing in income. This effect, is amplified by high garnishment rates. In other words, the marginal effect is larger (i.e. the slope is steeper) in states with high garnishment rates. Meaning that high garnishment rates increase the financial benefit of filing for bankruptcy if a household has low levels of income.

Thus, for a fixed portfolio, the probability of bankruptcy is higher in states with high exemption levels or high garnishment rates. Following the dynamic equilibrium model developed by Mitman (2016) and Athreya (2006) and the theoretical predictions from Lin and White (2001), creditors are, as a result, likely to decrease the supply of unsecured credit in such states. But because as it is preferable to have higher levels of unsecured debts when filing for bankruptcy, households will demand additional unsecured debt in these states. Thus, the overall impact of state laws on unsecured debts is unclear. But, as shown in Hintermaier and Koeniger (2016), Cao (2014), Mankart (2014), Pavan (2008), Athreya (2006), and Repetto (1998), a household's assets are predicted to be higher in such states.

## **IV. Data Description**

### *A. Choice-Based Sample*

To simultaneously examine the heterogeneous impact of state laws on a household's bankruptcy decision as well as their impact on a household's assets and debts, I construct a choice-based sample. Data on bankrupt households was collected from bankruptcy petitions while data on non-bankrupt households came from the Panel Study of Income Dynamics (PSID).<sup>17</sup> It should be noted that publically available datasets such as the PSID and Survey of Consumer Finance cannot be used because they contain too few bankrupt households. Furthermore, a choice-based

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<sup>17</sup> Choice-based sampling arises when selection into the sample is determined by the dependent variable.

sample is preferable to data from a major credit card company or credit bureau data as the likelihood of receiving credit depends on state laws, thereby causing sample selection bias.

Information on bankrupt households was obtained from PACER (Public Access to Court Electronic Records) bankruptcy records for the population of households that filed for bankruptcy nationwide on February 1, 2007.<sup>18</sup> Bankruptcy records provide an abundance of financial information including unsecured debts, home equity, employment status, and income over the previous two calendar years.<sup>19</sup> However, these records contain limited demographic information--they provide the debtor's gender (inferred from pronouns used in the court documents and the debtor's name), marital status, and household size. Using the filer's address, other demographic information including the debtor's age, education, and race are imputed using 2000 Census block statistics.

Data on non-bankrupt households was obtained from the 2007 PSID.<sup>20</sup> Each of the 6,782 households in the PSID detailed similar information, including their home equity, unsecured debt, income from 2006 and 2004, employment status, gender, family size, marital status, age, education, and race.

### *B. Summary Statistics*

Summary statistics, comparing bankrupt and non-bankrupt households, can be found in Table 2. One of the most striking disparities between the groups is the difference in their home equity. Not surprisingly, bankrupt households are characterized by much lower levels of home equity--- \$9,649 compared to \$95,523 in the PSID. Furthermore, Table 2 shows that bankrupt households have higher levels of unsecured debt; while households in the PSID have an average

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<sup>18</sup> To reiterate, this dataset uses data from all 94 federal bankruptcy courts.

February 1st was selected as a random non-holiday date at the beginning of the year. The Statement of Financial Affairs collects information on the household's income from the previous two calendar years. February 1 is late enough that the household likely received their W-2 and can provide accurate income information but early enough that I can accurately calculate recent changes in income.

Data was collected from 2007 for two reasons. First, prior to 2007, many courts did not use PACER's Case Management/Electronic Case Files (CM/ECF) system, and therefore, it would not have been possible to electronically collect a nationally representative sample of cases. Additionally, data after 2007 would have been muddled with households filing due to the housing crisis.

<sup>19</sup> In particular, unsecured non-priority debts are collected from Schedule F, as these are the debts that are likely to be discharged in bankruptcy. My results are statistically similar when I include unsecured priority debts such as domestic support obligations and unpaid taxes (from Schedule E).

Home equity is calculated as the difference in the debtor's interest in the property and the amount of secured claim, both found on Schedule A. Income over the previous two calendar years (2005 and 2006) was collected from the Statement of Financial Affairs.

Bankruptcy petitions contain a wealth of other information as well. For example, in addition to the variables mentioned above, Agarwal, Chomsisengphet, McMenamin and Skiba (2010) mention that bankruptcy petitions include information on monthly expenditures, number of creditors, and previous bankruptcy filings. However, as my control sample does not contain these covariates, they are not included in my regressions.

<sup>20</sup> Because bankrupt households are not identified in this study, I assume that none of the households in the PSID filed for bankruptcy. However, because 1.2 percent of all households in the United States filed for bankruptcy in 2007, some households in my control group may have filed for bankruptcy. Cosslett (1981) and Lancaster and Imbens (1996) develop an estimation procedure to deal with the "contaminated control group" problem. Using this alternative estimation strategy does not alter my results as such a small fraction of controls are contaminated. As a result, I assume that none of the households in the PSID filed for bankruptcy.

\$7,926 of unsecured debt, bankrupt households have an average \$50,838 of unsecured debt. Additionally, bankrupt households earned less than half of what non-bankrupt households earned in 2006--- on average bankrupt households earned \$31,940 while non-bankrupt households earned \$69,037. For the average bankrupt household, this represented a decline in their income from the previous year (a decline of \$5,148) while for the average non-bankrupt household, this represented an increase in income (an increase of \$12,574).<sup>21</sup> Households in the bankruptcy sample have a higher employment rate --- 80 percent of the bankrupt sample is employed compared to 72 percent in the non-bankrupt sample.

Bankrupt and non-bankruptcy households also differ in terms of key demographics. The head of a bankrupt household is less likely to be male (0.48 percent in the bankrupt sample compared to 0.69 in the non-bankrupt sample) and less likely to be married (0.43 in the bankrupt sample compared to 0.48 in the non-bankrupt sample).<sup>22</sup> Furthermore, bankrupt households are larger (mean family size is 2.51 for the bankrupt sample compared to 2.35 nationwide).

The imputed demographic characteristics, based off the bankrupt household's census block, indicate that bankrupt households are younger--- the mean age in the bankruptcy sample is 41 compared to a mean age of 49 in the non-bankrupt sample. Additionally, they indicate that bankrupt households have slightly higher levels of education than non-bankrupt households. 90 percent of bankrupt households have at least completed high school, 24 percent have at least received a bachelor's degree and 7 percent have completed an advanced degree. For non-bankrupt households, the comparison figures are 82 percent, 24 percent, and 6 percent respectively.<sup>23</sup> The racial composition is similar in both samples. 17 percent of the bankrupt sample is Black while 10 percent of the sample is Hispanic; in the PSID, 15 percent of the sample is Black and 9 percent is Hispanic.

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<sup>21</sup> While the Statement of Financial Affairs collected income data on bankrupt households for the previous two calendar years (i.e. 2005 and 2006), the Panel Study of Income Dynamics (PSID) collected income information on non-bankrupt households from 2004 and 2006. Thus, for households in the bankruptcy sample, the change in income is the difference between their income in 2006 and 2005. But for households in the PSID, the change in income is the difference between their income in 2006 and 2004.

<sup>22</sup> See Hansen and Miller (2016) for a discussion of women in bankruptcy.

<sup>23</sup> Again, these findings are consistent with Sullivan, Warren, and Westbrook (2000) who found that in a 1991 sample of bankrupt debtors, 32 percent had a high school degree with no further formal training, 35 percent attended some college, 9 percent completed college, and 3 percent completed an advanced degree. By comparison, nationwide these figures were 36 percent, 25 percent, 12 percent and 6 percent respectively.

## V. Empirical Specification

To examine the heterogeneous impact of state laws on a household's bankruptcy decision, I estimate the following linear probability model:<sup>24</sup>

$$\begin{aligned} \text{Bankrupt}_{i_s} = & \alpha_0 + \alpha_1 \text{High Exemption}_{i_s} + \alpha_2 \text{High Exemption}_{i_s} * \text{Assets}_{i_s} + \\ & \alpha_3 \text{High Garnishment}_{i_s} + \alpha_4 \text{High Garnishment}_{i_s} * \text{Income}_{i_s} + \alpha_5 \text{Assets}_{i_s} + \\ & \alpha_6 \text{Debts}_{i_s} + \alpha_7 X_i + \varepsilon_{iB} \end{aligned} \quad (4)$$

where  $\text{Bankrupt}_{i_s}$  is a dummy variable equal to one if household  $i$  in state  $s$  files for bankruptcy.  $\text{High Exemption}_{i_s}$  and  $\text{High Garnishment}_{i_s}$  are dummy variables that equal one if household  $i$  lives in a state with a high exemption levels and high garnishment rate respectively.  $\text{Assets}_{i_s}$  are measured as the household's home equity and  $\text{Debts}_{i_s}$  by the household's unsecured debts. Finally,  $\text{Income}_{i_s}$  is household  $i$ 's income, and  $X_{i_s}$  is a vector of other characteristics including income, change in income, employment status, and demographic characteristics such as gender, family size, marital status, age, education, race, and regional fixed effects.

In my primary specification, I focus on the impact of homestead exemption levels, as they protect a household's primary asset: its home equity. Thus,  $\text{High Exemption}_{i_s}$  is defined as a dummy variable that equals one if the household lives in a state that protects more than \$40,000 in home equity (the median level). However, as detailed below, as a robustness check, I show that my findings are robust to alternative definitions.

Furthermore, in my primary specification, I define  $\text{High Garnishment}_{i_s}$  as a dummy variable that equals one if state law allows garnishment. Recall under federal law, creditors may garnish at most twenty five percent of wages or 30 times the minimum wage. However, many states, however, have placed further limits on the garnishment rate, including several states that have prohibited garnishment all together. Below I show that my findings are robust to alternative definitions of this variable as well.

However, the coefficients in equation (4) are likely to be biased by endogeneity because, as discussed above, a household's assets and debts are also impacted by state exemption and

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<sup>24</sup> Because of the interaction terms, a linear probability model is preferable to a logit or probit model. See Ai and Norton (2003) for a discussion of interaction terms in logit and probit models.

garnishment laws. Therefore, I employ a structural model to address this simultaneity.<sup>25</sup> The asset and debt equations take the following form:

$$Assets_{is} = \beta_0 + \beta_1 * High\ Exemption_{is} + \beta_2 * High\ Garnishment_{is} + \beta_3 X_i + \varepsilon_{iA} \quad (5)$$

$$Debts_{is} = \gamma_0 + \gamma_1 * High\ Exemption_{is} + \gamma_2 * High\ Garnishment_{is} + \gamma_3 X_i + \varepsilon_{iD} \quad (6)$$

where the covariance between  $\varepsilon_{iA}$  and  $\varepsilon_{iD}$  is not assumed to be zero as unobserved characteristics that impact assets also likely impact debts. This is the first paper to simultaneously examine a household's assets, debts, and probability of bankruptcy.

## VI. Results

Using the choice-based sample detailed in section IV, I estimate the structural equation model specified in equations (4)-(6) using weighted exogenous sampling maximum likelihood estimation (WESMLE).<sup>26</sup> Results from equation (4) are reported in Table 3 while results from equations (5) and (6) are reported in Table 5. Robust standard errors are in parentheses.

### A. Probability of Bankruptcy

In the first column of Table 4, I estimate a regression model that is similar to prior studies. I regress bankruptcy on state level dummy variables *High Exemption<sub>is</sub>* and *High Garnishment<sub>is</sub>*--- interaction terms are not included.<sup>27</sup> Other covariates include home equity, income, unsecured debt, change in income, employment status, the demographic variables detailed in Table 2, and regional fixed effects. As discussed in section II, like prior works, I find that high exemption laws do not have a statistically significant impact on the average household while high garnishment rates increase the probability that the average household files for bankruptcy. In keeping with Domowitz and Sartain (1999) and Gross and Souleles (2002a), the probability of bankruptcy is decreasing in home equity, decreasing in income, and increasing in debt.

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<sup>25</sup> Endogeneity bias occurs when the value of variables, such as assets and debts, are determined within the system. While there are many methods that can be used to correct the endogeneity bias, including instrumental variables, this paper uses a structural equations regression. Specifically, the model considered here is a recursive system (Wooldridge, 2010) and thus, the identification in this model is guaranteed. Estimates from a structural equation model are generally more efficient as they account for the correlation in error terms. Furthermore, structural equation regressions allow us to separately examine the direct and indirect impact of state laws on the probability of bankruptcy. The estimation technique employed here is called structural equations modeling (SEM). The STATA commands "sem" (structural equation models) and "gsem" (generalized structural equation models) simultaneously estimate regression results.

<sup>26</sup> Because the dataset oversample an infrequently made choice, OLS estimates will be biased and inconsistent (Manski and Lerman, 1977). Instead, using WESMLE, each term is weighted by the inverse of the ex-ante probability that an observation is included in the sample. As detailed in Manski and Lerman (1977), if  $Q_i$  denotes the fraction of the population that is bankrupt and  $H_i$  denotes the fraction of the sample that is bankrupt, then using WESMLE, each bankrupt household is weighted by  $Q_i/H_i$  and each non-bankrupt household is weighted by  $(1-Q_i)/(1-H_i)$ .

<sup>27</sup> The correlation between *High Exemption* and *High Garnishment* is -0.14.

In column II, I include the interaction terms outlined in section III. Consistent with the conceptual framework, while the dummy variable *High Exemption<sub>is</sub>* is insignificant, it has a positive and statistically significant impact when interacted with home equity, meaning that the marginal effect of assets is smaller in states with high exemption levels. In other words, high exemption levels increase the probability that high asset households file for bankruptcy. Furthermore, the dummy variable *High Garnishment<sub>is</sub>* has a positive impact on bankruptcy that declines with income, meaning that the marginal effect of income is amplified in states with high garnishment rates. In other words, high garnishment rates increase the probability that low income households file for bankruptcy.

Admittedly, these coefficients could be biased by spatially correlated variables that are not observed by the econometrician. For example, households in a particular state could be influenced by the same social norms, legal culture, and preferences to repay debt. To examine this issue, in column III, I re-run my regression with state fixed effects. With the inclusion of state fixed effects, I cannot estimate the level effect of state laws. However, the interaction effects between the laws and various household characteristics can still be identified. As seen in the third column, the inclusion of state fixed effects does not alter the coefficients on my interaction terms. Additionally, it is worth noting that the BIC rises with these additional variables. This important robustness check should alleviate any concern that my results are driven by state-level omitted variables, or even that they are driven by variations in the cost of living across states.

In column IV, I show that my results are robust to alternative definitions of *High Exemption<sub>is</sub>* and *High Garnishment<sub>is</sub>*. In this column, *High Exemption<sub>is</sub>* is defined as a dummy variable that equals one if the state protects more than \$72,000 (the median) in all property, that is personal property and home equity. Furthermore, instead of using the dummy variable *High Garnishment<sub>is</sub>*, which equals one if the state law allows any garnishment, I create a dummy variable that equals one if the state law allows garnishment at the federal limit of 25 percent.<sup>28</sup> Results using these alternative definitions are consistent with those found in column II. Again, the dummy variable denoting a high exemption level has a positive and significant effect when interacted with home equity. As before, this suggests that exemption levels have an increasing impact with assets. Furthermore, the dummy variable denoting that garnishment is

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<sup>28</sup> The correlation between these variables is -0.18.

permitted at the federal limit has a positive impact on bankruptcy that is decreasing with income. Again, this indicates that garnishment laws increase the probability that low income households file for bankruptcy.

### *B. Predicted Probabilities Across Households*

In Table 4, to better understand the heterogeneous impact of state laws on a household's bankruptcy decision, I examine the likelihood of bankruptcy by legal and demographic factors.<sup>29</sup> For the median household, with approximately \$25,000 in home equity, the probability of bankruptcy is nearly identical in high and low exemption states--- the probability of bankruptcy is 0.1184 in a state with a low exemption level and 0.1123 in a state with a high exemption level. Understandably, the difference between a \$20,000, \$40,000, \$100,000, or even an unlimited exemption level is meaningless for this household. This explains why most prior studies were unable to find an empirical relationship between exemption levels and bankruptcy. However, high asset households are greatly impacted by high exemption laws. Households with \$250,000 in home equity (approximately the 90<sup>th</sup> percentile in the home equity distribution), for example, are 1.28 times more likely to file for bankruptcy in a state with a high exemption level than a low exemption level.

Table 4 also demonstrates that low income households are more likely to file for bankruptcy in a state with a high garnishment rate. For example, households with \$15,000 in income (at approximately the 10<sup>th</sup> percentile in the income distribution) are 1.67 times more likely to file for bankruptcy in a state with a high garnishment rate. For these households, being subject to wage garnishment has a large impact on their bankruptcy decision. Notice however, that for high income households, at approximately the 90<sup>th</sup> percentile, earning \$135,000 in income, the predicted probability of bankruptcy is nearly identical in states with high and low garnishment rates--- the probability of filing for bankruptcy is 0.0700 in states with a low garnishment rate and 0.0737 in states with a high garnishment rate.

### *C. Impact on Assets and Debts*

Table 5 provides coefficients from equations (5) and (6), examining the impact of state laws on a household's assets and debts. To date, no other paper has addressed whether debts or assets depend on the state's exemption *and* garnishment laws.

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<sup>29</sup> All other factors are held constant at the mean of the data for the 6,782 households in the PSID. These results are based on my baseline specification, seen in the second column of Table 3.

Again, in specifications (I) and (II) the dummy variable *High Exemption*<sub>is</sub> is defined to equal one if the state's homestead exemption is above the median and *High Garnishment*<sub>is</sub> is defined to equal one if state law allows garnishment. Recall that the conceptual framework predicts that high homestead exemptions and high garnishment rates will decrease the supply of unsecured credit while simultaneously increasing its demand. Consistent with these conflicting forces, results indicate that these laws have no statistically significant impact on unsecured debt. Furthermore, as predicted by the conceptual framework, and consistent with Hintermaier and Koeniger (2016), Cao (2014), Mankart (2014), Pavan (2008), Athreya (2006), and Repetto (1998), both high homestead exemption levels and high garnishment rates increase a household's home equity.

To examine whether coefficients are biased by specially correlated variables that are not observed by the econometrician, specification (III) includes state fixed effects. The inclusion of state fixed effects does not alter the coefficients on household level variables, and a Wald test fails to reject the hypothesis that the fixed effects are jointly equal to zero (p-value 0.00). Thus, it is also unlikely that results are driven by state-level omitted variables, such as differences in housing value across states.

Finally, in the fourth specification, I use alternative definitions of *High Exemption*<sub>is</sub> and *High Garnishment*<sub>is</sub>. The results are robust to these alternative definitions; coefficients in the unsecured debt equation are again insignificant. Furthermore, the coefficients in the home equity equation remain significant, and as expected, are smaller in magnitude.

#### *D. Policy Implications*

Table 6 gives predicted changes in the probability of filing for bankruptcy that result from hypothetical policy changes. Suppose first that every state enacts a high exemption level, protecting at least \$40,000 of home equity (the median amount). The model predicts that the average household will have an additional \$13,221 in home equity but \$534 less in unsecured debt. As a result, the probability of bankruptcy would fall by 0.00329.<sup>30</sup> Since the average probability of filing in my sample is 0.104, the model predicts that the number of bankruptcy filings would decrease by 3.2 percent per year. Based on 822,590 bankruptcy filings per year in the United

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<sup>30</sup> Note that the home equity, unsecured debt, and probability of filing for bankruptcy do not change for households currently living in states with high exemption levels. For households currently living in states with low exemption levels with a fixed portfolio, increasing their exemption level increases the probability of filing for bankruptcy. However, this effect is offset by the impact of the additional home equity. Moreover, decreasing these households' unsecured debts decreases the probability of filing.

States (the figure for 2007), this implies that approximately 26,000 fewer bankruptcy filings would occur per year. Given that the average household discharges over \$50,000 of debt upon filing for bankruptcy (Report of Statistics Required by the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Tables 1X), this hypothetical policy change would decrease the amount of debt being discharged by \$1.3 billion each year.

Next, suppose every state enacts a high garnishment rate, allowing wage garnishment. The model predicts that the average household will have an additional \$3,740 in home equity but \$223 more in unsecured debt. As a result, the probability of bankruptcy would rise by 0.01039.<sup>31</sup> This represents an increase of 10 percent, implying that approximately 82,000 additional households would file for bankruptcy each year. Based on the statistic above, this hypothetical policy change would lead to an additional \$4.1 billion dollars of debt being discharged each year.

## VII. Conclusion

While state exemption laws and garnishment laws have little to no impact on the *average* household, this paper shows that they have a large and significant impact on *some* households. To study the heterogeneous impact of state laws across households, this paper estimates a reduced form structural model using a newly created household-level dataset and choice-based estimation techniques. The results are robust to a variety of specification checks and are unlikely driven by omitted state-level variables.

This paper makes two contributions to the existing literature. First, while prior empirical works have examined the average impact of state laws, this is the first to explicitly examine the heterogeneous impact of state laws across households. Additionally, this is the first paper to simultaneously examine the impact of homestead exemption levels *and* garnishment laws on a household's bankruptcy decision as well as the impact on a household's unsecured debts and assets.

These findings have important policy implications. Because of the heterogeneous impact of state exemption laws and garnishment laws, a household with a given set of financial characteristics will seek bankruptcy relief if it resides in one state but will use alternative consumption smoothing measures if it lives in a different state. Numerous studies have examined the differential use of social insurance programs including Social Security (for example Parsons,

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<sup>31</sup> Again, the probability of filing for bankruptcy does not change for households currently living in states with high garnishment rates.

1980) and Medicare (for example Baicker et. Al, 2004) across households. Given its size, it is important to also recognize the differential use of another consumption smoothing program--- bankruptcy--- across households. These findings are also of the utmost importance for state governments; the majority of states make small incremental changes to their exemption laws on an annual or biannual basis. They should note that these changes not only impact the characteristics of filers, but that they also impact the portfolio decisions of *all* households.

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## Tables

**Table 1 --- State Exemption Laws and Garnishment Laws**

State	Homestead Exemption if	Personal Exemption	Garnishment Law*
	Married	if Married	Wages that are Exempt
Alabama	10,000	21,000	Federal Limit
Alaska	108,000	22,400	\$688 per week
Arizona	100,000	15,000	Federal Limit
Arkansas	2,500	29,150	Federal Limit
California	75,000	43,800	Federal Limit
Colorado	60,000	10,500	Federal Limit
Connecticut	32,300	74,000	40 Times Minimum Wage
Delaware	0	25,150	85 Percent
Florida	Unlimited	4,000	100 Percent
Georgia	10,000	12,400	Federal Limit
Hawaii	30,000	53,150	80 Percent
Idaho	50,000	22,600	Federal Limit
Illinois	15,000	7,900	85 Percent or 45 Times Minimum Wage
Indiana	15,000	8,000	Federal Limit
Iowa	Unlimited	36,200	40 Times Minimum Wage
Kansas	Unlimited	9,200	Federal Limit
Kentucky	10,000	17,600	Federal Limit
Louisiana	30,000	9,600	Federal Limit
Maine	12,500	37,300	40 Times Minimum Wage
Maryland	0	17,000	Federal Limit
Massachusetts	100,000	29,500	Federal Limit
Michigan	32,300	29,500	40 Times Minimum Wage
Minnesota	400,000	63,100	40 Times Minimum Wage
Mississippi	150,000	20,500	Federal Limit
Missouri	16,000	9,800	90 Percent
Montana	120,000	20,000	Federal Limit
Nebraska	12,500	17,800	85 Percent
Nevada	250,000	27,000	Federal Limit
New Hampshire	60,000	29,600	50 Times Minimum Wage <sup>a</sup>
New Jersey	32,300	29,500	90 Percent
New Mexico	60,000	52,500	40 Times Minimum Wage
New York	20,000	16,000	90 Percent
North Carolina	20,000	12,500	Federal Limit <sup>b</sup>
North Dakota	160,000	12,400	40 Times Minimum Wage
Ohio	10,000	8,100	Federal Limit
Oklahoma	Unlimited	52,000	Federal Limit
Oregon	33,000	42,000	40 Times Minimum Wage
Pennsylvania	32,300	29,500	100 Percent
Rhode Island	200,000	29,500	Federal Limit
South Carolina	5,000	19,900	100 Percent
South Dakota	Unlimited	8,400	80 Percent <sup>b</sup>
Tennessee	7,500	21,800	Federal Limit
Texas	Unlimited	60,000	100 Percent
Utah	40,000	16,000	Federal Limit <sup>c</sup>
Vermont	150,000	29,500	85 Percent <sup>b</sup>
Virginia	10,000	44,000	Federal Limit
Washington	80,000	29,500	35 Times Minimum Wage
West Virginia	10,000	27,400	80 Percent
Wisconsin	80,000	29,500	80 Percent
Wyoming	20,000	29,800	Federal Limit

Source : Lefgren and McIntyre (2009)

Notes : † "Federal Limit" indicates that 75 percent or 30 times the federal minimum wage per week is exempt from garnishment.

<sup>a</sup> Garnishments are effective only for one paycheck, at which point a new lawsuit must be filed

<sup>b</sup> Living expenses are exempt

<sup>c</sup> 6 month limit

**Table 2: Descriptive Statistics**

	Bankruptcy Sample	PSID Sample
Home Equity	\$9,649.19 (1,721.61)	\$95,522.95 (2,868.46)
Unsecured Debt	\$50,837.68 (2,052.56)	\$7,926.14 (319.48)
Income	\$31,940.52 (722.98)	\$69,036.72 (2,407.00)
Change in Income <sup>a</sup>	-\$5,147.75 (824.97)	\$12,574.27 (2,132.07)
Employed	0.80 (0.01)	0.72 (0.01)
<u>Demographic Variables</u>		
Male	0.48 (0.01)	0.69 (0.01)
Family Size	2.51 (0.04)	2.35 (0.02)
Married	0.43 (0.01)	0.48 (0.01)
Age <sup>b</sup>	40.69 (0.27)	48.73 (0.28)
High School Degree <sup>b</sup>	0.90 (0.01)	0.82 (0.01)
Bachelor's Degree <sup>b</sup>	0.24 (0.00)	0.24 (0.01)
Professional/Doctorate	0.07 (0.00)	0.06 (0.00)
Black <sup>b</sup>	0.17 (0.01)	0.15 (0.01)
Hispanic <sup>b</sup>	0.10 (0.00)	0.09 (0.00)
Sample Size	1,609	6,782

Notes: Standard errors are in parentheses.

<sup>a</sup> For households in the bankruptcy sample, the change in income is the difference between their income in 2006 and 2005. For households in the PSID, the change in income is the difference between their income in 2006 and 2004.

<sup>b</sup> For households in the bankruptcy sample these variables are imputed based on the household's census block.

**Table 3: Probability of Bankruptcy**

	(I)	(II)	(III)	(IV)
High Homestead Exemption Level (Above Median)	-0.0010 (0.0062)	-0.0088 (0.0072)		
High Homestead Exemption Level * Home Equity		0.0011** (0.0005)	0.0010* (0.0005)	
Garnishment is Allowed	0.0372*** (0.0072)	0.0615*** (0.0104)		
Garnishment is Allowed * Income		-0.0043*** (0.0013)	-0.0041*** (0.0013)	
High Total Exemption Level (Above Median)				-0.0139* (0.0072)
High Total Exemption Level * Home Equity				0.0012** (0.0005)
Garnishment Allowed at the Federal Limit				0.0523*** (0.0112)
Garnishment Allowed at the Federal Limit * Income				-0.0032* (0.0017)
Home Equity	-0.0021*** (0.0003)	-0.0023*** (0.0005)	-0.0024*** (0.0005)	-0.0026*** (0.0004)
Income	-0.0034*** (0.0010)	-0.0010 (0.0009)	-0.0012 (0.0009)	-0.0023** (0.0010)
Unsecured Debt	0.0295*** (0.0029)	0.0293*** (0.0029)	0.0288*** (0.0028)	0.0294*** (0.0029)
Fixed Effects	Region	Region	State	Region

*Notes:* Robust standard errors in parentheses.

All regressions also include controls for change in income, employment status and demographic variables detailed in Table 2. Income, home equity, and unsecured debt are measured in \$10,000.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4: Predicted Probabilities (in Percentage Points)  
by Legal and Demographic Factors**

<b>Points Along Home Equity Distribution</b>	<b>Low Exemption Level (Below Median)</b>	<b>High Exemption Level (Above Median)</b>
10th Percentile: \$0 in Home Equity	0.1243	0.1154
25th Percentile: \$0 in Home Equity	0.1243	0.1154
50th Percentile: \$25,000 in Home Equity	0.1184	0.1123
75th Percentile: \$125,000 in Home Equity	0.0951	0.0999
90th Percentile: \$250,000 in Home Equity	0.0660	0.0844

<b>Points Along the Income Distribution</b>	<b>Low Garnishment Rate (Garnishment Not Allowed)</b>	<b>High Garnishment Rate (Some Garnishment Allowed)</b>
10th Percentile: \$15,000 in Income	0.0824	0.1374
25th Percentile: \$25,000 in Income	0.0813	0.1321
50th Percentile: \$50,000 in Income	0.0787	0.1188
75th Percentile: \$85,000 in Income	0.0751	0.1003
90th Percentile: \$135,000 in Income	0.0700	0.0737

This table contains the predicted probabilities of bankruptcy differentiated by legal and demographic factors. All other household characteristics are held fixed at their mean value.

**Table 5: Assets and Debts**

	(I) and (II)		(III)		(IV)	
	Unsecured Debt	Home Equity	Unsecured Debt	Home Equity	Unsecured Debt	Home Equity
High Homestead Exemption Level (Above Median)	-0.0911 (0.0951)	2.2549*** (0.3172)				
Garnishment is Allowed	0.1279 (0.0944)	2.1462*** (0.3492)				
High Total Exemption Level (Above Median)					-0.1146 (0.0915)	1.8371*** (0.3050)
Garnishment Allowed at the Federal Limit					0.0672 (0.0766)	0.9575*** (0.2862)
Income	-0.0022 (0.0119)	0.6250*** (0.1294)	-0.0030 (0.0120)	0.6036*** (0.1263)	-0.0022 (0.0119)	0.6247*** (0.1296)
Change in Income	-0.0151 (0.0162)	-0.3492** (0.1516)	-0.0148 (0.0164)	-0.3377** (0.1456)	-0.0152 (0.0162)	-0.3499** (0.1518)
Employed	-0.0425 (0.1181)	-2.4683*** (0.6770)	-0.0428 (0.1174)	-2.4351*** (0.6535)	-0.0416 (0.1182)	-2.4482*** (0.6761)
Fixed Effects		Region		State		Region

Notes : Robust standard errors in parentheses.

All regressions also include demographic variables detailed in Table 2.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6: Policy Implications**

<b>Hypothesized Change</b>	<b>Impact on Home Equity</b>	<b>Impact on Unsecured Debt</b>	<b>Impact on Probability of Bankruptcy</b>	<b>Percentage Change in Filing Rate</b>	<b>Additional Filings Per Year</b>
All states impose high exemption levels (at least \$40,000 of home equity is protected)	\$13,221.25	-\$534.13	-0.00329	-3.2	-26,066
All states impose high garnishment rates (allowing wages to be garnished)	\$3,740.09	\$223.08	0.01039	10.0	82,443

This table examines the impact of hypothetical policy changes on home equity, unsecured debt and the predicted probability of bankruptcy, holding all other household characteristics at their mean value.

Note that the home equity, unsecured debt, and probability of filing for bankruptcy does not change for households currently living in states with these laws.