

# PERSONAL FINANCIAL DECISIONS: A STUDY OF CHANGES IN HOMESTEAD EXEMPTION LEVELS AND CONSUMER BANKRUPTCY CHOICES

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## ABSTRACT

*This study examines the impact of changes in homestead exemption levels upon the consumer bankruptcy filing rate. This relationship is examined through the creation of an interrupted time-series multiple regression model. Regression analyses were implemented using several predictor variables to detect any relationship between changes in homestead exemption levels and their effect on the applicable dependent variable. Four dependent bankruptcy variables were employed: per capita total consumer-bankruptcy filings, per capita Chapter 7 consumer-bankruptcy filing rate, per capita Chapter 13 bankruptcy filing rate, and Chapter 7 consumer-bankruptcy filings as a percentage of aggregate consumer-bankruptcy filing rates. Analyses indicate that consumers clearly prefer utilizing a Chapter 7 discharge method over Chapter 13. Additionally, these consumers do not find changes in homestead exemption levels as a source of wealth insurance to the extent that filings are significantly increased. Finally, consumer filing rates do not appear to be positively affected by the wealth effect that a risk-averse consumer might choose in bankruptcy choice.*

**JEL:** G, K

**KEYWORDS:** Bankruptcy, Chapter 7, Chapter 13, Homestead Exemption

## INTRODUCTION

Exemptions laws occupy a long and varied history as state and federal laws developed in America. These laws grew from a basic protection of a debtor's property from legal collection practices during the 1800s to myriad additions developed and implemented at the state level during the 1900s (Hansen & Hansen, 2012). Sullivan, Warren, and Westbrook (1989) identify exemption laws as a method of protecting a debtor such that he or she has the necessary property for survival, although this is subjective across states and other jurisdictions. (Buckley & Brinig, 1998).

Bankruptcy exemption laws follow largely the same logic in protecting and supporting the basic premise of survival and are intended to protect debtor assets from liquidation with the intent of allowing the debtor and family a sustainable basis for emerging from discharge (White, 2007; Fay, Hurst, & White, 2002). Exemption protection is normally 100 percent for basic items such as clothes, but varies widely from state to state for homesteads (White, 1998). Federal exemption levels are constant across all states. Most states require that debtors use state exemption levels but some states allow the use of the federal exemption (Sullivan, Warren, & Westbrook, 1989). Under the Bankruptcy Code states may permit debtors to opt out of the federal exemptions available under the Code and choose the state exemption level, which may vary widely among states (Peterson, 2003; Grant & Koeniger, 2009). Only states that have not opted out of the federal exemption scheme and also have state exemptions lower than the federal exemptions would be impacted by the federal exemption change. In those states debtors would choose the more advantageous federal exemptions (Gropp, Scholz, & White, 2012).

The fact that state laws are not uniform and offer higher or lower levels of debtor protection, especially when expressed in terms of the value of the home (Landry, Boozer, & Lowe, 2012), suggests that variations

in homestead exemption levels may affect consumer decision-making. Logically, consumers make financial decisions that maximize their financial benefit relative to cost. The decision to file consumer bankruptcy or to what extent that a consumer will file chapter 7 as opposed to chapter 13 rests in part on these financial incentives.

In fact, when considering the process of filing bankruptcy as a consumer choice, homestead exemption levels appear to impact behavior as a major financial incentive. Higher homestead exemption levels apply to both chapter of consumer bankruptcy and are positively correlated with higher filing rates (Domowitz & Sartain, 1999a). Households as well as individuals are impacted by this incentive in individual states and in the aggregate (Fay, Hurst, White, 2002), even to the extent that income inequality is positively associated with higher homestead exemption levels (Gala, Kirshner, & Volpin, 2013). A point of discussion, however, is to what extent the incentive shifts filing between bankruptcy chapters, especially when a change in the exemption level occurs. Several states increased their homestead exemption levels in the early to mid-1990s and have often increased again in the 2000s or been indexed.

Financial incentives may be static at an initial level or may change over time, thus affecting the relative benefit of bankruptcy protection. A key component of this argument is to what extent changes in financial benefits affect consumer decision-making not only after the incentive changes, but also preceding and during the change. Homestead exemption levels are normally relatively static but have been increased in several states (White, 1998), allowing for measure of this changing incentive on the decision to file consumer bankruptcy. Ample research has identified homestead exemption levels in relation to consumer bankruptcy filing rates (Domowitz & Sartain, 1999a; Shepard, 1984), but relatively sparse research in changes in the level of homestead exemption. From this aspect this research analysis proceeds. The research questions are as follows: 1) To what extent do changes in homestead exemption levels impact consumer bankruptcy filing rates in selected states? 2) To what extent do changes in aggregate homestead exemption levels impact aggregate consumer bankruptcy filing rates? For each research question these relationships will be explored in terms of total consumer filings for each chapter (chapter 7 and chapter 13) and as a percent of chapter 7 and percent of chapter 13 for a period of time before and after a change in state level exemptions. The next section reviews prior literature pertaining to the measurement of homestead exemption levels in emphasizing consumer choice. To follow an interrupted time series model is developed that measures changes in filing rates before, during, and after a change in homestead exemption levels for selected states and in the aggregate. Lastly, findings of the research are expressed and concluding remarks are offered.

## LITERATURE REVIEW

Consumer bankruptcy filings have maintained a steady increase over the last several decades. Numerous studies have examined the relationship between filing rates and legal changes surrounding bankruptcy code amendments, while others introduce socio-economic variables in explaining the increase (Buckley & Brinig, 1998). Chapter 7 and Chapter 13 are the two primary procedures by which consumer debtors address obligations that they have to their creditors. The primary difference between the two chapters is that Chapter 13 requires debtor repayment from future income, while Chapter 7 only requires repayment from assets or relinquish through discharge. Provisions of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 replaced the debtor's freedom to choose either chapter with a means test for determining eligibility (White, 2007). Financial incentives drive and promote behavior to the extent that consumer choice impacts bankruptcy filing, especially regarding the choice of chapter and the level of resources at stake (Domowitz & Sartain, 1999a). For Chapter 7 cases the financial benefit of filing is the difference between the value of the outstanding debt that will be discharged and the cost of the non-exempt assets that must be relinquished. Homeownership is only protected to the extent of the homestead exemption relative to home equity, with no limit on the amount of debt that may be discharged (Domowitz & Sartain, 1999a).

Conversely, Chapter 13 cases do not require that debtors relinquish assets but as part of their plan they must repay a portion of their debts from future income over a time period of up to five years. Debtors have a financial incentive to choose Chapter 7 over Chapter 13 if debtor assets are less than the level of exemption allowed within their state of filing (Faye, Hurst, & White, 2002). Differences exist in administration of bankruptcy law across local districts, to the extent that support for local filing trends may be influenced by national filing rates regardless of exemption levels. In terms of financial benefit, the value of the homestead exemption is equal to the value of the debtors' residence, if the homestead exemption level is unlimited, or up to the homestead exemption level if the home value is more than the level; otherwise, if the home value is less than the amount allowed via homestead exemption, the value of the homestead exemption would only be worth the value of the home and not the possible value of the homestead exemption (p. 709). Individuals or households will only file bankruptcy if the amount of debt discharged exceeds the amount of non-exempt assets that they must relinquish.

Before changes in bankruptcy law in 2005 consumers had a choice and thus this logic applied to both chapters 7 and 13, while after 2005 the choice of chapter is based on the ability to repay debt. When considering this financial benefit to filing over a ten year period from 1984 to 1994, about 18 percent of households would experience a financial benefit of up to \$2500 to filing, while ten percent would gain between \$2500 and \$10,000. Three percent would gain more than \$10,000 from filing. In each case the relationship was statistically significant and indicated that financial incentives guide bankruptcy decision-making (p. 712). Two primary approaches to measuring exemptions are by the use of dichotomous variables or by using the actual dollar amount of the exemption, with the former limited in capturing the change in dollar amounts of the exemption level (Fisher, 2001). Hynes (1998) concurred with this measure and favored the use of dummy variables, although with reservations about shortcomings surrounding the use of either a dummy variable or a continuous variable.

Gropp, Scholz, and White (1997) offer a perspective of bankruptcy filing from the supply and demand of credit. They find that the financial incentives are positively related to state level exemptions. The result is an increase in the amount of credit in high-asset households vis-à-vis low asset households, who experience a reduction in the availability and amount of credit. This suggests that bankruptcy exemptions redistribute assets from borrowers with few assets to borrowers with more assets. Exemption levels also impact both supply and demand effects of credit in the market for mortgage loans. Distinctions between unsecured and secured credit are important in that the former typically is included in a Chapter 7 filing and discharged, while the latter typically is a mortgage loan and represents a central role in the level of outstanding debt for most households that are often reaffirmed. Since property exemptions do not prevent foreclosure of the home mortgage if not fully repaid, it is not expected that a mortgage lender will be negatively affected by property exemptions and may in fact benefit the lender. There was not found to be an appreciable increase in mortgage increase rates or mortgage application denial as a result of high state level exemptions in the 1990s (Berkowitz & Hynes, 1999).

Domowitz and Sartain (1999b) identify medical and credit card debt as contributors to the reason why consumers file, finding that households with large medical debts are 28 times more likely to file than a base of all households. Homeownership, conversely, is inversely correlated with filing rates, where a debtor who does not own a home is seven times more likely to file than a debtor who owns a home (p. 413). Shifting the incidence of Chapter 13 filing relative to Chapter 7 is a desirable trend before 2005 but gained traction when means testing factors were applied (White, 2007). Nevertheless, property exemption levels may be used as a tool to manipulate the choice, with lower exemption levels associated with higher incidences of Chapter 13 filings. In fact, if exemption levels were lowered across the board by 50 percent, the result suggests that the probability of choosing Chapter 13 over Chapter 7 would increase by 18 percent (Domowitz & Sartain, 1999b).

Fan and White (2003) analyze entrepreneurial activity in explaining incentives for filing, where non-corporate firm liabilities are equivalent to personal debts. If a non-corporate firm fails the incentive is to file Chapter 7 bankruptcy to discharge those debts. Their approach considers the level of exemptions set by states as a form of “wealth insurance” (p. 543) that is positively correlated with business formation. This study concludes that the level of exemption is a determinant of filing decisions. Risk averse entrepreneurs were found to be more likely to start a business in those states with higher exemption limits, up to a point where higher and higher exemption levels begins to become negatively correlated with entrepreneurship (p. 544).

**METHODOLOGY**

For the model six states are considered, AK, CO, MN, MS, and NH, where changes in the level of homestead exemption were made. AK and MN allow filers to choose the federal exemption, but in each state the state level exemption is larger; thus, filers would choose the state exemption. In four of the five states the level of homestead exemption was increased; the only exception is MN, where the level decreased from unlimited to \$200,000. For each state the year that the homestead exemption changed was in the early 1990s, thereby minimizing the effect of national economic trends across different periods of time. For each state chosen other changes in state exemption levels did not occur within a six year period of time before or after the change indicated in the early 1990s. Additionally, this selection was made to avoid factors associated with the tremendous jump and subsequent decline in the number of consumer bankruptcies filed leading up to and after the Bankruptcy Reform Act of 2005 (Evans & Lewis, 2008). Representing a broad footprint of the U.S., through the dispersion of states the model tests each research question for each state and compares to aggregate totals. Table 1 offers a summary of each state chosen that includes the following: the name of the state chosen; the change year for exemption allowed; and exemption levels for six years before and six years after the change year. The nominal exemption level listed represents the amount of each state level exemption.

Table 1: Nominal State Homestead Exemption Levels Analyzed Before and After a Change

State	Pre-change Exemption	Change Year	Exemption	Post-Change Exemption Level
AK	\$27,000	1991		\$54,000
CO	\$20,000	1992		\$30,000
MN	unlimited	1993		\$200,000
MS	\$30,000	1992		\$75,000
NH	\$5,000	1993		\$30,000

Source: U.S. Courts

This study employs a methodology that is similar to the interrupted time-series analysis model used by Kellough (1990); Netter, Wasserman, and Kutner (1990, pp. 370-375); and Miller and Pierce (1997). As Kellough noted, the limited number of pre and post data points suggests that time-series is preferred to another modeling technique known as autoregressive integrated moving average (ARIMA). The interruption in the model for this study is the change in homestead exemption levels for the selected states as illustrated in Table 1. The model examines if the change in homestead exemption changes the bankruptcy filing rate or shifts the filing rate from one bankruptcy chapter to another. Changes to the applicable bankruptcy filing rate may be short or long-term depending on the impact of changes in homestead exemption on consumer personal financial choice.

Data are entered as cases in a year-by-year format for a total of 13 years for each state: six years before the change in homestead exemption; the contemporaneous year of the change in homestead exemption; and six years after the change in homestead exemption. Each state is considered independently. Four independent variables are employed. A counter variable is employed that is coded one for the first year of the analysis, two for the second year, and three for the third year, four for the fourth year, etc. This counter variable is

called BEFORE. The second independent variable is dichotomous in nature and is coded zero for the six years of analysis before and including the year of the change in homestead EXEMPTION (Table 1), and one for observations for the six years immediately after the change year. This variable is called CHANGE. The remaining independent variable is a post-intervention counter that is also coded in the following manner: coded as zero for observations six years prior to and including the contemporaneous year of change of homestead exemption, one for first year after change in homestead exemption, two for the next year, three for the next year, and so forth. This variable is called AFTER.

The intercept for the multiple regression equation describes the value of the dependent variable at the beginning of the time period. The coefficient, or slope, for the BEFORE variable describes the annual increase or decrease in the dependent variable that was happening before the change in homestead exemption. The estimated increase or decrease in those years is unaffected by the counter AFTER variable, as that variable is coded zero for all years prior to the change in homestead exemption. The coefficient for the policy variable (CHANGE) estimates the one-time increase or decrease in the value of the independent variable that came about in the first year following the change in exemption levels. The coefficient, or slope, of the AFTER variable estimates the increase or decrease in slope that occurred after the change in homestead exemption. The coefficient for the counter AFTER variable must be added to the coefficient for BEFORE to get the estimated slope after the change.

For the analysis four interrupted time-series regression analyses were run for four dependent variables: per-capita total consumer filings, per capita Chapter 7 consumer-bankruptcy filing rate, per-capita Chapter 13 bankruptcy filing rate, and Chapter 7 consumer-bankruptcy filings as a percentage of aggregate consumer-bankruptcy filing rates. The bankruptcy filing rates were collected from the Administrative Office of U.S. Courts and population data from various editions of the Statistical Abstract of the United States. Autocorrelation may be present in a model when serial data is utilized (Miller & Pierce, 1997). The existence of autocorrelation violates a basic assumption of Ordinary Least Squares (OLS) regression. Autocorrelation leads to an underestimation of the variance of the error terms and an overestimation of the significance of the coefficients. The Durbin-Watson statistic is a test statistic used to detect the presence of autocorrelation in the residuals from a regression analysis (Durbin & Watson, 1950) and is used in this study to indicate if autocorrelation is present. If the Durbin-Watson statistic is outside an acceptable range, transformation of the data, through the Cochrane-Orcutt (CORC) estimation procedure, is necessary to take into account the correlation of the error terms (Cochrane & Orcutt, 1949).

## **RESEARCH FINDINGS AND ANALYSES**

The results of this study are grouped and presented in an analysis for the four multiple regression analyses performed. Each individual multiple regression equation employs the same four predictor variables and compares them to a different dependent variable. Table 2 reports the regression results for the interrupted time-series analysis of the reform act and the per-capita total consumer-bankruptcy filings employing Kellough's regression model. Both the BEFORE and CHANGE coefficients are statistically significant at the 5% level, one tail, in the model. The EXEMPTION and AFTER variables are not statistically significant. The Durbin-Watson statistic (1.4695) is within an acceptable range.

Based on the BEFORE coefficient the per-capita total consumer-bankruptcy filing rate was increasing .314 per one thousand people per year prior to the change in homestead exemption. This is expected and consistent with the trend of increasing rates most years from the 1990s until today. The CHANGE coefficient reflects a large drop in the per-capita total consumer-bankruptcy filing rate of -1.356. This decline is unexpected in that more individuals would be expected to seek bankruptcy relief in anticipation of financial benefits to be gained from an increase in homestead exemption.

Table 2: Time-Series Regression Analysis of Total Consumer Filings (Per 1000) Of Measuring Statistical Significance of Variable Before, During, and After Change

Regression Variables	Coefficient	t-statistic	p-value	Durbin-Watson	R-square
Consumer Filings (per 1000)			$p < 0.01^*$	1.4695	0.225
Constant	1.518	3.18	$p < 0.01$		
EXEMPTION	0.000	0.23	0.822		
BEFORE	0.314	3.05	$p < 0.01^*$		
CHANGE	-1.356	-2.15	0.035		
AFTER	-0.033	-0.20	0.845		

This table shows results of time-series regression analysis of total consumer filings \* significant at the 0.05 level.

Although the AFTER variable is not significant, the coefficient is negative and this is slightly inconsistent with an expected upward trend in filings after the one time drop. However, this negative trend is very small. Table 3 reports the regression results for the interrupted time-series analysis of changes in homestead exemption and the per-capita Chapter 7 consumer-bankruptcy filings. Both the BEFORE and CHANGE coefficients are statistically significant at the 5% level, one tail, in the model. The EXEMPTION and AFTER variables are not statistically significant. The Durbin-Watson statistic (1.5356) is within an acceptable range.

Table 3: Time-Series Regression Analysis of Chapter 7 Bankruptcy Before, During, and After a Change in Homestead Exemption Levels

Regression Variables	Coefficient	t-statistic	p-value	Durbin-Watson	R-square
Chapter 7 Bankruptcy			$p < 0.01^*$	1.5356	0.330
Constant	1.164	4.09	$p < 0.01$		
EXEMPTION	-0.000	-0.09	0.927		
BEFORE	0.236	3.84	$p < 0.01^*$		
CHANGE	-1.047	-2.79	$p < 0.01^*$		
AFTER	-0.010	-0.10	0.919		

This table shows results of time-series regression analysis of Chapter 7 bankruptcy around changes in homestead exemption levels. \* significant at the 0.05 level

Based on the BEFORE coefficient the per-capita Chapter 7 consumer-bankruptcy filing rate was increasing 0.236 per one thousand people per a year prior to the change in homestead exemption. This is expected and consistent with the trend of increasing rates most years from the 1990s until today. The CHANGE coefficient reflects a large drop in the per-capita Chapter 7 consumer-bankruptcy filing rate of -1.047. Like the analysis of total consumer filings, this decline was not expected. Although the AFTER variable is not significant, the coefficient is negative. Although this is slightly inconsistent with an expected upward trend in filings after the one time drop, this coefficient is quite small. Table 4 reports the regression results for the interrupted time-series analysis of changes in homestead exemption and the per-capita Chapter 13 bankruptcy filing rate. Overall, the multiple regression model was found to be statistically insignificant. The high p-value (0.537) indicates the four independent variables used in the model are not valid predictors of explained variance in per-capita Chapter 13 bankruptcy filing rates. This analysis is strengthened in that none of the predictor variables are individually significant and contribute to a robust regression model. Additionally, the Durbin-Watson statistic (0.2918) is near an acceptable range at the 10% level. As such, it is possible that autocorrelation exists in the model.

These results are contrary to the expected results. It is logical for Chapter 13 filing to be increasing before a change in homestead exemption, but at a rate less than increases in Chapter 7 filings that allow discharge of the entire debt. We expected the CHANGE coefficient and the AFTER coefficient to be positive and reflect increases in filing with a higher level of homestead protection afforded. Chapter 7 filers typically experience greater benefit from higher homestead exemption levels. Therefore, we are not surprised that these variables were found to be insignificant, essentially not adding to the robustness of the regression model. Chapter 13 filing would not necessarily be expected to change greatly with changes in homestead

exemption, so the lack of statistical significance for CHANGE and AFTER is logical.

Table 4: Time-Series Regression Analysis of Chapter 13 Bankruptcy Before, During, and After Change in Homestead Exemption Levels

Regression Variables	Coefficient	t-statistic	p-value	Durbin-Watson	R-square
Chapter 13 Bankruptcy			0.537	0.2918	0.050
Constant	0.356	1.35	0.181		
EXEMPTION	0.000	0.51	0.610		
BEFORE	0.078	1.39	0.170		
CHANGE	-0.309	-0.90	0.373		
AFTER	-0.022	-0.25	0.806		

This table shows time series regression analysis results around changes in homestead exemption levels. \* significant at the 0.05 level

Table 5 reports the regression results for the interrupted time-series analysis of changes in homestead exemption and Chapter 7 consumer-bankruptcy filings as a percentage of aggregate consumer-bankruptcy filings. The regression model was not found to be statistically significant at the 5% level. The high p-value (0.594) indicates the independent variables used in the model are not valid predictors of explained variance in per-capita Chapter 7 filings as a percentage of aggregate consumer-bankruptcy filings. Often in a multiple regression model that is insignificant, certain variables could be individually significant and strengthen the overall model. Unfortunately, none of the four independent variables were found to be significant. The Durbin-Watson statistic (0.1999) is far outside an acceptable range indicating that autocorrelation among the four independent variables is almost certain.

Table 5: Time-Series Regression Analysis of Chapter 7 Bankruptcy as Percentage of Total Bankruptcy Before, During, and After Change in Homestead Exemption Levels

Regression Variables	Coefficient	t-statistic	p-value	Durbin-Watson	R-square
Chapter 7 Bankruptcy Percent			0.594	0.1999	0.045
Constant	82.411	16.73	p < 0.01		
EXEMPTION	-0.000	-1.48	0.143		
BEFORE	-0.530	-0.50	0.619		
CHANGE	-0.999	-0.15	0.878		
AFTER	1.304	0.76	0.449		

This table shows time-series regression analysis of Chapter 7 Bankruptcy around changes in homestead exemption levels.

\* significant at the 0.05 level

## CONCLUSIONS AND FUTURE RESEARCH

The purpose of this study was as follows: 1) To examine to what extent do changes in homestead exemption levels impact consumer bankruptcy filing rates and 2) To what extent do changes in aggregate homestead exemption levels impact aggregate consumer bankruptcy filing rates? These relationships were explored in terms of total consumer filings for each chapter (Chapter 7 and Chapter 13) and for Chapter 7 as a percent of aggregate consumer bankruptcy filing rates. Homestead exemptions offer a level of protection to debtors that protect the value of the home (Landry, Boozer, & Lowe, 2012) in similar ways that exemption laws in general protect and support debtor survival after discharge by offering a level of financial sustainability (White, 2007). Finding that a positive correlation exists between homestead exemption levels and consumer filing rates (Domowitz & Sartain, 1999a), it is logical to expect consumers to find a financial benefit from higher levels of homestead exemption. Whether changes in state-level homestead exemption levels produce an incentive for consumers to change filing behavior as a consequence was a key area to this analysis.

Results of this analysis reflect that total consumer filings in the aggregate were increasing before the change in bankruptcy exemption, but then decline during the change in exemption and slightly thereafter. The decline in coefficient both during and after the change in exemption was not statistically significant as a

predictor but should be addressed, nonetheless. These results are consistent with increases in aggregate filing rates (White, 2007), but do not explain why filing rates do not maintain the level of increase or even accelerate after a higher homestead exemption level was implemented (Faye, Hurst, & White, 2002). Domowitz and Sartain (1999a) offer a possible explanation in that the consumer choice of filing or not filing bankruptcy is a function of the level of equity protected. Thus, homeowners with more equity experience a greater benefit from higher homestead exemption levels. Landry, Boozer, & Lowe (2012) introduced a novel approach for considering this variable from the perspective of a rational consumer and found that the value of the home protected increases the validity of empirical results by offering a more accurate measure of what is actually protected. The logic extends to this analysis, but is not reflected statistically when measuring changes in homestead exemption levels over time.

Although this analysis avoided the changes in bankruptcy reform and filing by considering states that made changes in their homestead exemption levels more than a decade before implementation of the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act, one of the major provisions of the Act was addressed in our analysis of selection of bankruptcy chapter before, concurrently, and after changes in state-level homestead exemption levels. White (2007) found that the implementation of a means test replaced the debtor's freedom to choose whether they would seek discharge of all debts through a Chapter 7 or make repayment of a least some level of future income through a Chapter 13. Our analysis considers changes in consumer filing rates by chapter to the extent that consumers have a financial incentive to file Chapter 7 as opposed to Chapter 13.

The results of our analysis reflect that consumers were filing more Chapter 7 petitions before the change in homestead exemption. However, in a manner similar to aggregate effects, filing rates declined during the change in exemption and after. The fact that no variables in the model were statistically significant when considering Chapter 13 filing rates shows that consumers clearly prefer a Chapter 7 discharge of consumer debt but that consumers do not find changes in homestead exemption levels as a source of wealth insurance (Fay & White, 2003) to the extent that they file more actively. These findings are consistent with Domowitz and Sartain (1999b) in that if exemption levels were lowered consumers would file Chapter 13 rather than Chapter 7 in increasing numbers. That our analysis of consumer bankruptcy filing rates as a function of changes in homestead exemption levels did not indicate a strong association between consumer choice and assets protected indicates that this variable (i.e. changes in homestead exemption levels) may not capture other financial incentives surrounding this issue. It is clear that borrowers will act rationally and make financial decisions for their benefit. Gropp, Scholz, and White (1997) show this through the supply and demand for credit, where higher exemption levels redistribute assets from borrowers with fewer assets to borrowers with more assets.

Thus, our analysis offers evidence that consumer bankruptcy filing rates are not positively affected by the wealth effect that a risk-averse consumer (Fan & White, 2003) would seek when making consumer choices, but establishes a foundation for future research. Prior research shows that aggregate economic and financial conditions play a role in consumer filing rates (Berkowitz & Hynes, 1999; Domowitz & Sartain, 1999b) that may validate the expected positive relationship with higher homestead exemption levels. This is consistent with positive relationship in the elderly between home ownership and home equity associated with higher homestead exemptions levels that Greenhalgh and Rohlin (2013) observed.

From our model that established the role of homestead exemption levels as a predictor variable, future research could address cross-sectional changes in filing rates after the 2005 Act. Other opportunities are beginning to materialize to analyze if the Act has increased the level of Chapter 13 petitions relative to Chapter 7 over time. Comparisons of post 2005 reforms with homestead exemption changes in the 1990s could offer a method for testing and isolating individual states, by controlling for state level effects and capturing if bankruptcy reform initiatives to change consumer behavior are challenged by homestead assets protected.



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