NC STATE UNIVERSITY The Forum for Family and Consumer Issues (FFCI)

The Forum for Family and Consumer Issues (FFCI)
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TheForumJournal.org | ISSN 1540-5273 | info@theforumjournal.org

Targeting bankruptcy prevention programs to vulnerable census tracts

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Abstract

This study demonstrates that even though bankruptcy filings may be random events at the individual level, patterns emerge when filings are aggregated at the census tract level, and by metropolitan areas. Census tracts located in metropolitan areas are associated with higher

bankruptcy rates. Some of the emergence of patterns can be explained by the economic and demographic conditions shared by neighboring residents including the unemployment rate, educational attainment of the labor force, percentage of female-headed households, prevalence of second mortgages, and other non-economic factors such as stigma and religious beliefs. The results have implications for Extension educators and outreach educational programming.

Keywords: consumer bankruptcy, neighborhoods, metropolitan areas

Introduction

Over the past decade, Utah has ranked in the top three states for bankruptcy filings (American Bankruptcy Institute 2004 and 2006; Flynn and Bermant 2003). Unlike previous research endeavors that examined individual bankruptcy filings, this study seeks to understand Utah bankruptcy at the aggregate level in the context of geographic units called census tracts.

The following assumptions guided this study:

1. Consumer bankruptcies may be random at the individual level and can occur after some unexpected trigger, such as a reduction in income as a result of a job loss, uninsured medical expenses, marital dissolution, or other economic event (Getter 2003), but they show geographical patterns and concentrations when they are aggregated at the census tract level.

2. Individual filings are affected by the community conditions in which the debtor lives. If community conditions change, for example, local employment conditions, educational attainment of the labor force, availability of credit, etc., the repercussions affect individuals. Community trigger events can influence the frequency of individual consumer bankruptcy filings.

3. Last, it is assumed that, aside from sharing similar demographic and socioeconomic characteristics, the tendency to file for bankruptcy protection in a geographic area may be influenced by social stigma and religious beliefs.

This study will answer the following research question:

R1H How much of the variance in the aggregate bankruptcy filings at the census tract level can be explained by a specific set of economic, demographic, and non-pecuniary factors?

Because this research is the first attempt to compare bankruptcy data at the census tract level, it can be considered an exploratory study. Nonetheless, the results have implications for Extension

educators and outreach educational programming. Aggregate data are an important tool in the resource allocation process for both Extension educators and policy makers. This research illustrates how researchers and educators can partner to identify census tracts with high bankruptcy filing rates. It is much more feasible to focus limited resources on specific geographic areas rather than spreading resources thinly across an entire state. How to locate specific census tracts in an area with high bankruptcy rates is shown in Appendix A.

Literature review The first section in the literature review describes the "typical" filer. The next section presents a few of the studies that have used societal predictors to estimate changes in aggregate filing rates. The last section explores some non-economic factors, such as stigma and religion, and their role in the bankruptcy decision.

The typical filer: The most comprehensive study of consumer debtors is the Consumer Bankruptcy Project conducted by Sullivan, Warren, and Westbrook (1989; 2000). The main conclusions of this research are that bankruptcy is primarily a middle-class phenomenon, and that the principal cause of bankruptcy is reduction in income (job loss or cut in hours or pay) combined with uninsured medical expenses. A small business failure was also a cause of bankruptcy in about one-fifth of the cases (Sullivan, Warren, and Westbrook 1989). According to Sullivan, Warren, and Westbrook (2000), the people most likely to file for bankruptcy had one to three years of post–high school education; those with degrees were far less likely to file. Surprisingly, high school graduates were also less likely to file, and those who did not graduate from high school at all were even less likely to file.

Marital dissolution is another reason debtors file for bankruptcy. The U.S. leads the world in the incidence of both divorce and bankruptcy; Utah's divorce rate of 4.4 per 1,000 people is higher than the national average of 4.0 per 1,000 (U.S. Census Bureau 2004). One empirical study of bankruptcy in Utah (Lown and Rowe 2003) found that single women filers with dependent children are overrepresented in bankruptcy court. While large families and low per capita incomes contribute to the high filing rate in Utah, the large number of single women debtors with children suggests that divorce and separation are contributing factors.

The remarkable rise in consumer borrowing, especially credit card debt, and relaxation in lending standards for both consumer and mortgage loans contributes to escalating bankruptcy rates (Black and Morgan 1999; Canner, Durkin, and Luckett 1998). Black and Morgan (1999) reported that lenders are granting credit cards to riskier borrowers who have more liberal attitudes toward debt, carry higher debt burdens, and have low job security. Fewer than one-third of U.S. households have adequate emergency reserves, making it hard to meet financial obligations when income is reduced (Chang, Hanna, and Fan 1997; Huston and Chang 1997).

Studies that have examined aggregate bankruptcy rates: Troxell, Boldin, and Albohali (2001) sought to characterize the patterns of bankruptcy on an aggregate level, particularly comparing different geographic areas of the state of Pennsylvania to each other, and to the nation as a whole. They found distinct differences between rural and urban areas; urban areas tend to have higher bankruptcy rates than rural areas. Shepard (1984) also established the usefulness of studying aggregated bankruptcy rates by demonstrating how aggregate trends may be associated with the reduction of stigma and increases in bankruptcy lawyer advertising. Areas with high percentages of minorities also report high filing rates. Culture, stigma, and discriminatory practices may all contribute to these patterns.

Non-economic aggregate variables associated with bankruptcy: Previous studies (Buckley and Brining 1998; Fay et al. 2002) have suggested that the explosion of bankruptcy filings is in substantial part attributable to a shift in social norms including a reduction in social stigma and religious attitudes rather than a rational, deliberative economic decision by individuals. The following section describes the religious and social appeals of bankruptcy.

Stigma: Fay, Hurst, and White (2002) modeled the effects of both bankruptcy stigma and financial benefit on households' decisions to file for bankruptcy. They demonstrated that the probability of debtors filing for bankruptcy rises when the level of bankruptcy stigma falls. Fay, Hurst, and White (2002) believe that the stigma of bankruptcy has fallen over time. One of the reasons the authors cite is that since 1979, federal law has prohibited employers from firing workers who file for bankruptcy. Another reason is that both consumer credit and mortgage credit have become more available to recent bankrupts. Finally, they maintain that as the number of bankruptcy filings rise, people become more knowledgeable about bankruptcy because there is greater advertising by lawyers and more coverage of bankruptcy by the local and national media.

Social norms and religion: Buckly and Brinig (1998) argue that bankruptcy filing rates depend on legal predictors, including exemption levels and whether or not the bankruptcy district has a lax approach to debtor misbehavior under Chapter 13; on economic predictors, including unemployment and poverty levels; and on social predictors. They employed migration and the percent of population living in a metropolitan area as proxies for the strength of social networks; Catholic and elder as a proxy for conservative attitudes; and divorce rates as a proxy for the social stigma of promise breaking. Buckley and Brinig (1998) concluded that a large number of bankruptcy filings for the twelve-year period following the introduction of the new Bankruptcy Code in 1979 can be explained by economic predictors, but more than anything, they suggested that the increase in filing rates is attributable to changes in social norms.

Efrat (1998) also offered similar conclusions, comparing different religious perspectives on debt repayment and their influence on the bankruptcy decision, regardless of legal or financial

implications. Different from neoclassical economic studies, which assume individuals make rational economic choices, Efrat argues that social and religious morality are much better predictors of the bankruptcy filing decision than economic factors. Judaism, Hinduism, Islam, and Christianity all teach the moral obligations to repay debts, though the principle is emphasized on different levels. As a whole, however, a negative correlation between religiosity and the bankruptcy decision is expected to be found.

In the present study, we are interested in variables that are aggregate in the census tracts. Buckley and Brinig (1998) believe that "it is a fallacy to suppose that because the consumer bankruptcy decision is made by the individual; it cannot usefully be studied with aggregate data (p.197)." Societies, they add, also have their own character, and one's propensity to file for bankruptcy may depend on where one lives. Bankruptcy research at the aggregate level has compared differences in rural and urban settings and their association with aggregate consumer bankruptcies (Troxell, Boldin, and Albohali 2001), and economic, legal, and social issues (Buckley and Brinig 1998; Efrat 1998; Fay, Hurst, and White 2002; Shepard 1984).

Methods

This paper uses primary and secondary data. The primary data consisted of a randomly drawn sample of 2,000 consumer bankruptcies filed in Utah in 2003, which represents approximately 10 percent of filings in that year. Bankruptcy filers' addresses were geo-coded and the appropriate census tract numbers were matched to addresses. Census tract codes were then derived according to the filers' addresses using the Federal Financial Institutions Examination Council (FFIEC) (U.S. Census Bureau 2003). In the geo-coding process, 21 cases were dropped because the bankruptcy filers only provided a post office box address. Census tracts are geographic units that may share similar characteristics in population, economic status, and living conditions. Census tracts average about 4,000 residents and range between 1,500-8,000 residents (U.S. Census Bureau 2001).

Variables used to describe census tracts were extracted directly from the U.S. Census 2003: (a) unemployment rate for the census tracts in 2003; (b) educational attainment, operationalized as (b.1) percentage of males and females with bachelor's degree, (b.2) percentage of males and females with less than a high school education; (c) percentage of female-headed households; (d) home equity debt, computed as proportion of households in a census tract with second mortgages, as reported by the Census Bureau; and (e) metropolitan status, coded 0 = if the census tract is not in a metropolitan county and coded 1 = otherwise. The metropolitan variable also serves as a proxy for stigma and religious ties because preliminary evidence has shown that the percentage of Utah's people claiming membership in the Church of Jesus Christ of Latter Day Saints, the predominant religion of the state, is higher in non-metropolitan areas (Association of Religion Data Archives 2006). The bankruptcy filing rate was computed as the number of filings

in each census tract divided by number of households in each census tract. Filing rate is the dependent variable (DV) in the regression model. A high rate of bankruptcy is operationalized as the average bankruptcy filing for the county plus one or more standard deviations above the mean. It is expected that variance in the aggregate level of bankruptcy filings in a census tract is explained by unemployment rate, educational attainment, percentage of single female-headed households, home equity debt, and metropolitan status.

Data analysis: To answer the research question, this study used descriptive statistics and a two-step regression model. The first step included only the economic and demographic variables. The second step added the dichotomous metropolitan variable, used as a proxy for stigma and religious ties, to test whether or not metropolitan status would provide further "information" to explain bankruptcy filings beyond the variables already in the model. Alpha level of 0.05 was used to determine statistical significance. Analysis of residuals was performed to check for possible violations of the assumptions in multivariate analysis.

Results

Are census tracts with high rates of bankruptcy filings significantly associated with a specific set of economic, demographic, and non-pecuniary factors? The goal of this research was to explain variance in the proportion of bankruptcy filings and economic and demographic factors. The first regression model was run using the Stepwise procedure. After four steps, the multivariate analysis produced a final model that included four predictors and removed the percentage of males and females with less than high school education (Table 1). The procedure yielded an R-squared value of 0.275. The R-squared value indicates that about 28 percent of the variance in bankruptcy default is explained by units with second mortgages, percentage of males and females with bachelor's degrees, percentage of female-headed households, and unemployment rate.

Table 1. Multiple regression model with demographic and economic factors

	Unstandardized coefficients		**Standardized coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
Constant	.229	.048		4.778	.000
Unit with second mortgages rate	1.801	.177	.412	10.180	.000
Pct. male and female with bachelor's degree	-.014	.002	-.327	-8.291	.000

Female-head	.028	.005	.226	5.529	.000
Unemployment rate 2003	.014	.007	.082	2.060	.040

Note: R-squared = .275 Adjusted R-squared = .268

A second regression model used the four predictors from above and one additional variable, metropolitan status. The explanatory power of the model improved by about 5 percent, R-squared = .299, and adjusted R-squared = .293 (Table 2), which may imply that less social stigma in metropolitan areas may play a role in the bankruptcy decision.

Results show that given a 10 percent increase in units with second mortgages in a census tract, bankruptcy filings are predicted to increase by 15 percent in that census tract, holding everything else constant. Similarly, a 10 percent increase in the percentage of female-headed households will result in a 2.3 percent increase in bankruptcy filings in the census tract. Also, the model shows that an educated labor force will decrease the likelihood of filings, and census tracts in metropolitan counties are associated with higher aggregate bankruptcy filings.

Table 2. Multiple regression model with metropolitan variable added

	Unstandardized coefficients		**Standardized coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
Constant	.153	.032		4.808	.000
Unit with second mortgages rate	1.581	.182	.361	8.709	.000
Pct. male and female with bachelor's degree	-.016	.002	-.369	-9.207	.000
Female-head	.023	.005	.187	4.661	.000
Metropolitan	.084	.018	.192	4.595	.000

Note: R-squared = .299 Adjusted R-squared = .293

The issue of metropolitan status deserves more attention. Of the 29 Utah counties, only four counties are considered metropolitan by the U.S. Census Bureau, while the remaining 25 are considered non-metropolitan. As expected, the non-metropolitan counties in the state generally showed lower rates of filing than metropolitan counties. A one-way Anova test revealed that the

difference in mean filings for non-metropolitan (mean= .20 SD= .17) versus metropolitan counties (.29 SD= .22) was statistically significant at the .001 level (F= 19.36. p = 0.00) (Table 3). Households in non-metropolitan areas are less likely to file (on average two per every 100 households) than households in metropolitan areas (on average three per every 100 households).

Note: This research was supported by Utah Agriculture Experimental Station UTA00977.

Table 3. Anova table with bankruptcy rate as DV and metropolitan status as the factor

	Sum of squares	df	Mean square	F	Sig.
Between groups	.816	1	.816	19.366	.000
Within groups	20.405	484	.042		
Total	21.221	485			

Discussion and implications

This study demonstrates that even though bankruptcy filings may be random at the individual level, they show patterns when they are aggregated at the census tract level. Some of the reasons that patterns emerge may be explained by the economic and demographic conditions of the neighborhood.

An important finding of this study is that the percentage of the population with second mortgages appears to be the best predictor of aggregate bankruptcy filings in Utah in 2004. Although the data do not specify the loan amount or the nature of the second mortgage, second mortgages can be used for a variety of purposes including home improvements, in lieu of private mortgage insurance, purchase of real estate, and in many cases, credit card debt consolidation. Regardless of the purpose of the loan, a second mortgage is a loan secured against the home. If homeowners with second mortgages lost their jobs and could not make their mortgage payments, they could face foreclosure. Bankruptcy can be a rational choice for homeowners, particularly when there is no equity in the home to secure the second mortgage.

This study also shows that there is a statistical association between high bankruptcy rates and census tracts with a high percentage of female-headed households. Despite having higher than average female labor force participation rates and higher than average number of households receiving child support (Annie E. Casey Foundation 2006), Utah women employed full time earn only 70.3 percent of male wages (Institute for Women's Policy Research 2004). Utah ranks in the bottom five of all states on the female composite employment and earnings score (Institute for Women's Policy Research 2004).

The study demonstrates that, in general, communities located in non-metropolitan areas experience relatively low bankruptcy rates. Small non-metropolitan counties may possess peculiarities that are absent in metropolitan counties such as strong social stigma about bankruptcy because of relatively close social, familial, and religious ties. It may be the case that perceptions about filing in non-metropolitan areas are mediated by religious values. The predominant religion in the state, The Church of Jesus Christ of Latter-Day Saints (LDS), popularly known as the Mormon Church, teaches frugality and self sufficiency, and such religious adherence is more predominant in non-metropolitan counties than in metropolitan counties (Association of Religion Data Archives 2006). In twenty-one out of twenty-four non-metropolitan counties the percentage of LDS population ranges from 62 percent to 89 percent (Arave and Hardy 2003). Metropolitan residents are less likely to claim LDS church membership, ranging from 56 percent to 59 percent of the population. In states that have more religious diversity, researchers interested in replicating this study can use the American Community Survey to map the predominant religions in their states.

Implications for Extension educators and outreach educational programming: An implication of this study for Extension educators is that limited resources can be directly and efficiently applied to census tracts with high bankruptcy rates, and that usually high bankruptcy filings may be related to other social issues including low educational attainment, over-use of home equity credit, and single female-headed households. By identifying at-risk census tracts, Extension educators and policy makers can focus limited resources in areas where the need is greatest. This method of targeting and addressing the needs of specific neighborhoods is a far more realistic goal than addressing the financial and societal maladies of an entire state. Extension educators can play a fundamental role in providing decision-making information to policy makers. Local government administrators and legislators at the municipal and state levels are interested in aggregate data to address community problems. Extension educators can facilitate the process of understanding that bankruptcies at the individual level may be related to local aggregate problems, and at the same time, individual bankruptcies can have a negative impact on census tract businesses. Extension programming, in part, should be designed to promote educational and job training programs, provision of affordable housing and health care, and employment opportunities. Extension programming should be developed in partnership with private and public organizations, for example, to encourage employers to provide financial management education to their workers. This is a model that has the potential to be effective and profitable for employers (Garman 1999).

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 mandates that all debtors receive financial education prior to receiving a debt discharge. Educational providers may charge fees for the mandatory classes. This mandate provides the opportunity for Extension educators to serve multiple needs within their communities. The U.S. Trustee Program Web site lists approved providers and the criteria for approval. While the majority of providers offer only

internet or telephone services, county Extension educators have the advantage of being able to provide classroom programs. These mandatory classes do not have to be restricted to debtors but can be marketed to the general public. USU Extension is an approved debtor education provider offering classes in multiple counties which are marketed to the public as well as debtors.

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