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**LENGTH:** 11015 wordsSYMPOSIUM: REGULATION AND RECESSION: CAUSES, EFFECTS, AND SOLUTIONS FOR FINANCIAL  
CRISES: ARTICLE: **WOMEN ENTREPRENEURS IN BANKRUPTCY****NAME:** Rafael Efrat\*

**BIO:** \* Professor, College of Business & Economics, California State University, Northridge. J.S.D., 2002, J.S.M., 1998, Stanford Law School; J.D., 1992, University of Southern California. I would like to acknowledge the vital cooperation I received from the Executive Office of the United States Trustee Office, the Clerk of the Court for the United States Bankruptcy Court in the Central District of California, as well as the Assistant United States Trustee for the San Fernando Valley Division of the United States Trustee Office, Jennifer L. Braun. Lastly, I would like to express my appreciation for the tremendous data gathering efforts in the field to my research assistants: Joseph W. Berriman, Scott Cohn, Ryan McNicholas, Edward Morales, Collette Y. Schmidt, Cherilyn R. Teague, and Tanya Vannoy. I am particularly grateful to the invaluable contribution of my lead research assistant and project manager, Carlos Gallardo.

**LEXISNEXIS SUMMARY:**

... This study relied on information from surveys rather than bankruptcy schedules because vital data for this research project such as ethnicity, education, cause of bankruptcy, and various characteristics of petitioners' businesses, would not be available in the bankruptcy schedules. ... The questionnaire included questions concerning age, gender, educational background, marital status, country of origin, racial/ethnic background, religious affiliation, number of dependents, occupation, household income, home ownership, value of assets, amount and type of debts, cause of bankruptcy, and entrepreneurship background. ... In 2006, with over 540,000 firms, majority female-owned businesses accounted for thirty percent of all privately held firms in the metropolitan area. ... The following table shows the actual and the expected data on the gender of small business owners in our Los Angeles bankruptcy sample: Table 2: Gender of Small Business Owners in Bankruptcy Actual Data Expected Self Employed Male 133 145 Self Employed Female 64 52 Not Available 1 N/A Total 198 197 To check whether the female entrepreneurs were over or under represented in the bankruptcy sample, we conducted the following one tail test of proportion: H0: Proportion of female entrepreneurs filing for bankruptcy Proportion of female entrepreneurs in the general population H1: Proportion of female entrepreneurs filing for bankruptcy > Proportion of female entrepreneurs in the general population Using the table of areas for the standard normal distribution, we found that the Z value for 95% confidence level is 1.64. ... Nonetheless, while self-employed women in the United States have recently outpaced growth rates compared to self-employed men, some studies have found that female-owned businesses have significantly higher closure rates than their male counterparts. ... Outside of bankruptcy, women's higher closure rate is attributed in part to their inferior human capital, lower earnings, lower capitalization, smaller size of business, lower access to credit, and greater reliance on high cost financing.

**TEXT:**

[\*527]

## I. Introduction

Women are a significant and an emerging part of the American small business community. <sup>n1</sup> Some have described this development as one of the most striking trends in the U.S. labor market. <sup>n2</sup> Female-owned businesses generate almost a trillion dollars in revenues every year and employ more than seven million workers. <sup>n3</sup>

Women represent one of the fastest growing business-owner groups in the United States. The number of female-owned firms grew at a faster rate than the overall number of firms in the United States between 1997 and 2002. <sup>n4</sup> Similarly, between 1985 and 2000, female-owned sole proprietorships grew much faster than their male-owned counterparts in terms of number of businesses, gross receipts, and net income. <sup>n5</sup> By the end of the 1990s, the number of female-owned businesses was estimated to have increased in the United States by eighty-nine percent compared to a decade earlier, and reached six and a half million enterprises by 2002. <sup>n6</sup>

[\*528] This tremendous growth in female-owned businesses is due in part to various statutory enactments that have removed structural barriers women traditionally faced in owning a business. The upsurge in female-owned businesses might be initially traced to the equal rights movement of the 1960s and the Civil Rights Act of that decade. The rise of female-owned businesses continued in earnest in 1970 following the passage of the Equal Credit Opportunity Act, which prohibited credit discrimination based on gender, as well as the Affirmative Action Act of 1978. <sup>n7</sup>

Along with the statutory pronouncements enabling women to join the entrepreneurial sector with greater ease, several national associations of women business owners were formed in the 1970s. <sup>n8</sup> These associations along with various federal government aid programs to female-owned businesses provided important support for women entrepreneurs in the country. <sup>n9</sup> The most recent rise in the number of female-owned businesses may have been facilitated by technological advances. As advancements in telecommunication have made it more feasible for entrepreneurs to operate their businesses from home, more individuals, and particularly women, have found home-based businesses as the most suitable vehicle to join the entrepreneurial sector. <sup>n10</sup>

While female-owned businesses experienced significant growth in recent years, "women still trail men by a significant margin in entrepreneurial activity." <sup>n11</sup> The self-employment rate among men is twelve percent as compared to the self-employment rate among women of just under seven percent. <sup>n12</sup> As a result, as of 2000, women sole proprietors constituted only thirty-seven percent of the sole proprietors in the United States. <sup>n13</sup> Studies have consistently shown that men are significantly more likely to become self-employed, with some researchers even finding that men are twice as likely to become self-employed compared to women. <sup>n14</sup> This phenomenon holds true for most [\*529] ethnic groups in America <sup>n15</sup> as well as in most other industrialized countries. <sup>n16</sup>

Researchers have attributed women's under-representation in the entrepreneurial sector to a number of social structural barriers. Some contend that certain embedded social structures, such as workplace and family, adversely affect women's propensity to become entrepreneurs. <sup>n17</sup> Additionally, occupational segregation and under-representation in upper management positions limit the opportunities of many women to gain the managerial experience vital for the pursuit of entrepreneurship. <sup>n18</sup> Similarly, entrenched traditional social roles for women which are not compatible with entrepreneurship have also deterred women from pursuing it. <sup>n19</sup> Furthermore, women are sometimes discouraged from pursuing self-employment due to the difficulty of locating the necessary external financing. <sup>n20</sup> Moreover, women face more difficulties gaining access to networks that in many cases are critical for the pursuit of entrepreneurship. <sup>n21</sup> Lastly, some researchers have suggested that women are under-represented among the self-employed because of poor self-esteem and a greater fear of failure. <sup>n22</sup>

## II. Hypothesis One: Women entrepreneurs would be over-represented in bankruptcy

While female-owned businesses are under-represented in the entrepreneurial sector, no study to date has examined whether female-owned businesses are over or under-represented in the bankruptcy population. One may hypothesize that self-employed women would be over-represented in bankruptcy. First, women entrepreneurs' lower human capital may lead to a lower survival rate and a higher bankruptcy filing rate [\*530] among women entrepreneurs. The success of a firm is dependent largely on the skills and abilities of the business owner.<sup>n23</sup> Skills and talents of a business owner cannot easily be quantified, but level of education and managerial experience can both serve as an adequate surrogate.<sup>n24</sup> Prior research has found that female entrepreneurs lack in terms of both education and managerial experience as compared to their White male counterparts.<sup>n25</sup> Studies have found that female entrepreneurs are less likely to have a college degree compared to their male counterparts.<sup>n26</sup> Similarly, male entrepreneurs are more likely to have acquired advanced and professional degrees compared to female entrepreneurs.<sup>n27</sup> Furthermore, researchers have learned that women tend to start a business in sectors where they have limited prior experience.<sup>n28</sup>

Aside from lower human capital, women entrepreneurs' over-representation in bankruptcy may be a product of their limited extent of networking. Some have asserted that personal networks of the entrepreneur are the most vital asset of a business.<sup>n29</sup> Some evidence suggests women entrepreneurs do not enjoy the same level of personal networks cultivated by men entrepreneurs.<sup>n30</sup> Indeed, studies demonstrate that women starting new ventures are often mired by insufficient business support systems and the absence of business information and mentoring.<sup>n31</sup> These deficient networking resources have been traced as a factor in the lack of business success among some women entrepreneurs.<sup>n32</sup>

Women entrepreneurs are also more likely to be over-represented in the bankruptcy sample due to their higher vulnerabilities arising out of their businesses' small size. Small size is a vulnerability for all small businesses, but particularly so for female-owned small businesses.<sup>n33</sup> For example, while seventy-five percent of small [\*531] businesses in the United States have no employees other than the owner, eighty-five percent of female-owned businesses have no employees.<sup>n34</sup> Similarly, on average, female-owned firms have half as many employees as male-owned firms.<sup>n35</sup> The small size of the female-owned businesses is also reflected in their lower annual receipts. Female sole proprietors average less than half of the average gross receipts generated by male sole proprietors.<sup>n36</sup>

In addition to their smaller size, female-owned businesses face an additional vulnerability to over-representation in bankruptcy due to lower access to start up financing. Prior research has indicated that businesses with relatively lower start up capitalization have a greater likelihood of business failure.<sup>n37</sup> The studies have also found that women entrepreneurs experience significantly lower access to start up financing and that obtaining external financing is one of the most prevalent challenges facing women entrepreneurs.<sup>n38</sup> While both women and men entrepreneurs have exhibited similar demand for credit, empirical data suggest that women entrepreneurs are routinely supplied less financing from various credit sources.<sup>n39</sup> Hence, the percentage of women entrepreneurs using some type of financing is somewhat lower than the average entrepreneur.<sup>n40</sup> It appears that the lower access to credit by women entrepreneurs is partly due to pervasive fear of loan denial, which prevents some women entrepreneurs from applying for credit.<sup>n41</sup> The lower access to capital may also be the result of self-employed women's lower asset level as compared to self-employed men and perhaps [\*532] also discrimination in the lending market.<sup>n42</sup>

Women entrepreneurs are not only facing greater difficulties obtaining external financing, but they also tend to rely on more costly external financing. As early as 1993, more than a third of women entrepreneurs were using personal credit card debt to finance their business' operations<sup>n43</sup> and they continue to do so at a greater rate than self-employed men do.<sup>n44</sup>

In addition to their lower access to external capital, self-employed women would be expected to be over-represented in the bankruptcy sample partly because they invest less time in operating their business. One study has found that while as much as eighty percent of male entrepreneurs worked over forty hours per week, less than seventy five percent of female entrepreneurs did the same.<sup>n45</sup> Women entrepreneurs tend to spend less time running their business perhaps because of their conflicting family obligations. Researchers have found that many women entrepreneurs join the entrepreneurial sector in order to be able to combine work with family responsibilities. Being an entrepreneur provides many women, particularly those who have pre-school aged children, the flexibility,

independence, and convenience that are not otherwise available for a wage-earner. <sup>n46</sup>

Nonetheless, studies have found that individuals, who become entrepreneurs in order to gain the flexibility to combine work with family responsibilities were more likely to experience a business closure. <sup>n47</sup> Similarly, studies have found that entrepreneurs who spend less than forty hours per week managing their business have lower survival prospects than entrepreneurs who spend more time managing their businesses. <sup>n48</sup>

[\*533] Aside from investing fewer hours in their businesses, female-owned businesses tend to organize their businesses in a structure that is more susceptible to closure. Studies have shown that small businesses that are organized as sole proprietorships are over-represented among businesses that shut down. <sup>n49</sup> While most small businesses in the United States are operated as sole proprietorships, an even larger portion of female-owned businesses are operated as sole-proprietorshipships. <sup>n50</sup>

Women entrepreneurs may be over-represented in the bankruptcy sample also because of their businesses' over-representation in lower growth industries. Studies have found that businesses in the retail and service industries generally experience lower growth rates, lower profitability, and higher closure rates. <sup>n51</sup> Female entrepreneurs in the United States have traditionally concentrated in these two industries at a rate greater than male entrepreneurs. <sup>n52</sup> Indeed, some surveys have found that more than seventy percent of all women entrepreneurs operate in the retail and service trade sectors. <sup>n53</sup>

Lastly, female-owned businesses may be over-represented in the bankruptcy sample because of their businesses' lower gross revenues, lower net income, as well as higher rate of business closures. While female-owned businesses constitute thirty-seven percent of all sole proprietorships in the nation, they generate only eighteen percent of business receipts and twenty-two percent of net income. <sup>n54</sup> Similarly, small businesses run by women are typically less profitable. <sup>n55</sup> In addition, self-employed women are over-represented among self-employed individuals earning less than \$ 25,000. <sup>n56</sup> Likewise, [\*534] while not uniformly so, a number of empirical studies have found that female-owned businesses have a higher likelihood of business closure than their male counterparts. <sup>n57</sup> This higher rate of business closure and lower business income may lead to a higher rate of bankruptcy filings by women entrepreneurs.

### III. Hypothesis Two: Women entrepreneurs would be under-represented in bankruptcy

Alternatively, one may hypothesize that women entrepreneurs may be under-represented in the bankruptcy sample. While women entrepreneurs experience higher closure rate, this higher business failure rate may not necessarily be reflected in a higher bankruptcy rate. As stated earlier, women entrepreneurs tend to rely less on bank financing when operating their businesses. <sup>n58</sup> In 1998, forty-six percent of women entrepreneurs, who had outstanding bank credit, had less than \$ 50,000 in debt compared with thirty-four percent of men entrepreneurs. <sup>n59</sup> Similarly, male-owned firms were more than twice as likely to have \$ 100,000 or more in bank credit compared to female-owned firms. <sup>n60</sup> Instead of relying on bank credit, women business owners tend to rely more on family members and friends for capital and financial assistance and hence have less accumulated debt. <sup>n61</sup> Some women seem uncomfortable with undertaking debt to establish or operate their business, and hence they are seeking less external financing and are operating less leveraged firms. <sup>n62</sup> By operating their business with limited debt [\*535] burden, women entrepreneurs would plausibly find it less necessary to file for bankruptcy protection once the business faces serious challenges.

This study attempts to ascertain the validity of these two alternative hypotheses. The study first examines the extent to which women entrepreneurs are over or under represented among entrepreneurs in bankruptcy. Second, this study examines the distinguishing financial and non-financial characteristics of **women entrepreneurs in bankruptcy** as compared to their male counterparts. Results from this study about **women entrepreneurs in bankruptcy** may be useful to policy makers in the future in formulating intervention plans to better address the particular needs of the various entrepreneurial groups as a way of reducing the risk of business failure and related bankruptcies.

### IV. Methodology

Data for this research study was based on information obtained from surveys completed by bankruptcy petitioners in the Central District of California-San Fernando Valley Division.<sup>n63</sup> The San Fernando Valley is a geographic area which includes several cities and a large portion of the City of Los Angeles. This Los Angeles suburb is the home of approximately 1.7 million residents, forty percent of whom are foreign-born and under half of whom are White, with Hispanics making up almost thirty-eight percent of the population, and Asians almost ten percent.<sup>n64</sup> The Los Angeles area also has the greatest concentration of small businesses in the United States.<sup>n65</sup>

This study relied on information from surveys rather than bankruptcy schedules because vital data for this research project such as ethnicity, education, cause of bankruptcy, and various characteristics of petitioners' businesses, would not be available in the bankruptcy schedules. The questionnaire was purposefully drafted to be only one and a half pages long to minimize the time necessary to complete it.

The questionnaire was composed of a list of twenty one questions, with an additional supplement of ten questions for petitioners that have owned a business prior to their bankruptcy filing. Most of the questions in the survey solicited non-narrative answers and asked petitioners to check a box from among several options. However, questions concerning the cause of the bankruptcy filing or business distress were open ended.

The questionnaire included questions concerning age, gender, educational [\*536] background, marital status, country of origin, racial/ethnic background, religious affiliation, number of dependents, occupation, household income, home ownership, value of assets, amount and type of debts, cause of bankruptcy, and entrepreneurship background. Former business owners were also asked a number of questions about their business operation. Among other things, they were asked to identify the problems, if any, their business faced, the number of years they engaged in the business, the type of business entity they owned, the type of business financing, the number of employees, the number of family members working in the business, the nature of the business industry, the number of business ventures owned beforehand, and their plans for future business ownership.

Before commencing with the collection of the questionnaires in the field, I submitted the questionnaire and procedures to the California State University, Northridge's office charged with the protection of human subjects. As part of this procedure, I promised to maintain the respondents' confidentiality. Similarly, in asking for cooperation from the U.S. Trustee to conduct the study, I also promised confidentiality for our respondents. All of the personnel engaged in the research in any capacity also pledged to protect the confidentiality of the respondents.

In 2004, the Executive Office of the U.S. Trustee granted permission to access and distribute the questionnaire at the mandatory creditors' hearing in the Central District of California-San Fernando Valley Division.<sup>n66</sup> The Assistant U.S. Trustee in the Central District of California-San Fernando Valley Division cooperated in facilitating the distribution of the questionnaires at the site. There were a total of ten student assistants that attended the mandatory 341(a) hearing beginning in January 2005 and ending in January 2006 for the purpose of distributing and collecting completed questionnaires from bankruptcy petitioners. While the vast majority of petitioners had filed during 2005, because the mandatory creditors' hearings are often scheduled sometime after the initial filing, some of the questionnaires that were collected were for petitioners who had filed for bankruptcy in late 2004.

Each student assistant was assigned to cover different hearing dates either in the morning or in the afternoon. The student assistants were given a script to address bankruptcy petitioners while they were attending their mandatory creditors' meeting. The student assistants would arrive at the creditors' meeting approximately fifteen minutes before the beginning of each session and they were instructed to approach petitioners as they entered the waiting area for the creditors' meeting hearing room. Each student was asked to identify him or herself, briefly describe the purpose of the research project, and [\*537] then ask the petitioner whether he/she would be willing to participate in the study by completing the survey.

The survey was available in English and in Spanish, given the high Hispanic population in the local area. The

English questionnaire was first translated by a research assistant who was fluent in Spanish and English. Another bilingual research assistant then validated that translation. It is possible that some petitioners who were immigrants that spoke neither Spanish nor English did not complete the survey. However, based on feedback from the research assistants, very few petitioners appeared not to understand the questions in the questionnaire.

Respondents were not asked for their name or case number. The student assistants were asked to mention to the petitioners that participation in the study was completely voluntary and anonymous. In addition, a statement to that effect was included at the top of the survey instrument.

Some debtors came to the creditors' meeting with their attorneys, and there was often a lengthy wait in the waiting area for their hearing to begin during which the debtors had the opportunity to consult with their legal counsel about completing the questionnaire. The debtors were asked to return their completed questionnaire to the research assistant attending the hearing that day. Debtors in this study did not receive any monetary value in exchange for their services. Most debtors who completed the questionnaire did so while waiting, although some asked to take the survey home and mail it back upon completion.

We selected a bankruptcy court in California for the study since California is the country's leader in female-owned businesses. In 2006, with almost 1.4 million majority female-owned firms, California ranked first among all other states in the number of privately-held majority female-owned firms, as well as first in the nation in sales and in employment. <sup>n67</sup> Self-employed women constitute twenty-seven percent of all self-employed individuals in California. <sup>n68</sup> Similar to the robust growth trend in female-owned businesses experienced recently across the nation, between 1997 and 2006, the number of female-owned businesses in California increased by sixty-one percent. <sup>n69</sup>

We selected the Central District Court of California primarily because it holds courts in a number of locations in the Los Angeles County. The Los Angeles area has one of the greatest concentrations of small businesses in the United States. <sup>n70</sup> This is especially true with regard to female-owned businesses. In 2006, with over 540,000 [\*538] firms, majority female-owned businesses accounted for thirty percent of all privately held firms in the metropolitan area. <sup>n71</sup> Among the top fifty major metropolitan areas in the United States, the Los Angeles-Long Beach area ranked second in the number of privately held majority female-owned firms in 2006, first in employment, and first in sales. <sup>n72</sup> According to the U.S. Census Bureau, in 2002, female-owned firms constituted twenty nine percent of all firms in the city of Los Angeles. <sup>n73</sup> This significant presence of female-owned businesses in the Los Angeles area makes the bankruptcy courts in the Central District an excellent setting to empirically investigate female-owned entrepreneurs in bankruptcy.

We received 1,500 completed questionnaires. The average response yield rate was approximately twenty-one percent. <sup>n74</sup> The total number of surveys completed constitutes twelve percent of the total number of bankruptcy petitions that were filed during the period of this study. <sup>n75</sup> The sample size reflected the approximate composition of bankruptcy filings in the Central District of California under Chapter 7, Chapter 13, and Chapter 11. <sup>n76</sup> The original goal was to obtain at least 150 completed questionnaires from former small business owners. The final number of small business entrepreneurs in our sample was 208. This sample size is approximately the same as or larger than the sample sizes in similar studies of economic or financial issues. <sup>n77</sup>

The completed surveys that were collected during each session were sequentially numbered and tabulated into a database. Following the tabulation of the data, the ten student assistants participating in the data collection phase were paired and instructed to exchange the hard copies of the questionnaires they had collected. The paired students were then asked to validate the data tabulated by their counter-part and identify and correct any detected data entry error or missing values. Those surveys that were completed in Spanish were tabulated and validated by one of the four Spanish fluent research assistants.

From the questions that asked about the cause of bankruptcy, the cause of the petitioner's business financial distress, and the type of business owned by the petitioner, we developed content codes based on the answers that were included in a random sample [\*539] from the completed questionnaires. Analysis in this study was done using R and

SPSS statistical packages. The statistical significance of the interaction variables was tested by the usual t test ( $p < .05$ ).

## V. Results

### A. The General Population in Bankruptcy

Demographically, the bankruptcy petitioners in the sample were similar in many respects to the general population in Los Angeles.<sup>n78</sup> The median age of the bankruptcy petitioner was forty, compared to a median age of thirty-eight in the San Fernando Valley.<sup>n79</sup> The education level of the bankruptcy petitioners also resembles the educational level in the general local population, with sixty-two percent having at least some college education under their belt.<sup>n80</sup> Also, over thirty seven percent of the bankruptcy sample and the residents of the City of Los Angeles were identified as single.<sup>n81</sup> Lastly, the entrepreneurship rate in the bankruptcy population of fourteen percent mirrors the self-employment rate in the local region.<sup>n82</sup>

While the bankruptcy population in our sample is demographically indistinguishable in many respects from the general population, financially it is remarkably different. Its earnings are considerably lower, with a median annual household income of \$ 33,600 compared to the median household income in the San Fernando Valley of \$ 53,723.<sup>n83</sup> Reliance on public assistance is another important contrast between the general local population and the bankruptcy sample. Twelve percent of the bankruptcy petitioners that were surveyed reported receiving public assistance, while only 6.9% of the population in the City of Los Angeles received such [\*540] benefits in 2000.<sup>n84</sup>

A more dramatic example of the differences between the two groups is reflected in homeownership rates. Outside of bankruptcy, almost half of the population own homes in Los Angeles County compared to a mere eight percent in the bankruptcy sample.<sup>n85</sup> Similarly, the fair market value of the houses owned by the bankruptcy petitioners is remarkably low, with a median of \$ 290,000 compared to a \$ 600,000 median in the local housing market at that time.<sup>n86</sup>

Moreover, the bankruptcy petitioners were deep in debt, owing an average of over \$ 86,000 and with a median outstanding debt of \$ 35,000.<sup>n87</sup> A significant portion of the total debts was made up of credit card obligations. On average, the bankruptcy petitioner had more than \$ 30,000 worth of credit card debts, with a median of \$ 20,000.<sup>n88</sup> In fact, over two-thirds of the petitioners reported more than \$ 10,000 in credit card debts.<sup>n89</sup> This heavy debt burden along with particularly low income levels have contributed to a large debt-to-income ratio for the households in the bankruptcy sample with a median of 1:2.<sup>n90</sup> Hence, at the median, a petitioner's family owed debts greater than one-year's worth of income.

[\*541] The heavy debt burden along with the low homeownership rate contributed to the large negative net worth in the bankruptcy sample. Debtors' net worth is a vital indicator used to assess the debtor's relative financial well being.<sup>n91</sup> The mean net worth of the bankruptcy petitioner in the sample was a negative \$ 54,504 and their median net worth was a negative \$ 29,840.<sup>n92</sup> An overwhelming 89.2% of the sampled population had a negative net worth compared to only 12.6% in the general population outside of bankruptcy.<sup>n93</sup>

### B. Women in Bankruptcy

Before examining the data relating to women entrepreneurs, we scrutinized whether women bankruptcy petitioners in general were over-represented in the bankruptcy sample. As of 2000, there were 2,713,509 people over 18 years old in the City of Los Angeles. Among them, there were 1,339,269 male (49.4 %) and 1,374,240 female (50.6%). Table 1 shows the actual and the expected data on gender in our Los Angeles bankruptcy sample.

Table 1: Gender of Bankruptcy Petitioners

	Actual Data	Expected
Male	693	732

Female	788	749
Not Available	5	N/A
Total	1486	1481

We implemented the chi-square test of independence to test the hypothesis that filing for bankruptcy was independent of gender. We first computed the observed frequencies and expected frequencies of males and females filing for bankruptcy in our sample. We found that the test statistics for our observed and expected frequencies were 4:1, while the critical value for 95% confidence level at the right hand tail of chi-square distribution with one degree of freedom was 3.841. Since the test statistics were greater than the critical value, the null hypothesis was rejected. Hence, we concluded that filing for bankruptcy was not independent of gender.

To check whether the females were over or under represented in the bankruptcy sample, we conducted the following one tail test of proportion:

H0: Proportion of female filing for bankruptcy  $\leq$  Proportion of female in the general population

[\*542]

H1: Proportion of female filing for bankruptcy  $>$  Proportion of female in the general population

Using the table of areas for the standard normal distribution, we found that the Z value for 95% confidence level was 1.64. The test statistic was 2.0. Since the test statistic was greater than the critical value of 1.64, the null hypothesis was rejected. That is, females were not equally or underrepresented in the bankruptcy sample. Instead, the alternative hypothesis may be adopted. That is, females were over-represented in the bankruptcy sample at a 95% confidence level.

The men and women bankruptcy petitioners in our sample were demographically similar in a number of ways. For example, the average age of both men and women in the bankruptcy sample was forty-one.<sup>n94</sup> Similarly, women and men in the bankruptcy sample both belonged to similar racial and religious groups. Half of the men and women in the bankruptcy sample were White and a third were Hispanics.<sup>n95</sup> However, Black petitioners in the bankruptcy sample were twice as likely to be female, while among the Asians, males were more likely to file.<sup>n96</sup> Finally, the vast majority of both men and women in the bankruptcy sample were affiliated with the Christian faith.<sup>n97</sup>

Men and women in the bankruptcy sample exhibited a similar preference for Chapter 7 filing. Similar to the overall heavy use of Chapter 7 in the local bankruptcy court, ninety-five percent of both men and women petitioners filed under Chapter 7 of the Bankruptcy Code.<sup>n98</sup> In addition, men and women petitioners were equally represented by an attorney, with just under half of them retaining counsel.<sup>n99</sup>

While men and women in the bankruptcy sample were demographically similar in a number of ways, they displayed significantly different financial characteristics. Male petitioners reported significantly higher income levels. Similar to the disparity in the general population, female petitioners earned approximately eighty percent of their male counterparts.<sup>n100</sup> While they owed more, men petitioners reported higher asset holdings. [\*543] Men owed on average twice as much as women in the bankruptcy sample.<sup>n101</sup> However, men petitioners reported on average almost three times as much in total assets.<sup>n102</sup>

The stronger financial showing of men in the bankruptcy sample may be the product of their higher educational attainment. Similar to the educational attainment disparity outside of bankruptcy, a quarter of the men petitioners reported earning a bachelor or a graduate degree.<sup>n103</sup> In contrast, only seventeen percent of female petitioners were similarly educated.<sup>n104</sup> Also, the greater fragility of women petitioners in the sample may be a manifestation of their

reportedly higher divorce rate, higher reliance on government support, and greater reliance on high cost credit in the form of credit cards. <sup>n105</sup>

Loss of employment was an important contributing factor for bankruptcy filing for both men and women petitioners in our sample. Almost a quarter of both men and women petitioners identified loss of employment as the primary cause of their bankruptcy filing. <sup>n106</sup> However, contrary to the women petitioners in our sample, men reported at a much greater rate excessive credit card debts and business failure as the [\*544] primary causes of their bankruptcy filings. <sup>n107</sup> In contrast, over half of the women petitioners in our sample attributed their bankruptcy filing to personal calamities, such as medical complications or family related problems, while less than a third of the men in our sample did the same. <sup>n108</sup>

Fig. 1: Causes of Bankruptcy Filing

[SEE FIGURE 1 IN ORIGINAL]

### C. Women Entrepreneurs in Bankruptcy

Similar to the women being over-represented in the bankruptcy sample, women entrepreneurs were also over-represented in the bankruptcy population. When comparing the self-employed men and women populations in the City of Los Angeles with the self-employed men and women populations in the bankruptcy sample, this study has found women entrepreneurs to be over-represented. As of 1997, there were 341,117 firms in the City of Los Angeles. Among them, 73.7% were male owned, and 26.3% were female owned. The following table shows the actual and the expected data on the gender of small business owners in our Los Angeles bankruptcy sample:

Table 2: Gender of Small Business Owners in Bankruptcy

	Actual Data	Expected
Self Employed Male	133	145
Self Employed Female	64	52
Not Available	1	N/A
Total	198	197

[\*545] To check whether the female entrepreneurs were over or under represented in the bankruptcy sample, we conducted the following one tail test of proportion:

H0: Proportion of female entrepreneurs filing for bankruptcy  $\leq$  Proportion of female entrepreneurs in the general population

H1: Proportion of female entrepreneurs filing for bankruptcy  $>$  Proportion of female entrepreneurs in the general population

Using the table of areas for the standard normal distribution, we found that the Z value for 95% confidence level is

1.64. The test statistic was 1.97. Since the test statistic was greater than the critical value of 1.64, the null hypothesis was rejected. That is, female entrepreneurs were not equally or under-represented in the bankruptcy sample. Instead, the alternative hypothesis may be adopted. That is, female entrepreneurs were over-represented in the bankruptcy sample at a 95% confidence level.

It appears that women's over-representation among the small business owners in our bankruptcy sample may be the result of the same challenges and disadvantages they face in the entrepreneurial sector outside of bankruptcy. Admittedly, the self-employed women in the bankruptcy sample exhibited similar demographic characteristics to the self-employed men in the sample. Both groups filed predominantly under Chapter 7.<sup>n109</sup> About half of both groups retained professional representation in bankruptcy.<sup>n110</sup> Both women and male entrepreneurs were primarily married.<sup>n111</sup> The majority of the two groups were Christians.<sup>n112</sup> Lastly, over two-thirds of both male and female entrepreneurs in the bankruptcy sample were White and three-fourths of them were native born.<sup>n113</sup>

Nonetheless, similar to the inferior human capital reported by women entrepreneurs outside of bankruptcy,<sup>n114</sup> the women small business owners in our bankruptcy sample reported a lower propensity compared to their male counterparts to hold advanced degrees and a higher propensity to attain lower educational credentials.<sup>n115</sup> [\*546] Likewise, similar to their limited management work experience compared to male entrepreneurs outside of bankruptcy,<sup>n116</sup> self-employed women in our bankruptcy sample reported lower duration of business ownership experience.<sup>n117</sup>

Aside from inferior human capital characteristics, **women entrepreneurs in our bankruptcy** sample seem to suffer from the same pitfalls that adversely affect them outside of bankruptcy. For example, just as research on female-owned small businesses outside of bankruptcy found them experiencing growth difficulties as a result of their small size,<sup>n118</sup> **women entrepreneurs in our bankruptcy** sample similarly reported having a very low number of employees.<sup>n119</sup> Also, similar to their over-representation in the retail sector outside of bankruptcy,<sup>n120</sup> female-owned businesses in our bankruptcy sample were overwhelming engaged in the retail and service sectors.<sup>n121</sup>

In addition, consistent with their lower earnings and inferior capital holdings outside of bankruptcy,<sup>n122</sup> self-employed women in our bankruptcy sample reported lower earnings and homeownership rate, as well as significantly lower total asset holdings.<sup>n123</sup>

Finally, similar to the limited access to financing reported by female-owned small businesses outside of bankruptcy, it appears that women business owners in the bankruptcy sample experienced comparable challenges. Female entrepreneurs in our bankruptcy sample attributed their business demise to lack of financing twice as [\*547] frequently compared to their male counterparts.<sup>n124</sup> Indeed, the outstanding debt of female-owned enterprises in the bankruptcy sample was significantly lower than the total debt carried by the male counterparts. The total average debt reported by male-owned enterprises in our bankruptcy sample was \$ 323,000 compared to an average of only \$ 120,000 among the female entrepreneurs.<sup>n125</sup> Not only did they report lower debt accumulation, the women business owners in the bankruptcy sample reported a greater reliance on more costly financing. While credit card debt constituted less than a third of all outstanding debt among the male small business owners, credit card debt constituted almost half of all of the debts reported by the female small business owners.<sup>n126</sup>

Fig. 2: Causes of Bankruptcy Filing. A= Excessive Regulations; B= Internal Business Problems; C= Tax Problems; D= Competition; E= Lack of Financing; F= Too Much Debt; G= Personal Problems; H= Lawsuits

[SEE FIGURE 2 IN ORIGINAL]

[\*548]

## VI. Discussion

Entrepreneurship is a vital and promising venue for women's integration into the labor market. Indeed, with the

advancements in technology and proactive government encouragement over the past twenty years, women have become a significant and an emerging part of the American small business community. Women entrepreneurship has contributed in a number of key respects to overall economic growth, employment, and innovation in the market place.

Nonetheless, while self-employed women in the United States have recently outpaced growth rates compared to self-employed men, some studies have found that female-owned businesses have significantly higher closure rates than their male counterparts. Substantial research has also previously documented the reasons for the higher failure rate among women entrepreneurs. This study has contributed to the literature by documenting that women entrepreneurs' higher closure rate extends into bankruptcy. This study showed that just as women entrepreneurs have a higher propensity to fail outside of bankruptcy, they are similarly significantly over-represented in the bankruptcy population in our sample.

Women entrepreneurs' over-representation in the bankruptcy population appears to be attributed to the same reasons that have led them to experience a higher closure rate outside of bankruptcy. Outside of bankruptcy, women's higher closure rate is attributed in part to their inferior human capital, lower earnings, lower capitalization, smaller size of business, lower access to credit, and greater reliance on high cost financing. Importantly, this study has found that **women entrepreneurs in bankruptcy** share manifestations of the same challenges. **Women entrepreneurs in our bankruptcy** sample were reporting lower educational attainment, fewer years of prior business ownership experience, fewer number of employees, over-crowdedness in low growth industries, inferior capital ownership, and a greater reliance on high cost financing.

These challenges and hardships facing the small business owners in our bankruptcy sample apparently inflicted lasting adverse consequences on members of this group. In particular, our study appears to show that the self-employed women were somewhat less likely to consider entrepreneurship in the future.<sup>n127</sup>

It appears that, in order to promote entrepreneurship among women as a way of integrating more of them into the labor force in the future, it is imperative to address some of the underlying challenges that hinder the success of many female-owned small businesses. Namely, to increase a sustained level of women entering and remaining in the entrepreneurial sector in the United States, it is vital to craft and promote interventions that assist women entrepreneurs to effectively address some of these core challenges. These interventions may include providing opportunities to self-employed women in learning about ways to access greater low-cost financing, learning about the value of greater education, training, and the need to develop asset wealth and, finally, by channeling more women into higher growth industries.

[\*549] By actively addressing some of these underlying problems in women entrepreneurship, women entrepreneurs will not only continue to grow in numbers, but their rate of sustainability may grow as well.

### **Legal Topics:**

For related research and practice materials, see the following legal topics:  
 Bankruptcy LawCase AdministrationExaminers, Officers & TrusteesUnited States TrusteeBankruptcy LawCase AdministrationMeetingsReal Property LawBankruptcyGeneral Overview

### **FOOTNOTES:**

n1. See Off. of Advoc. of the U.S. Small Bus. Administration, Dynamics of Women-Operated Sole Proprietorships, 1990-1998 4, [http://www.sba.gov/advo/stats/rwosp\\_03.pdf](http://www.sba.gov/advo/stats/rwosp_03.pdf) (Mar. 2003).

n2. See Theresa J. Devine, Characteristics of Self-Employed Women in the United States, 117 Mthly. Lab. Rev. 20, 20 (Mar. 1994).

n3. See Off. of Advoc. of the U.S. Small Bus. Administration, Women in Business, 2006: A Demographic Review of Women's Business Ownership 13, <http://www.sba.gov/advo/research/rs280tot.pdf> (Aug. 2006) (reporting that in 2002, women-owned firms generated \$ 940.8 billion in total receipts and employed 7.1 million workers).

n4. *Id.* at 14 (reporting that between 1997 and 2002, women-owned firms increased by 19.8% compared to 10.3% overall growth rate).

n5. See Ying Lowrey, U.S. Sole Proprietorships: A Gender Comparison, 1985-2000 21, <http://www.sba.gov/advo/research/rs263tot.pdf> (Sept. 2005) ("The growth rates of female sole proprietors in the numbers of businesses, gross receipts, and net income were all more than double that of their male counterparts between 1985 and 2000.").

n6. See Off. of Advoc. of the U.S. Small Bus. Administration, Women in Business 5, <http://www.sba.gov/advo/stats/wib.pdf> (Oct. 1998) ("The Office of Advocacy estimates the number of women-owned businesses in 1997 at 8.5 million, an 89 percent increase since 1987."); see Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 3, at 14 (reporting that in 2002 there were 6,489,483 women-owned firms in the United States).

n7. See Off. of Advoc. of the U.S. Small Bus. Administration, The New American Evolution: The Role and Impact of Small Firms 17, [www.sba.gov/ADVO/stats/evo1\\_pap.html](http://www.sba.gov/ADVO/stats/evo1_pap.html) (June 1998) (describing the role regulatory enactments had in fostering women-owned businesses in the United States beginning in the 1960s).

n8. *Id.* (referring to the creation of the National Association of Women Business Owners and the National Foundation for Women Business Owners in the 1970s).

n9. *Id.*; Julie R. Weeks, Support for Women's Enterprise in the United States: Lessons Learned, [http://www.nwbc.gov/idc/groups/public/documents/nwbc/issue\\_brief\\_briefsupportforwbo.pdf](http://www.nwbc.gov/idc/groups/public/documents/nwbc/issue_brief_briefsupportforwbo.pdf) (Dec. 2002).

n10. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 7, at 17 ("According to many authors, one of the key variables that has facilitated women starting businesses has been the change in technology.").

n11. See Robert E. Litan, *What We Know, in Understanding Entrepreneurship: A Research and Policy Report* 8-9, [http://www.kauffman.org/uploadedFiles/Research\\_\\_Policy\\_Singles.pdf](http://www.kauffman.org/uploadedFiles/Research__Policy_Singles.pdf) (2005).

n12. See Robert W. Fairlie, *Self-Employed Business Ownership Rates in the United States: 1979-2003* 5, [www.sba.gov/ADVO/research/rs243tot.pdf](http://www.sba.gov/ADVO/research/rs243tot.pdf) (Dec. 2004) (reporting that male self-employment rate in 2003 was 12.4% compared to 6.8% among women).

n13. U.S. Census Bureau, *2002 Survey of Business Owners: Advance Report on Characteristics of Employer Business Owners: Gender, Veteran Status, Ethnicity, and Race*, <http://www.census.gov/econ/census02/sbo/sboadvance.htm> (last updated Feb. 2, 2005); see also Lowrey, *supra* n. 5, at 5 ("The proportion of female sole proprietors increased, from less than 31 percent in 1985 to more than 37 percent in 2000.").

n14. See Paul D. Reynolds, Nancy M. Carter, William B. Gartner, Patricia G. Greene & Larry W. Cox, *The Entrepreneur Next Door: Characteristics of Individuals Starting Companies in America* 5, [http://www.kauffman.org/uploadedFiles/psed\\_brochure.pdf](http://www.kauffman.org/uploadedFiles/psed_brochure.pdf) (2002) ("Men are twice as likely to be starting new businesses as women. The prevalence rate for men 18 years and older is 8.1 per 100 compared to 4.5 per 100 for women.").

n15. See Robert W. Fairlie & Bruce D. Meyer, *Ethnic and Racial Self-Employment Differences and Possible Explanations*, 31(4) *J. of Hum. Res.* 757, 763 (1996) ("In general, male and female [entrepreneurial] rates have similar rankings across ethnic/racial groups, but female rates are typically around 55 percent of male rates.").

n16. See Paul D. Reynolds, Michael Hay & S. Michael Camp, *Global Entrepreneurship Monitor: 1999 Executive Report* 24, [www.gemconsortium.org/download.asp?fid=140](http://www.gemconsortium.org/download.asp?fid=140) (1999) (reporting the level of entrepreneurial activity and gender in ten industrialized countries).

n17. See Miri Lerner, Candida Brush & Robert Hisrich, *Israeli Women Entrepreneurs: An Examination of Factors Affecting Performance*,

12 J. Bus. Venturing 315, 318 (1997).

n18. See Howard Aldrich, *Networking Among Women Entrepreneurs*, in *Women-Owned Businesses* 114-118 (Oliver Hagan, Carol Rivchun & Donald Sexton eds., Praeger Publishers 1989).

n19. See Miri Lerner et al., *supra* n. 17, at 318 (referring to expectations and cultural norms in various societies that deter women from becoming entrepreneurs).

n20. See Alicia Robb, *The Role of Race, Gender, and Discrimination in Business Survival* 20 (unpublished Ph.D. dissertation, U. N.C., 2000) (on file with author) (finding that although the researchers did not find differences in demand for credit, the lending patterns of these small businesses indicate that women were supplied less credit from the various credit sources); Eleanor Shaw, Sara Carter & Jackie Brierton, *Unequal Entrepreneurs: Why Female Enterprise is an Uphill Business* (The Indus. Socy. 2001); Ken S. Cavalluzzo, Linda Cavalluzzo & John Wolken, *Competition, Small Business Financing, and Discrimination: Evidence from a New Survey* 26 (Bd. Gov. Fed. Reserve Sys. 1999) (available at <http://www.federalreserve.gov/Pubs/feds/1999/199925/199925pap.pdf>) (finding that women entrepreneurs were more likely to pay more for credit).

n21. See Howard E. Aldrich & Catherine Zimmer, *Entrepreneurship Through Social Networks*, in *The Art and Science of Entrepreneurship* 12-13 (Donald L. Sexton & Raymond W. Smilor eds., Ballinger Publ. Co. 1986).

n22. See Rebecca Harding, *Global Entrepreneurship Monitor* 10 (unpublished ms., 2002) (on file with author) (indicating that one of the reasons that prevents women from starting their own business is the fear of failure); Wendy Brown, *Ambition Versus Action: Do Males and Females Exhibit Conflicting Perspectives of Entrepreneurial Potential and Growth. A Study Among Entrepreneurship Students and Entrepreneurial Graduates Before and After Start-Up* 13 (2002) (paper presented at the 25th ISBA Natl. Small Firms Policy & Research Conf. Nov. 2002) (available at <http://cdi.mecon.gov.ar/biblio/docelec/dp3123.pdf>) (suggesting that one reason for women's under-representation among the self-employed is the lower self-esteem).

n23. See Robb, *supra* n. 20, at 30.

n24. *Id.*

n25. Id.

n26. Id. at 63 (finding that self-employed men were more likely than self-employed women to have a college degree 51% versus 40%).

n27. See Off. of Advoc. of the U.S. Small Bus. Administration, *Women in Business*, 2001 11, <http://www.sba.gov/advo/stats/wib01.pdf> (Oct. 2001) (stating "self-employed women are proportionally more represented than men in the 'some college' category, but less in the doctorate and professional degree categories").

n28. See Miri Lerner et al., *supra* n. 17, at 325 (asserting that "many studies of women entrepreneurs find women start ventures in sectors where they have little experience").

n29. See Bengt Johannisson, *To Grow and Not to Grow-On the External Growth of Small Firms*, in *Recent Research in Entrepreneurship: The Third International EIASM Workshop* 276 (Leslie G. Davies & Allan A. Gibb eds., Avebury Gower Publ. Co. 1991).

n30. See Miri Lerner et al., *supra* n. 17, at 324.

n31. See Patricia Richardson & Christina Hartshorn, *Business Start-up Training: The Gender Dimension*, in *Women in Business: Perspectives on Women Entrepreneurs* 87-88 (Sheila Allen & Carole Truman eds., Routledge 1993); Caroline Turner, *Women's Businesses in Europe: EEC Initiatives*, in *Women in Business: Perspectives on Women Entrepreneurs* 139 (Sheila Allen & Carole Truman eds., Routledge 1993).

n32. See Alan L. Carsrud, Connie Marie Gaglio & Kenneth W. Olm, *Entrepreneurs-Mentors, Networks, and Successful New Venture Development: An Exploratory Study*, in *Frontiers of Entrepreneurship Research: 1986* 234-235 (Ctr. for Entrepreneurial Stud., Babson College 1986) (finding that limited use of mentors by women entrepreneurs was a significant detractor from a successful business launching).

n33. See Timothy Bates & Alfred Nucci, *An Analysis of Small Business Size and Rate of Discontinuance* 13, [http://webserver03.ces.census.gov/docs/cache/paper\\_contents\\_100136.pdf](http://webserver03.ces.census.gov/docs/cache/paper_contents_100136.pdf) (Jan. 1990) (concluding that the smaller size of a small business,

the greater the likelihood of business failure); Off. of Advoc. of the U.S. Small Bus. Administration, *Characteristics of Small Business Employees and Owners: 1997* 19, [www.sba.gov/advo/stats/ch\\_em97.pdf](http://www.sba.gov/advo/stats/ch_em97.pdf) (1998) (finding that the survival rate of small businesses in the U.S. varies greatly for firms with employees and firms without employees).

n34. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 17 ("Of the 5.4 million women-owned businesses, only 15.6 percent were employer firms in 1997, compared with 25.4 percent of all firms.").

n35. See Arne L. Kalleberg & Kevin T. Leicht, *Gender and Organizational Performance: Determinants of Small Business Survival and Success*, 34.1 *Acad. Mgt. J.* 136, 152 (1991) ("Companies headed by women were smaller than those headed by men: the mean for the latter is 12 employees, compared to 6 for the former ..."); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 17 ("Nearly 90 percent of self-employed women were in firms with fewer than 10 employees.").

n36. See Lowrey, *supra* n. 5, at 3 (finding that women sole proprietors average \$ 31,000 annually in gross proceeds compared to \$ 69,000 averaged by men sole proprietors).

n37. See Stephen Coate & Sharon Tennyson, *Labor Market Discrimination, Imperfect Information and Self-Employment*, 44(2) *Oxford Econ. Papers* 272, 279 (1992) (illustrating the importance of capital in both the business start up, as well as the earnings of the business); Brian Headd, *Redefining Business Success: Distinguishing Between Closure and Failure*, 21 *Small Bus. Econ.* 51, 55 (2003) (referring to studies that have shown that businesses having greater inputs, including financing, tend to survive longer).

n38. See Miri Lerner et al., *supra* n. 17, at 326-327 (stating that "studies of women's access to bank loans indicate that although women are able to obtain outside financing, they faced perceptual barriers that they were less capable than their male counterparts"); Robb, *supra* n. 20, at 20 (finding that although the researchers did not find differences in demand for credit, the lending patterns of these small businesses indicate that minorities and women were supplied less credit from the various credit sources).

n39. See Robb, *supra* n. 20, at 18, 20 (referring to studies finding that female entrepreneurs are more likely to have unmet credit needs).

n40. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 6, at 14 (finding that 32% of all female-owned businesses used some type of traditional loans, compared to 37% of all businesses); Robb, *supra* n. 20, at 20 (finding that the percentage of women entrepreneurs using some type of credit was lower (73.6%) than the average among all small business owners (75.7%)); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 20-21 (finding that in 1997, 28% of small businesses in the United States used credit line, compared to only 18.4% of women-owned businesses).

n41. See Robb, *supra* n. 20, at 18-19 (referring to a study that found that some women entrepreneurs avoided applying for a loan due to the fear of rejection).

n42. See Robb, *supra* n. 20, at 13.

n43. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 6, at 2 ("More than 35 percent of all women-owned firms used some type of credit card for their business credit needs in 1993.").

n44. See Robb, *supra* n. 20, at 21 ("Women [entrepreneurs] were most likely to rely on personal credit cards to finance some of their business operations."); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 21 ("Women-owned businesses were more likely than their male counterparts to use personal credit cards and less likely to use business credit cards to finance their businesses.").

n45. See Ingrid Verheul, Martin Carree & Roy Thurik, Allocation and Productivity of Time in New Ventures of Female and Male Entrepreneurs 15-16, <http://papers.ssrn.com/sol3/Delivery.cfm/7178.pdf?abstractid=871127&mirid=1> (last updated Mar. 13, 2010) (showing that women invest less time in the development of their new businesses than men); Robb, *supra* n. 20, at 63.

n46. See Deborah Carr, Two Paths to Self-Employment? Women's and Men's Self-Employment in the United States, 1980, 23 *Work & Occ.* 26, 30 (Feb. 1996) (contending that self-employment offers women an escape route from a less convenient or less flexible work schedule in the wage sector); Nancy M. Carter, William B. Gartner, Kelly G. Shaver & Elizabeth J. Gatewood, The Career Reasons of Nascent Entrepreneurs, 18 *J. Bus. Venturing* 13, 29-31 (2003) (finding in a survey that women cite the need for independence, which includes flexibility and work-family balance, as a reason for starting a business more often than men). Indeed, one study has concluded that self-employed women were more likely to spend more time on family responsibilities than men. See Karyn A. Loscocco & Kevin T. Leicht, Gender, Work-Family Linkages, and Economic Success Among Small Business Owners, 55 *J. Marriage & Fam.* 875, 885 (Nov. 1993).

n47. See Patricia G. Greene & Candida G. Brush, Women Entrepreneurs: An Explanatory Framework of Capital Types, in *Immigrant and Minority Entrepreneurship: The Continuous Rebirth of American Communities* 123, 131-132 (John Sibley Butler & George Kozmetsky eds., Praeger Publishers 2004) (arguing that societal expectations about traditional family roles restrict the growth potential of women entrepreneurs); Robb, *supra* n. 20, at 83 (finding that "individuals who entered into business ownership for a secondary source of income, to have flexibility for the family, etc. were more likely to see their businesses close over this period").

n48. See Robb, *supra* n. 20, at 83-84 (suggesting that entrepreneurs that spend more hours per week operating their business had a higher survival prospect).

n49. See LuAnn R. Gaskill, Howard E. Van Auken & Ronald A. Manning, A Factor Analytic Study of the Perceived Causes of Small Business Failure, 31 *J. Small Bus. Mgt.* 18, 23 (Oct. 1993) (referring to studies that have tied higher rates of business closure to those operated as sole proprietorships).

n50. See Lowrey, *supra* n. 5, at 2 ("Most U.S. firms (72.6 percent in 1997) and an even larger percentage of women-owned businesses (84.8 percent) operate as a sole proprietorships.").

n51. See Arnold Cooper, F. Javier Gimeno-Gascon & Carolyn Y. Woo, A Resource-Based Prediction of New Venture Survival and Growth, in *Best Paper Proceedings: Academy of Management* 68, 72 (Jerry L. Wall & Lawrence R. Jauch eds., Omnipress 1991) (finding that "avoiding retail and personal services businesses make it more likely for the venture to achieve substantial growth"); Kalleberg & Leicht, *supra* n. 35, at 140 (finding that companies in the trade and service industries experience lower growth rates and profitability and often face greater competition); Headd, *supra* n. 37, at 55-56 (finding that factors that best explain the likelihood of business closure include operating a business in the retail or service industry).

n52. See Alexandra L. Anna, Gaylen N. Chandler, Erik Jansen & Neal P. Mero, Women Business Owners in Traditional and Non-Traditional Industries, 15 *J. Bus. Venturing* 279, 280-281 (2000) (finding that women-owned businesses are more likely to be found in personal services and retail industries rather than manufacturing and high technology); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 17 (finding that women entrepreneurs are over-represented in the service industries compared to men entrepreneurs); Kalleberg & Leicht, *supra* n. 35, at 140 (suggesting that traditionally self-employed women have been concentrated in retail sales and personal and educational services).

n53. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 6, at 6 (finding that more than 70% of all women-owned firms in the United States are in the services and retail industries); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 17 (finding that in 1997, 55% of women-owned businesses were in the service sector and 17% percent in retail trade).

n54. See Eileen M. Fischer, A. Rebecca Reuber & Lorraine S. Dyke, A Theoretical Overview and Extension of Research on Sex, Gender, and Entrepreneurship, 8 *J. of Bus. Venturing* 151 (1993) (finding that women-owned businesses have lower sales and employ fewer employees than men); Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 2 ("In 1998, of all U.S. sole proprietorships, 37 percent were operated by women. Women-operated businesses generated 18 percent of total business receipts and 22 percent of net income.").

n55. See Alicia Robb & John Wolken, Firm, Owner, And Financing Characteristics: Differences Between Female-and Male-Owned Small Businesses 4-5 (Fed. Reserve Bd. of Gov. Working Paper No. 2002-18, Mar. 2002) (available at <http://www.federalreserve.gov/Pubs/FEDS/2002/200218/200218pap.pdf>).

n56. See Off. of Advoc. of the U.S. Small Bus. Administration, *supra* n. 27, at 6 ("At the personal income levels below \$ 25,000 were many more self-employed women than self-employed men.").

n57. See Richard J. Boden, Jr. & Brian Headd, Race and Gender Differences in Business Ownership and Business Turnover, 37 Bus. Econ. 61, 66 (Oct. 2002) ("women-owned businesses are at 7.7-percent and 8.6-percent greater hazards of dissolution, other things equal, among White non-Hispanic-owned and Asian and other minority-owned businesses, respectively"); Richard J. Boden, Jr. & Alfred R. Nucci, On the Survival Prospects of Men's and Women's New Business Ventures, 15 J. Bus. Venturing 347, 361 (2000) (finding that the businesses owned by women were less likely to survive than the businesses owned by men); Robb, *supra* n. 20, at 77 ("My research does provide evidence that even after controlling for factors such as detailed industry, employment, size, class, location, incorporation status, organizational structure, and business age, women-owned businesses were less likely to survive than businesses owned by men."); John Watson, Failure Rates for Female-Controlled Businesses: Are They Any Different? 41 J. Small Bus. Mgt. 262, 262 (2003) (According to this author, previous research has generally asserted that women-owned firms consistently underperform compared to their male counterparts on several levels such as: revenue generation, success rates, and growth. However, this author suggests that these findings are perhaps the result of differences (such as type of industry) that usually exist between male-and female-owned firms. The author finds that when research allows for industry differences, the failure rates of female-owned firms are not significantly lower than that of male-owned ones); but see Kalleberg & Leicht, *supra* n. 35, at 154 (finding that gender is not a significant predictor in business performance).

n58. See Robb, *supra* n. 20, at 13, 18-19 (referring to a study that found that some women entrepreneurs avoided applying for a loan due to fear of rejection). Similarly, women small business owners in Southern California tend to rely less on bank financing than their male-owned counterparts. See Marla Dickerson, Women Are Geared for Growth: Female Entrepreneurs are Agile, Tech-Savvy, Work Well at Home, L.A. Times C-1 (Oct. 7, 1998).

n59. See Ctr. for Women's Bus. Research, A Compendium of National Statistics on Women-Owned Businesses in the U.S. ES-4, <http://www.nwbc.gov/idc/groups/public/documents/nwbc/compendium.pdf> (Sept. 2001).

n60. *Id.* ("Just 16% of women-owned firms had \$ 100,000 or more in bank credit, compared with 36% of men-owned firms.").

n61. See Robb, *supra* n. 20, at 21 ("Table 2 shows that women-owned businesses were the most likely to rely on family and friends for financial assistance than did other groups ...").

n62. See Christina Constantinidis, Annie Cornet & Simona Asandei, Financing of Women-Owned Ventures: The Impact of Gender and Other Owner-and Firm-Related Variables, 8(2) Venture Capital 133, 147 (2006).

n63. Since the data for this study was collected in the San Fernando Valley Division of the Central District Court of California, the results are contrasted with relevant characteristics of the general population or the small business owner population of the San Fernando Valley. However, when the relevant data from the San Fernando Valley was not available, relevant data from the City of Los Angeles or the County of Los Angeles was used instead.

n64. See Joel Kotkin & Erika Ozuna, Davenport Institute Research Reports: The Changing Face of the San Fernando Valley, <http://publicpolicy.pepperdine.edu/davenport-institute/reports/changing-face/> (2002); U.S. Census Bureau, Profile of Selected Social Characteristics: 2000 2, at <http://www.calmis.ca.gov/file/Census2000/LosAngelesCityDP2000.pdf> (last accessed May 25, 2010) (reporting that 40.9% of the residents of the city of Los Angeles were foreign born in 2000).

n65. See Karen B. Leonard & Chandra S. Tibrewal, Asian Indians in Southern California: Occupations and Ethnicity, in *Immigration and Entrepreneurship: Culture, Capital, and Ethnic Networks* 141, 141 (Ivan Light & Parminder Bhachu eds., Transaction Publishers 1993); Ivan Light & Elizabeth Roach, Self Employment: Mobility Ladder or Economic Lifeboat? in *Ethnic Los Angeles* 193, 193-194 (Roger Waldinger & Mehdi Bozorgmehr eds., Russell Sage Found. 1996).

n66. In January 2004, I contacted the Executive Office of the U.S. Trustee and requested permission to distribute surveys at the 341(a) hearings in the Central District of California. Later that year, the Executive Office of the U.S. Trustee rejected the request to grant access, citing privacy concerns for the debtors. As a result, surveys were mailed to a randomized sample of bankruptcy petitioners in the Central District of California-San Fernando Valley Division. Unfortunately, the response rate for the mailed survey was unacceptably low. I subsequently submitted a request for re-consideration to the Executive Office of the U.S. Trustee. In December 2004, the Executive Office of the U.S. Trustee granted us permission to distribute surveys at the creditors' meeting in the Central District of California-San Fernando Valley Division. Since the results of the small sample of the completed mailed surveys were not significantly different from the results of the completed surveys that were collected in person, the completed mailed surveys were included in the final sample.

n67. See Ctr. for Women's Bus. Research, *Women-Owned Businesses in California, 2004: A Fact Sheet 2*, <http://www.nawbo-ca.org/PDF/california2004.pdf> (last accessed May 25, 2010) ("Among the 50 states and Washington, D.C., California ranks 1st in the number of privately-held, 50% or more women-owned firms in 2004, 1st in employment, and 1st in sales.").

n68. See U.S. Census Bureau, *State and County QuickFacts: Los Angeles (city), California 2*, <http://quickfacts.census.gov/qfd/states/06/0644000.html> (last accessed Mar. 28, 2010) (reporting that the share of women owned firms in California in 2002 was 29.9%).

n69. See Ctr. for Women's Bus. Research, *supra* n. 67, at 3 (Estimating that the privately-held and majority female-owned firms in California generate nearly \$ 297 billion in sales and employ 1,860,456 people. Between 1997 and 2006, the Center estimates that the number of these firms in California increased by 61%).

n70. See Leonard & Tibrewal, *supra* n. 65, at 141; Pyong Gap Min & Mehdi Bozorgmehr, *Immigrant Entrepreneurship and Business Patterns: A Comparison of Koreans and Iranians in Los Angeles*, 34 *Intl. Migration Rev.* 707, 708 (2000) (indicating that Los Angeles is one of the top metropolitan areas in the United States in self-employment rate).

n71. See Ctr. for Women's Bus. Research, *supra* n. 67, at 41 (estimating that in 2004, there were 333,939 majority women-owned firms in the Los Angeles-Long Beach metropolitan area, constituting 42.9% of all privately owned firms in the area).

n72. *Id.* at 43.

n73. See U.S. Census Bureau, *supra* n. 68 (reporting that women owned firms in the city of Los Angeles in 2002 was 29.8%).

n74. The yield rate was calculated by dividing the number of surveys collected by the total number of petitioners present at the hearings that were attended by the research assistants in this study.

n75. During the period of this study from January 2005 through January 2006, there were 12,049 bankruptcy filings. The 1,500 surveys collected represent a yield of 12.45%.

n76. During the period of this study from January 2005 through January 2006, 11,929 bankruptcy petitions were filed in the San Fernando Valley Division of the United States Federal Bankruptcy Court for the Central District of California. Approximately, ninety-four percent of the filings were under Chapter 7 (N=11,162), approximately five and a half percent were filed under Chapter 13 (N=696), and half of a percent were filed under Chapter 11 (N=71). See U.S. Bankr. Ct. C. Dist. of Cal., *2005 & 2006 Filings for Central District*, <http://www.cacb.uscourts.gov/> (last accessed Mar. 28, 2010). In the bankruptcy sample, 1,500 surveys were completed. Similar to the chapter composition, over 97% of the surveys were under Chapter 7 (N=1,465), 0.5% were filed under Chapter 11 (N=8) and the balance under Chapter 13 (N=27).

n77. See Teresa A. Sullivan, Elizabeth Warren & Jay Lawrence Westbrook, *As We Forgive Our Debtors: Bankruptcy and Consumer Credit in America* 345 (Oxford U. Press 1989).

n78. Since the bankruptcy court in this study is located in the San Fernando Valley, comparisons from the bankruptcy sample were made to the general population in the San Fernando Valley. However, where no recent comparable data from the San Fernando Valley is available, comparisons from the greater Los Angeles area have been used.

n79. See Economic Alliance, *San Fernando Valley Almanac* 59, [http://www.valleyofthestars.net/Library/Almanac\\_2000/Pub\\_SFV\\_Almanac\\_2000.pdf](http://www.valleyofthestars.net/Library/Almanac_2000/Pub_SFV_Almanac_2000.pdf) (2000) (estimating that the median age of residents in the San Fernando Valley in 2004 would be 37).

n80. *Id.* at 61 (reporting that in 1999, 55.4% of the adult population in the San Fernando Valley had some college education or more). In the bankruptcy sample, the distribution was as follows: No schooling: 0.7%; 6th grade or less: 1.2%; 7th to 12th grade with no diploma: 8.9%; High School graduate: 23.5%; some college: 31.3%; Associate Degree: 11.2%; Bachelor's Degree: 14.5%; Advanced degree: 5.9%.

n81. See U.S. Census Bureau, *supra* n. 64, at 2 (reporting that in 2000, 37% of people 15 years old or older in Los Angeles City were single, 45% were married, 11.9% were divorced or separated, and 5.4% were widowed). In the bankruptcy sample, 37.2% were identified as single; 32.2% were identified as married; 24.5% were identified as divorce or separated; and 3.5% as widow.

n82. See San Fernando Valley Econ. Research Ctr., *San Fernando Valley Economic Report: 2003-2004* 66, <http://www.csun.edu/sfverc/0403toc.htm> (last accessed Mar. 28, 2010) (reporting that the self-employment rate for the San Fernando Valley was 14.5% of the working population). In the bankruptcy sample, 208 (13.8%) bankruptcy petitioners identified themselves as self-employed. Specifically, the survey asked the respondents the following question: "Within the last two years prior to filing for bankruptcy, have you earned any money from a business you owned or spent any time operating a business you owned?"

n83. Economic Alliance, *supra* n. 79, at 62. The median monthly household income in the bankruptcy sample was \$ 2,800, with a monthly mean of \$ 3,710 (\$ 3,070 without outliers), and a standard deviation of 5,631. The median household income reported in this bankruptcy sample was higher than the median household income of \$ 20,172 found in a recent national bankruptcy study. See Teresa A. Sullivan, Elizabeth Warren & Jay Lawrence Westbrook, *Less Stigma or More Financial Distress: An Empirical Analysis of the Extraordinary Increase in Bankruptcy Filings*, 59 *Stan. L. Rev.* 213, 223 (2006).

n84. See U.S. Census Bureau, *supra* n. 64 at 3. In the bankruptcy sample, 178 of the bankruptcy petitioners reported receiving government assistance, or 11.9%.

n85. See U.S. Census Bureau, *supra* n. 68 (reporting a homeownership rate in Los Angeles County in 2000 at 47.9%). The homeownership rate reported in the bankruptcy sample was particularly low compared to findings in other studies. For example, in a study focusing exclusively on Chapter 7 petitioners, researchers have found a homeownership rate of about 30% among the bankruptcy petitioners. See Marianne B. Culhane & Michaela M. White, *Taking the New Consumer Bankruptcy Model for a Test Drive: Means-Testing Real Chapter 7 Debtors*, 7 *Am. Bankr. Inst. L. Rev.* 27 (1999).

n86. See San Fernando Valley Econ. Research Ctr., *San Fernando Valley Economic Report 2005-2006* 32, <http://www.csun.edu/sfverc/reports/pdfs/06/economicP1-38.pdf> (last accessed Mar. 28, 2010) (reporting that the median value for a single-family residence in the San Fernando Valley was \$ 600,000 in August 2005). The average value of the house in the bankruptcy sample was \$ 313,923 (\$ 302,368 without outliers), with a median of \$ 290,000 and a standard deviation of 201,245. While the homeowners in the bankruptcy sample owned homes with substantially lower values than homeowners in the general local population, the home values of the bankruptcy petitioners in this study was substantially higher than the median value of homes for families in bankruptcy in other national bankruptcy studies of merely \$ 90,000. See Sullivan et al., *supra* n. 83, at 226.

n87. The mean was \$ 86,246 (\$ 48,389 without outliers). The standard deviation was 317,745. A recent national bankruptcy study found a similar outstanding debt amount for the bankruptcy petitioners with an average of \$ 90,894, and a median of \$ 63,486. See Sullivan et al., *supra* n. 83, at 255.

n88. The average credit card debt of the bankruptcy petitioner in the sample was \$ 30,471 (\$ 25,229 without outliers), with a median of \$ 20,000 and a standard deviation of 44,467. Previous empirical studies found similar results. See Teresa A. Sullivan, Elizabeth Warren & Jay Lawrence Westbrook, *The Fragile Middle Class: Americans in Debt 121* (Yale U. Press 2000) (stating that the range of average credit card debt among bankruptcy petitioners in the United States was between \$ 14,260 and \$ 28,955).

n89. 31.1% of the petitioners in the bankruptcy sample reported credit card debts of \$ 10,000 or less. A recent national bankruptcy study also found the growing prevalence of credit card debt. See Sullivan et al., *supra* n. 83, at 233 (finding that 56.2% of all the bankruptcy petitioners owed more than \$ 10,000 in credit card debt at the time of filing for bankruptcy protection).

n90. The average debt-to-income ratio of the debtor's household in the bankruptcy sample was 2:3 (1:7 without outliers), and a median of 1:2. To make the debt-to-income ratio a useful account of the financial condition of the petitioner, I did not measure total debt of all petitioners against total income of all petitioners. Instead, I measured the debt-to-income ratio on a debtor-by-debtor basis and then averaged the ratios. Also, I omitted from the sample petitioners reporting no income since arithmetically I would not be able to divide total debt by

zero. Hence, the debt-to-income ratio reported here understates the true debt-to-income ratio of the sample. A recent empirical bankruptcy study across a number of districts found a higher debt-to-income ratio with a median of 3:04 and an average ratio of 4:35. See Sullivan et al., supra n. 83, at 230-231. The lower debt-to-income ratio reported in this study is plausibly due to the higher average household income reported by petitioners in this study.

n91. See Sullivan et al., supra n. 77, at 70.

n92. The average, without the outliers, was -\$ 38,753. The standard deviation was 493,768. In order to make the net worth calculation a useful account of the financial condition of the petitioner, I did not measure total assets of all petitioners against total liabilities of all petitioners. Instead, I measured the net worth on a debtor-by-debtor basis and then averaged the results. Similar general findings were reported in previous studies of bankruptcy petitioners, although the extent of negative net worth was measurably higher in this study. See Sullivan et al., supra n. 88, at 72 ("The mean net worth of the bankrupt debtors is -\$ 16,819, and their median net worth is - \$ 10,542."). The higher negative worth reported in this study as compared to previous studies is plausibly due to the lower homeownership rate reported in this sample.

n93. This finding is consistent with the findings from previous empirical studies in the United States. Id. at 72 ("Only 12.6 percent of the total United States population had a net worth of zero or negative value, compared with nearly all of the bankrupt debtors.").

n94. In our bankruptcy sample, the median age of male and female was 40, with a mean of 41 and a standard deviation of 13.

n95. In our bankruptcy sample, White males comprised 49% of the male population (N=343), while Hispanic males made up 32% of the male population (N=224). White females similarly comprised 49.6% of the female population (N=394), while Hispanic females made up 30.7% of the female population (N=244). This difference was deemed statistically significant at  $p=.008$ .

n96. In our bankruptcy sample, Black males comprised 5.4% of the male population (N=38), while Black females constituted 10.7% of the female petitioners in our sample (N=85). Asian males made up 7.9% of the male petitioners in our sample (N=55), while 5.5% of female petitioners were Asians (N=44). This difference was deemed statistically significant at  $p=.008$ .

n97. Among male petitioners, 81.4% were Christians (N=315), .5% were Muslims (N=2), 7.8% were Jewish (N=30), and 10.3% were affiliated with other religions (N=40). Among female petitioners, 82.2% were Christians (N=412), .8% were Muslims (N=4), 5.0% were Jewish (N=25), and 12% were affiliated with other religions (N=60). The differences were not deemed statistically significant.

n98. Among male petitioners, 97.2% filed under Chapter 7 (N=680), 1% filed under Chapter 11 (N=7), and 1.9% filed under Chapter 13 (N=13). Among female petitioners, 98.1% filed under Chapter 7 (N=780), .1% filed under Chapter 11 (N=1), and 1.8% filed under Chapter 13 (N=14). The differences were not deemed statistically significant.

n99. Among male petitioners, 49.7% were represented by counsel (N=348), compared to 46.7% among females in the sample (N=371). The difference was not deemed statistically significant.

n100. The gender earnings gap in the United States in 2004 was .765. See Carmen DeNavas-Walt, Bernadette D. Proctor & Cheryl Hill Lee, U.S. Census Bureau, Current Population Reports: Income, Poverty, and Health Insurance Coverage in the United States: 2004, P60-229 38 (U.S. Dept. Comm. 2005) (available at <http://www.census.gov/prod/2005pubs/p60-229.pdf>). Similarly, in the bankruptcy sample the gender earnings gap was approximately .80. Male petitioners in the sample reported monthly average earnings of \$ 2,362, with a median of \$ 2,000 and a standard deviation of 2,905 (N=637). Female petitioners in the sample reported monthly average earnings of \$ 1,916, with a median of \$ 1,600 and a standard deviation of 2,605 (N=706). The differences were deemed statistically significant at  $p=.013$ .

n101. Male petitioners in the sample reported total debts of \$ 120,353, with a median of \$ 40,000 and a standard deviation of 448,865 (N=582). Female petitioners in the sample reported total debts of \$ 55,549, with a median of \$ 31,037 and a standard deviation of 92,037. The differences were deemed statistically significant at  $p=.002$ .

n102. Male petitioners in the sample reported a total asset value of \$ 66,711, with a median of \$ 5,000 and a standard deviation of 540,961 (N=468). Female petitioners in the sample reported a total asset value of \$ 23,017, with a median of \$ 3,000 and a standard deviation of 96,563 (N=502). The differences were not deemed statistically significant.

n103. See U.S. Census Bureau, Educational Attainment in the United States: 2003 2, <http://www.census.gov/prod/2004pubs/p20-550.pdf> (June 2004) (reporting that while women have made gains in recent years, the percentage of women who have a college degree or higher is 26% compared to 29% among men). Residents of the City of Los Angeles reported similar rates of educational attainment. See U.S. Census Bureau, Los Angeles City, CA, Los Angeles-Long Beach-Santa Ana, CA Metropolitan Statistical Area, [http://factfinder.census.gov/servlet/STTable?\\_bm=y&-context=st&-qr\\_name=ACS\\_2008\\_3YR\\_G00\\_S1501&-ds\\_name=ACS\\_2008\\_3YR\\_G00\\_&-tree\\_id=3308&-redoLog=false&-\\_caller=geoselect&-geo\\_id=31200US311000644000&-format=&-\\_lang=en](http://factfinder.census.gov/servlet/STTable?_bm=y&-context=st&-qr_name=ACS_2008_3YR_G00_S1501&-ds_name=ACS_2008_3YR_G00_&-tree_id=3308&-redoLog=false&-_caller=geoselect&-geo_id=31200US311000644000&-format=&-_lang=en) (last accessed May 4, 2010) (reporting that of men over 25, 30.1% had a college degree or higher, while 28.3% of women reported the same). In the bankruptcy sample, 24.6% of the male petitioners reported having a college degree or higher (N=172).

n104. In the bankruptcy sample, 17% of the female petitioners reported having a college degree or higher (N=135). The differences between

the rates reported by male and female petitioners in our sample was statistically significant at  $p=.000$ .

n105. The marital status of male petitioners in the sample was as follows: Single= 37.9% (N=265); Married: 38.3% (N=268); Divorced or Separated: 20.1% (N=141); Widowed: 1.1% (N=8). The marital status of female petitioners in the sample was as follows: Single: 37.5% (N=298); Married: 26.9% (N=214); Divorced or Separated: 28.3% (N=225); Widowed: 5.5% (N=44). The differences were deemed statistically significant at  $p=.000$ . Females in our sample were more likely to be the recipient of government assistance. 14.5% of the female petitioners were relying on government assistance (N=115), compared to only 9% among male petitioners (N=63). The difference was deemed statistically significant at  $p=.015$ . Lastly, female petitioners were significantly more reliant on credit card debt than their male counterparts. Among male petitioners, credit card debts composed on average 35.09% of their total debts, with a median of 15% and a standard deviation of 40.3 (N=89). In contrast, among female petitioners, credit card debts constituted on average 52.5% of the total debts outstanding, with a median of 50% and a standard deviation of 45.7 (N=42). The difference was deemed statistically significant at  $p=.029$ .

n106. Among male petitioners in our sample, 22.7% reported loss of employment as the primary cause of their bankruptcy filings (N=76), compared to 24.4% (N=108) among the female petitioners in the sample. The difference was deemed statistically significant at  $p=.000$ .

n107. The higher propensity of male petitioners to attribute their bankruptcy filings to business failures or excessive credit card debts may partly explain their significantly higher outstanding debt level. Among the male petitioners in our bankruptcy sample, 16% attributed the bankruptcy filing to a failed business enterprise (N=54), while only 3.8% of female petitioners reported the same (N=17). Also, 28.8% of male petitioners in our sample identified credit card debt as the primary source of their bankruptcy filing (N=97), compared to only 19.7% among the female petitioners in the sample (N=88). The differences were deemed statistically significant at  $p=.000$ .

n108. Among male petitioners, 13.4% (N=45) identified personal or family calamities as the primary cause of their bankruptcy filing and 18.4% (N=62) attributed it to medical related problems. In contrast, among the female petitioners, 25.7% (N=115) identified personal or family calamities as the primary cause of their bankruptcy filing and 24.8% (N=111) attributed it to medical related problems. The differences were deemed statistically significant at  $p=.000$ .

n109. Among the self-employed males in our sample, 97.3% filed under Chapter 7 (N=133), 2.2% filed under Chapter 11 (N=3), and .7% filed under Chapter 13 (N=1). Among the self-employed female petitioners, 98.6% filed under Chapter 7 (N=69), 1.4% filed under Chapter 11 (N=1), and 0% filed under Chapter 13 (N=0). The differences were not deemed statistically significant.

n110. Among male entrepreneurs in the sample, 51.8% were represented by counsel (N=71) compared to 42.9% among females entrepreneurs (N=30). The difference was not deemed statistically significant.

n111. The marital status of the self-employed males in our sample was as follows: Single: 30.7% (N=42); Married: 41.6% (N=57); Divorced or Separated: 21.2% (N=29); Widowed: 1.5% (N=2). The marital status of the self-employed females in our sample was as follows: Single: 34.3% (N=24); Married: 37.1% (N=26); Divorced or Separated: 14.3% (N=10); Widowed: 7.1% (N=5). The differences were not deemed statistically significant.

n112. Among the self-employed males in our sample, 65.4% were Christians (N=51), 1.3% were Muslims (N=1), 19.2% were Jewish (N=15), and 14.1% were affiliated with other religions (N=11). Among the self-employed females, 51.3% were Christians (N=20), 5.1% were Muslims (N=2), 10.3% were Jewish (N=4), and 33.3% were affiliated with other religions (N=13). The differences were not deemed statistically significant.

n113. In our bankruptcy sample, among the self-employed males, Whites composed 67.2% (N=92), Hispanics made up 15.3% (N=21), Blacks composed 2.2% (N=3), Native Americans made up .7% (N=1), and Asians made up 6.6% (N=9). Among the self-employed females, Whites similarly composed 68.6% (N=48), Hispanics made up 22.9% (N=16), Native Americans made up 0% (N=0), and Asians made up 2.9% (N=2). These differences were not deemed statistically significant. Among the self-employed males in our sample, 75.9% were native born (N=101). Similarly, among the self-employed females in our sample, 73.9% were native born (N=51). This difference was not deemed statistically significant.

n114. See Robb, *supra* n. 20, at 30.

n115. In our bankruptcy sample, 17.5% of the self-employed male petitioners reported having an advanced degree (N=24), compared to only 8.6% among the self-employed females in our sample (N=6). Among the self-employed males in our sample, 21.9% (N=30) earned a Bachelor's degree compared to 21.4% (N=15) among self-employed females. Compared to self-employed males, self-employed females were more likely to have attained an Associate degree or some college education. Among the self-employed males in our sample, 7.3% (N=10) earned an Associate degree compared to 17.1% (N=12) among self-employed females. Lastly, among the self-employed males in our sample, 26.3% (N=36) has some college education compared to 27.1% (N=19) among self-employed females. The differences between the rates was statistically significant at  $p=.013$ .

n116. See Robb, *supra* n. 20, at 30, and accompanying text.

n117. The self-employed males in our bankruptcy sample reported an average in years of business ownership experience of 11.26, with a median of 8 years, and a standard deviation of 9.6 (N=113). In contrast, self-employed females in the bankruptcy sample reported on average 9.1 years of prior business experience, with a median of 6.5 years, and a standard deviation of 8.8 (N=62). The differences were not deemed to be statistically significant.

n118. See supra nn. 33-35 and accompanying text.

n119. The self-employed males in our sample had on average 7.01 employees (N=115), with a median of one employee and a standard deviation of 22. In contrast, the self-employed females in our sample had on average only 3.98 employees (N=56), with a median of one employee and a standard deviation of 8.8. Also, 39.3% (N=22) of the self-employed women had no employees. Similarly, 43.5% (N=50) of self-employed males had no employees. The differences between the two groups were not deemed statistically significant.

n120. See supra nn. 52-53 and accompanying text.

n121. Among self-employed female petitioners in our bankruptcy sample, 30.4% were engaged in the retail sector (N=17), 3.6% were engaged in the manufacturing sector (N=2), and 66.1% were engaged in the service sector (N=37). Among self-employed male petitioners in our bankruptcy sample, 22.4% were engaged in the retail sector (N=22), 2.0% were engaged in the manufacturing sector (N=2), 2% were engaged in the wholesale business (N=2), and 73.5% were engaged in the service sector (N=72). These differences were not deemed statistically significant.

n122. See Lowrey, supra n. 5, at 3.

n123. The monthly household earnings of self-employed females in our bankruptcy sample was \$ 3,192 (N=70), with a median of \$ 2,232 and a standard deviation of 2,447. In contrast, the monthly household earnings of self-employed males in our bankruptcy sample was \$ 6,142 (N=138), with a median of \$ 3,500 and a standard deviation of 13,240. The total average assets reported by the self-employed female petitioners was \$ 25,578 (N=70), with a median of \$ 5,000 and a standard deviation of 87,9373. In contrast, the total average assets reported by the self-employed male petitioners was \$ 82,999 (N=138), with a median of \$ 8,000 and a standard deviation of 269,984.

n124. Self-employed female petitioners in our bankruptcy sample attributed their business failure to the following causes: excessive regulations: 3.9% (N=2); internal business problems: 7.8% (N=4); tax problems: 7.8% (N=4); competition: 49% (N=25); lack of financing: 7.8% (N=4); too much debt: 5.9% (N=3); and personal problems: 17.6% (N=9). In contrast, self-employed male petitioners in our bankruptcy sample attributed their business failure to the following causes: excessive regulations: 1% (N=1); internal business problems: 17.2% (N=17); tax problems: 15.2% (N=15); competition: 43.4% (N=43); lack of financing: 4% (N=4); too much debt: 5.1% (N=5); personal problems: 7.1% (N=7); and lawsuits: 7.1% (N=7). These differences were deemed only somewhat significant at p=.066.

n125. Self-employed female petitioners in our sample had on average \$ 124,637 of outstanding debt, with a median of \$ 50,500 and a standard deviation of 199,160 (N=55). In contrast, self-employed male petitioners in our sample had on average \$ 320,538 of outstanding

debt, with a median of \$ 90,000 and a standard deviation of 923,562 (N=55). The differences were not deemed statistically significant.

n126. On average, credit card debt constituted 52.5% of the self-employed female petitioners' total outstanding debt, with a median of 50% and a standard deviation of 45 (N=42). In contrast, credit card debt constituted 35% of the self-employed male petitioners' total outstanding debt, with a median of 15%, and a standard deviation of 40 (N=89). The differences were deemed to be statistically significant at  $p=.029$ . The average total credit card debt reported by male petitioners in our sample was \$ 58,175, with a median of \$ 40,000 and a standard deviation of 67,993 (N=101). In contrast, the average total credit card debt reported by female petitioners in our sample was \$ 51,425, with a median of \$ 35,000 and a standard deviation of 63,328 (N=51). The difference in the amount of outstanding credit card debt was not deemed statistically significant.

n127. Among self-employed female petitioners in our sample, 44% expressed an interest in remaining an entrepreneur following the bankruptcy filing (N=31). In contrast, among self-employed male petitioners in our sample, 51% expressed an interest in remaining an entrepreneur following the bankruptcy filing (N=68). The difference was not deemed statistically significant.