

The Debt Structure of Small Business Owned by Women in 1987 and 1993¹

This study examines the access of women-owned small business borrowers to financial capital in 1987 and 1993 using the National Survey of Small Business Finances. Results indicate that while women-owned small businesses have gained similar access to line-of-credit loans from commercial banks as men-owned small businesses.

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Introduction

An important phenomenon in the U.S. economy in the last twenty-five years has been the rapid growth of women-owned businesses. In 1972, women owned less than five percent of all businesses and produced less than one percent of total sales (Bureau of the Census, 1976). Based on recent estimates of small business activity, women-owned businesses now comprise 27 percent of the 5.5 million small businesses (Cole, Rebel, & Wolken, 1995). Even though women ownership of small businesses has increased significantly over the past 25 years, many women who own small businesses claim they have less access to the market for financial capital than men-owned small businesses.

While previous literature has offered no evidence of price discrimination in financial capital markets, advocacy groups still claim that women business owners face discrimination (NFWBO, 1993). If real discrimination occurs in the market for financial services, one would expect women-owned businesses to receive less favorable treatment by lenders than men-owned businesses, even when the quality of the businesses is the same. The borrower could receive less favorable treatment by paying higher loan prices; being offered smaller loan amounts; being refused credit from a mainstream lender which makes it necessary for the borrower to search for non-conventional lenders; or, being offered only non-traditional debt instruments. The purpose of this study is to determine if women-owned small businesses had less access to line-of-credit loans from commercial banks in 1987 and 1993 than men-owned small businesses.

Literature Review

The literature has offered conflicting evidence on the relative financial success of women- and men-owned small businesses. Several reasons have been cited for the relative financial disadvantages realized by women-owned businesses. The most persuasive reasons suggest that women-owned businesses are relatively small, the business owners lack relevant business experience and they tend to be concentrated in business classifications earning relatively low profits (Aldrich, Howard, & Auster, 1986; Aronson, 1991; Loscocco, Robinson, Hall & Allen, 1991).

Other authors suggest that men and women-owned small businesses have similar financial characteristics. In the rural economy, women-owned businesses appear to have significantly lower gross sales than men owned small business; however, the factors influencing the business' success are the same for women- and men-owned small businesses (Tigges & Green, 1994). When examining women-owned businesses in specific service industries (e.g., food and drink, computer and software sales and health), women-owned businesses are similar to men-owned businesses in earnings, earnings growth rates, and business failure rates (Kalleberg & Leicht, 1991).

This literature on the financial success of women-owned businesses suggests that they are less successful financially than men-owned small businesses, except in specific industries. Apart from the demographic characteristics of the business (size, age and Standard Industrial Classification), women-owned business may not be given the opportunity to succeed because of the lack of financial and human capital resources. Ando (1985) dismissed the notion that men and women face differential access to financial credit; however, she did find that divorced women have more credit difficulties than non-divorced women. More recent research has found that women-owned businesses do not appear to pay higher loan prices or face more stringent collateral requirements (Haynes, 1995).

Research in the early 1980s suggested that women-owned businesses were undercapitalized primarily because banks were reluctant to lend money to them (Hisrich & Brush, 1984). The lack of success in securing adequate financial resources was blamed on the high percentage of women-owned businesses in low growth, highly

competitive industries (Humphreys & McClung, 1981). In addition, women may lack the managerial experience and access to key information networks that would increase the probability of success (Hagan, Rivchun, & Sexton, 1989). More recent research conducted on small business owners in Connecticut suggests that women-owned businesses often have a difficult time obtaining bank loans because they are young and have no track record of profitability or because they are service businesses and have few assets to use as collateral (Coleman & Carsky, 1996).

Even though no correlation has been established between the amount of debt held by a small business and their financial success, men owners appear to utilize significantly more debt than women owners (Schnerr, Sugrue & Ward, 1993). Women owners may simply prefer to hold less debt because they prefer less risk; however research by Master and Meier (1988) shows that risk preferences for men and women are very similar. Women owners may have other sources of debt (from family and friends), which enables them to utilize less debt from institutional lenders. In addition, women owners may employ a different funding strategy than men-owned business, which requires fewer financial resources (Carter, Williams, & Reynolds, 1997).

This literature has provided an examination of the access of women-owned small businesses to financial capital. However, the literature has not addressed the borrowing experience of women borrowers with line-of-credit loans from commercial banks, which is the gap in the literature addressed by this study.

Conceptual Considerations

Access to financial capital, or any other critical resource, is very likely to have profound effects on the profitability of the small business firm. Women borrowers may face other related forms of differential treatment in the financial services market, which can increase the cost of financial capital. If women-owned small businesses are unable to borrow from mainstream lenders, such as commercial banks, or acquire traditional loans, such as line-of-credit loans, then they may face higher transaction and search costs.

Commercial banks are the dominant source of all financial capital for small businesses. They offer a wide array of financial services demanded by most small businesses (such as checking accounts, night deposit facilities and credit card clearing) and they have offices in most communities. The wide array of financial services offered by commercial banks makes them a convenient and efficient place to purchase financial services. Hence, the transaction and search costs of purchasing the full set of financial services from commercial banks are normally lower than for other institutional and non-institutional lenders.

Lenders market several loan instruments to their borrowers based on the demands of the borrowers. Four loan instruments might be deemed traditional loans, including line-of-credit, vehicle, equipment and mortgage loans. Three of these traditional loans (vehicle, equipment and mortgage loans) are asset-backed loans and pose a minimal amount of credit risk to the lender. Line-of-credit loans are not asset-backed loans, hence the lender must solicit other forms of capital to secure these loans. Thus, a line-of-credit loan requires more confidence in the borrower's ability to repay the loan. In addition, the line-of-credit loan gives the borrower a source of credit that is less costly to utilize. While the other types of loans offered by the lender assume that the borrower will borrow a fixed sum of money and repay the loan at some defined time in the future, the line-of-credit loan allows the borrower to use as much of the line-of-credit as they deem necessary. During times of high cash demands the line-of-credit loan balance may approach the maximum allowed, while during times of low cash demands the line-of-credit loan balance may approach zero. If the rate of interest across all types of loans is the same, the total interest costs of line-of-credit loans should be lower than for other types of loans. Hence, borrowers who are unable to qualify for line-of-credit loans face times when they are paying interest on excess cash and subsequently incur higher loan costs.

The arguments addressed above suggest that borrowers unable to negotiate loans with institutional lenders offering a wide array of services (i.e., commercial banks) and borrowers unable to acquire line-of-credit loans realize higher costs of financial services. If this kind of differential treatment occurs across similar borrowers differentiated by gender only, then one could claim discrimination in the market for financial services. Unfortunately, this discrimination claim leaves out the most substantive form of discrimination, which occurs when applicants are completely denied credit and subsequently the business venture is never initiated. Using a Goldberg type procedure to assess whether women are discriminated against when seeking a business loan, Fay and Williams (1993) found that widely held perceptions that women experience gender discrimination seeking start-up capital were generally supported by the data.

The study is primarily concerned with the access of women-owned small businesses to line-of-credit of loans from commercial banks. Two hypotheses are addressed in this study and they are as follows:

(1) Women-owned small businesses have a lower probability of holding a line-of-credit loan with a commercial bank than men-owned small businesses; and,

(2) Women-owned small businesses have a lower proportion of their total debt outstanding with commercial banks in line-of-credit loans than men-owned small businesses.

Empirical Model

This study uses the 1987 and 1993 National Surveys of Small Business Finance to examine the hypotheses. Non-linear regression models are employed to assess the probability of acquiring a line-of-credit loan from a commercial bank and the share of total debt held by commercial banks in line-of-credit loans.

Data

This study uses the 1987 and 1993 National Surveys of Small Business Finances, surveys conducted by the Federal Reserve's Board of Governors in 1987 and 1993. A random sample of non-agricultural, non-financial businesses with less than 500 employees was surveyed each year. The response rate was just over 65 percent in 1987. Price Waterhouse implemented the survey in 1993 and achieved a response rate of about 50 percent. The 1987 data set provides detailed financial information on 3,405 randomly selected small businesses representing just over 3.5 million small businesses. The 1993 data set provides very similar information on 4,637 randomly selected small businesses representing 4.99 million small businesses. This study examines only small businesses with leases or loans outstanding, which includes 2,284 observations representing just over 2.3 million small businesses in 1987 and 2,969 observations representing just over 2.8 million small businesses in 1993.

Model

When assessing the probability of holding any debt, the primary dependent variable is dichotomous indicating whether the business has a line-of-credit with a commercial bank. When assessing the shares of total debt, the dependent variable is continuous variables indicating the share of total debt held by commercial banks in line-of-credit loans.

The primary independent variables are those chosen to measure the quality (i.e., credit riskiness) of the business and the gender of the business owner. Since credit-worthy high-risk borrowers may be denied a loan when credit is rationed, an appropriate measure of borrower quality is crucial. Embodied in this measure of quality must be the same criterion used by lenders to assess borrower quality, since lenders are the ones ultimately determining the quality of the borrower. This study measures business quality by using an Altman Z statistic derived from the financial statement information provided in the NSSBF. Undoubtedly, the Altman Z statistic is not the perfect measure of firm quality, even though similar, albeit proprietary, models are used in the financial services industry to evaluate loan quality.

The gender variable indicates whether or not the majority owner is a woman. In this study, more than 50 percent of the business must be owned by a woman to be classified as a woman-owned small business.

In this model, the demand for financial capital is held constant, therefore the control variables capture other factors that may cause the demand for financial capital to change. When attempting to model the financial capital market for small businesses, non-financial and financial characteristics of the business, individual and market variables are employed as control variables. The independent variables used as control variables include the following: age of the business, number of employees, type of legal organization (i.e., corporation or not), standard industrial classification, rural or urban location, Census Region, and ethnicity of the majority owner(s).

The empirical models, using non-linear regression analyses, will estimate the probability that the borrower uses line-of-credit loans acquired from a commercial bank. In this instance, the dichotomous dependent variable, labeled BKLOC, indicates whether a line-of-credit was obtained from a commercial bank. The following model is employed to test whether women-owned small businesses have a higher probability of acquiring a line-of-credit loan from a commercial bank than men-owned small businesses:

$$BKLOC = \beta_0 + \beta_1 \text{ business quality} + \beta_2 \text{ firm and borrower characteristics} + \beta_3 \text{ financial market characteristics} + \beta_4 \text{ lease/loan type dummy variables} + \beta_5 \text{ total debt amount} + \beta_6 \text{ gender} + \varepsilon$$

Based on the conceptual framework, women borrowers are less likely to hold a line-of-credit from a commercial bank than men borrowers. Therefore, β_6 is expected to be negative.

Tobit regressions will be used to assess the determinants of the shares of total debt held in line-of-credit loans from commercial banks. This model assesses whether women-owned small businesses have a higher percentage of their total debt in line-of-credit loans from commercial banks than men-owned small businesses. A regression equation specified the same as equation above is employed, except the dependent variable is changed to

BKSHR, which is the proportion of total debt held by commercial banks in line-of-credit loans. Once again, the coefficient on the gender variable, β_6 , is expected to be negative.

The gender coefficients on the regression equations for each year will be compared to determine if the borrowing experience of men and women small business owners in acquiring a line-of-credit loan from a commercial bank is more similar in 1987 than in 1993. The same regression models are used for both 1987 and 1993, hence the sign and statistical significance of the coefficients on the gender variable are compared to determine if the borrowing experience of women owners more closely parallels the experience of men owners in 1993 than in 1987 in acquiring line-of-credit loans from commercial banks.

Results

This study focuses on whether women and men-owned small businesses use the same lenders and debt instruments. Using a multivariate analysis, two models are employed to determine if women-owned businesses have a higher probability of using line-of-credit loans from commercial banks than men-owned small businesses.

Results show that when comparing women and men-owned small businesses, women-owned small businesses are somewhat newer and smaller businesses with a disproportionate share of these businesses engaged in retail trade in both 1987 and 1993. In 1987, women-owned businesses had a significantly higher proportion of firms less than five years old (20 versus 14 percent) and lower proportion of firms greater than 20 years old (24 versus 37 percent). In addition, women-owned businesses have a significantly higher proportion of firms with 5 or fewer employees (59 versus 50 percent); a significantly lower proportion of firms with more than 10 employees (20 versus 30 percent); a significantly lower proportion of firms organized as partnerships (4 versus 9 percent); and, a significantly lower proportion of firms engaged in construction (7 versus 13 percent) and wholesale (6 versus 11 percent); and, a significantly higher proportion of firms engaged in retail trade (35 versus 25 percent).

The same picture emerges in 1993. Women-owned small businesses have a higher proportion of firms less than 5 years old (27 versus 21 percent), a higher percentage of smaller firms (67 versus 60 percent), a relatively high percentage of sole proprietorships (39 versus 36 percent) and a disproportionate share of firms engaged in retail (27 versus 21 percent) and services (41 versus 31 percent).

Non-linear regression models are employed to assess the probability of holding a line-of-credit loan from a commercial bank and evaluate the proportion of total debt held in line-of-credit loans from a commercial bank. Two statistically significant results generated from the 1987 NSSBF warrant further discussion. First, women-owned small businesses had a lower probability of obtaining a line-of-credit loan from a commercial bank in 1987 than men-owned small businesses. Second, women-owned small businesses have a smaller share of their total debt in line-of-credit loans held by commercial banks than men-owned small businesses in 1987. By 1993, the structural model appears to have changed and statistically significant differences between women- and men-owned small business borrowers could no longer be shown for either the probability of obtaining a line-of-credit loan from a commercial bank or the proportion of total debt held in line-of-credit loans from commercial banks.

In summary, these results utilizing the 1987 data support the two hypotheses that women-owned small business borrowers have a lower probability and a smaller share of total debt held in line-of-credit loans from commercial banks than men-owned small business borrowers. However, the results utilizing the 1993 data do not support the two hypotheses. Over the period of time from 1987 to 1993, women-owned small businesses appear to have gained similar access to line-of-credit loans from commercial banks as men-owned small businesses.

Conclusions

This study has focused on the lending experience of women-owned small business borrowers. In 1987, women-owned businesses appeared to have less access to line-of-credit loans from commercial banks than men-owned small businesses. By 1993, access to line-of-credit loans from commercial banks appeared to be very similar to women- and men-owned small businesses.

Cross-sectional studies of this type should be viewed with caution. While this study includes variables deemed to be important determinants of the demand for financial capital, a key variable may be missing. If this missing variable is correlated with the gender variable, then the results of this study may change. In addition, this study utilizes the SAS software for estimating the linear and non-linear regression equations. The SAS algorithms do not compensate for design effects in weighted data, hence the standard errors for the regression coefficients may be underestimated.

Previous literature on women-owned businesses has examined the question of price discrimination in financial markets. The traditional approaches to examining price discrimination have defended the banking

community's claim that no systematic price discrimination was occurring in the market for financial capital (Ando, 1986; Peterson, 1981; Haynes, 1995). However, those directly involved in women-owned businesses have aggressively defended their perception that women-owned small businesses face some degree of gender-based discrimination.

The access of women-owned small businesses to mainstream financial resources appears to have changed significantly from 1987 to 1993. While this study suggests that women-owned small businesses had less access to line-of-credit loans from commercial banks in 1987, this difference became less significant by 1993. Several reasons may underlie this change: (1) The women-owned small businesses applying for loans and leases in 1993 may have been better quality firms (lower credit risk); (2) Women owning small businesses may have had more educational and business experience in 1993 than in 1987; (3) Women-owned small business borrowers may have changed their preference for risk and chose to more aggressively solicit financial capital; (4) Women may be more active in businesses requiring more financing or own businesses with more assets to pledge as collateral; (5) With the rapid growth in women-owned small businesses over the past decade, lenders may have accumulated more experience with women borrowers and concluded that these borrowers did not impose any additional credit risk on the institution; and, (6) Financial capital market may have become more competitive, especially for line-of-credit like financing, hence women (and men) small business owners switched from mortgages and other types of financing to line-of-credit loans because they were lower priced.

The borrowing experience for women-owned small businesses has changed. If acquiring a line-of-credit from a commercial bank decreases the operating costs of the business, then women-owned small businesses would be expected to earn higher profits in the short run. Higher short run profits will mean that the business (and society) makes additional investments in human and physical capital in the long run for both the family and the business. Thus, any movement toward equal access to the financial capital market positively affects the family, the business and society.

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Endnote

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