

CHARACTERISTICS AND BORROWING BEHAVIOR OF SMALL, WOMEN-
OWNED FIRMS: EVIDENCE FROM THE 1998 NATIONAL SURVEY OF SMALL
BUSINESS FINANCES

by

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Abstract

Recently released data from the 1998 National Survey of Business Finances reveals that commercial banks continue to be the dominant source of loans for both women- and men-owned small firms. Controlling for other variables, women were no less likely than men to apply for or be approved for a loan within the last three years. These findings suggest that previously noted differences between women and men in terms of access to debt capital may have been largely eliminated. These findings do indicate, however, that black- and Hispanic-owned firms were less likely to be approved for their most recent loan application than non-minority firms.

I. Introduction

Women-owned businesses represent an important and growing part of the United States economy. According to the Economic Census there were 5.4 million women-owned businesses in the U.S. in 1997 representing 26.5 percent of all nonfarm businesses. These firms employed 7.1 million people and generated receipts of \$818.7 billion (*Survey of Women-Owned Business Enterprises*, 2001).

Most women-owned firms fall into the category of "small businesses" or businesses having 500 or fewer employees. The 1997 Economic Census notes that 85 percent are sole proprietorships while only 15.6 percent have paid employees. Seventy-two percent of women-owned firms operate in either the service or retail trade sector.

During the past decade, the small business sector has been particularly dynamic in terms of its contributions to job growth and the development of new products and services. This has been particularly true for women-owned firms. The number of women-owned firms increased by 16 percent from 1992 to 1997 (*Survey of Women-Owned Business Enterprises*, 2001) compared to 6 percent for all firms. For the same time period, receipts for women-owned firms increased by 33 percent compared to 24 percent for all firms.

In spite of these impressive growth statistics, however, prior research suggests that women small business owners face greater hurdles than men small business owners. In particular, it has been noted that women business owners experience greater difficulty in securing capital and dealing with financial institutions. Although commercial banks have traditionally be a major source of financing for most small firms, women are less likely to borrow from a commercial bank than businesses overall (Cole & Wolken, 1995; *Women in Business*, 1998). Alternatively, they tend to be more reliant than men on informal sources of capital including the firm owner's personal financial resources and financial support from family and friends (Coleman & Carsky, 1996). This article will use recently released data from the 1998 National Survey of Small Business Finances to describe the characteristics of small women-owned firms, to compare them to small men-owned firms, and to discuss the extent to which they use debt as well as their sources of debt.

II. Characteristics of Women-Owned Firms Included in the 1998 NSSBF

The National Survey of Small Business Finances (NSSBF) is conducted jointly every five years by the Federal Reserve and the U.S. Small Business Administration. It includes a randomly selected, stratified national sample of firms. The 1998 NSSBF is the most recent survey for which data are publicly available and includes data on 3,561 small firms defined as firms having 500 or fewer employees. Of that total, 796 firms are owned by women and 2,765 by men.

The NSSBF is the largest and most comprehensive data set on small firms in the United States. It includes a wealth of information including demographic information on the surveyed firms, balance sheet and income statement data, and information on the use of financial services and financial service providers.

Prior research using earlier versions of the NSSBF has revealed that women-owned firms tend to be smaller and younger than men-owned firms. In addition, they are more likely to be organized as sole proprietorships and are more heavily concentrated in service and retail lines of business (Cole & Wolken, 1995; Coleman, 1999). These characteristics are also present in the women-owned firms included in the 1998 NSSBF. In fact, the profile of small women-owned firms included in the 1998 Survey does not differ markedly from that of those firms included in the 1993 NSSBF.

Table 1 reveals that women-owned firms were significantly smaller than men-owned firms in terms of sales, total assets, and number of employees. Average sales for women-owned firms were \$1.4 million compared to \$4 million for men, and average assets were \$837,948 compared to \$1.6 million. Both sales and assets were positively skewed. Nevertheless median sales for men at \$323,862 were still three times as large as the median sales for women at \$103,849. Similarly, median assets for men were \$123,570 compared to \$40,000 for women. Many of the firms included in the survey were indeed very small as revealed by the median number of employees for both women and men (3 and 5).

The women-owned firms included in the 1998 NSSBF were younger than men-owned firms in terms of years (11.70 years vs. 15.23 years), and their owners had fewer years of experience (15.14 years vs. 30.38 years). Nevertheless, the median firm ages (9 years and 12 years) and years of owner experience (13 years and 20 years) indicate that, by and large, the firms included in the survey were established firms with experienced owner-managers.

Table 2 reveals that a significantly smaller percentage of women-owned firms were organized as corporations or limited liability entities (42.71% vs. 58.34%). This finding is consistent with findings for the 1993 NSSBF (Coleman, 1999). In addition, a significantly higher percentage of women-owned firms were family businesses (92.09% vs. 83.36%), although a very high percentage of both women- and men-owned firms were family-owned. Educational levels for women and men small business owners were comparable; 55 percent of both had attended college.

In terms of industry mix, a significantly higher percentage of women-owned firms were in service businesses (50.25% vs. 39.13%). A significantly lower percentage were in manufacturing (7.91% vs. 11.79%) and construction (4.9% vs. 11.68%). In terms of business risk, approximately 30 percent of both women- and men-owned firms were rated as having either significant risk or high risk as measured by the Dun & Bradstreet credit score. Similarly, approximately 23 percent of both women and men had some history of personal or business bankruptcy or delinquency.

When asked to name the biggest problem facing their business today, both women and men small business owners tended to identify the same issues. The most frequently cited problem for both was the quality of labor. Competition was the second, and poor sales the third most frequently cited problem.

When asked to name their primary source of financial services, 90.7 percent of women and 91.4 percent of men selected commercial banks. This finding is consistent with prior research indicating that commercial banks continue to be the major providers of financial services to small firms. When asked why they chose their primary financial institution, the most frequently cited reason given by both women and men was proximity or location. The second and third most frequently cited reasons for women were having a long term relationship with the bank and having a personal or other business relationship with that institution. The second and third most frequently cited reasons for men were having a long term relationship with the bank and convenience or ease of use. It is noteworthy that interest rates and prices were not a major determinant in the selection of a primary financial service institution for either women or men. It is also noteworthy that the nature and duration of the relationship with the financial service provider were very important to both women and men.

III. Recent Borrowing Behavior

The NSSBF includes questions on recent borrowing experience with loans applied for within the previous three years. Table 3 reveals that a significantly lower percentage of

women than men had applied for a loan within the previous three years (22.11% vs. 28.43%). Further, a significantly higher percentage of women indicated that they did not apply for a loan because they were afraid that they would be turned down (26.01% vs. 21.19%). Of those who did apply for loans, there were no significant differences between women and men in loan approvals. Almost 75 percent of both were approved for the loan they applied for. Similarly, there were no significant differences between women and men in terms of compensating balance requirements, guarantees, or collateral. Over 50 percent of both women and men borrowers were required to put up either a personal guarantee or collateral for the approved loan suggesting that willingness to provide one or the other may be a necessary element of loan approval.

The NSSBF also reveals information on what type of loans small firms obtained, where they obtained them, and why they used those particular credit providers. Table 4 indicates that, for both women and men, the most recent loan was a line of credit. Thirty-five percent of women and 32 percent of men approved for loans within the prior three years obtained lines of credit. This finding is not surprising given that a line of credit is a relatively flexible instrument that can be used for a variety of purposes. The second and third most frequent types of loan for both were equipment loans and vehicle loans respectively. Leases were the least frequently obtained type of loan for both women and men.

In terms of source, commercial banks were the primary source for the most recent loan. Over fifty percent of both women and men obtained their loans from a commercial bank. Savings banks and S&L's were the second and third most commonly used sources for both. Together, these three sources accounted for over 85 percent of most recent loans.

When asked why they obtained their most recent loan from the institution they did, the most frequent response given by both women and men was that they had a long term relationship with that institution. This finding reinforces the importance of banking relationships to small business borrowers. The second most frequently cited reason cited by both women and men was interest rate, while the third most frequently cited reason was credit availability.

IV. Factors Affecting Loan Approval for Small Firms

It is noteworthy that over one quarter (26.01%) of the women small firm owners included in the 1998 NSSBF had not applied for a loan within the previous three years because they feared denial. The corresponding percentage for men was 21.19 percent indicating that over one fifth of them did not bother to apply either. These findings raise the question of what factors do, indeed, affect loan approval. To explore this question, two logistic regression models were developed, one to identify the types of firms that apply for loans and a second to identify the types of firms that are approved for them. The two models took the following form:

$$\text{MRLapp} = a + b_1\text{female} + b_2\text{black} + b_3\text{hispan} + b_4\text{ownage} + b_5\text{ed} + b_6\text{family} + b_7\text{sales} + b_8\text{firmage} + b_9\text{org} + b_{10}\text{ROE} + b_{11}\text{badcred} + b_{12}\text{highrisk} + b_{13}\text{serv} + b_{14}\text{manuf} + b_{15}\text{transp} + b_{16}\text{retail} + b_{17}\text{insre} + b_{18}\text{construc} + e$$

and

$$\text{MRLget} = a + b_1\text{female} + b_2\text{black} + b_3\text{hispan} + b_4\text{ownage} + b_5\text{ed} + b_6\text{family} + b_7\text{sales} + b_8\text{firmage} + b_9\text{org} + b_{10}\text{ROE} + b_{11}\text{badcred} + b_{12}\text{highrisk} + b_{13}\text{serv} + b_{14}\text{manuf} + b_{15}\text{transp} + b_{16}\text{retail} + b_{17}\text{insre} + b_{18}\text{construc} + e$$

The two dependent variables, MRLapp and MRLget, indicate whether the firm applied for a loan within the previous three years and whether or not it received one. The independent variables represent characteristics of the firm owner and of the firm itself that could affect the firm owner's propensity or ability to obtain a loan. A correlation analysis revealed that the independent variables are not highly correlated with each other or with the dependent variables.

Owner characteristics include gender, minority status, age, educational level, and whether or not the firm is family-owned. Prior research has suggested that women and minorities may be less likely to obtain a bank loan than a white male borrower (Ando, 1988; Bates, 1989; Cole & Wolken, 1995; Pellegrino & Reese, 1982; Scherr et al., 1993). Owner age was selected as a variable because prior research indicates that older individuals are more risk averse than younger ones (Cohn et al., 1975; Morin & Suarez, (1983). This may cause older owners to be less willing to use external debt which increases the riskiness of the firm. Educational level may increase the likelihood of obtaining a loan if lenders interpret it as a measure of human capital (Coleman & Cohn, 2000a). Finally, prior research indicates that family-owned firms tend to use lower levels of debt than non-family owned firms, possibly due to greater risk aversion (Gallo, 1996).

Firm characteristics include measures of firm size, firm age, organizational status, profitability, risk, and industry classification. Prior research reveals that larger firms are more likely to obtain loans than smaller firms (Cole & Wolken, 1995). Similarly, younger firms that are still growing are more likely to require external sources of debt (Coleman & Cohn, 2000a). Firms having limited liability may be more willing to accept the risks associated with debt than firms without it (Ang, 1991). This would suggest that S-corporations, C-corporations, and limited liability firms would be more willing apply for and use loans. If we assume that a lender's primary objective is to get paid back, we would anticipate that banks and other lenders would favor firms that are more profitable and those that have a track record of good credit. Finally, such researchers contend that industry classification has an impact on access to debt capital; firms in non-asset intensive industries may not be in a position to provide collateral for loans (Hisrich, 1989; Riding et al., 1994; Scherr et al. 1993).

V. Results and Discussion

The results of the MRLapp and MRLget logistic regression analyses are included in Tables 6 and 7. Table 6 shows that larger firms, younger firms, less profitable firms, and riskier firms were more likely to apply for a loan. These findings are consistent with prior research (Cole & Wolken, 1995; Coleman & Cohn, 2000a). Younger firms are still experiencing growth and are thus more likely to require external sources of debt capital. Similarly, firms that have a history of bad credit and are rated as having higher risk are more likely to have firm owners who are inclined to use higher levels of debt. Firms in the retail industry were less likely to apply for a loan than firms in mining, the omitted industry variable. Other industry variables were not significant.

The results reveal that younger firm owners were more likely to apply for loans, possibly indicating a lower degree of risk aversion or, alternatively, a greater need for external sources of capital. Finally, black firm owners were significantly more likely to apply for a loan.

Table 7 demonstrates that larger firms, older firms, and firms that do not have a history of bad credit were more likely to be approved for their most recent loan. These findings make sense when we consider that banks, the major source of small business loans, are risk averse lenders. They are in the business of making loans to companies that have a strong likelihood of paying them back. Hence, a preference for larger, more established, and more credit-worthy firms.

Black- and Hispanic-owned firms were significantly less likely to be approved for their most recent loan request than non-minority firms. This is a particularly interesting finding given that the prior model indicated that black borrowers were actually more likely to request a loan.

The variable representing gender, Female, was not significant in either the MRLapp or the MRLget regression suggesting that, controlling for other variables, women were no less likely to apply for or be approved for a loan within the previous three years. These findings are consistent with similar findings using data from the 1993 National Survey of Small Business Finances (Coleman & Cohn, 2000b; Haynes & Haynes, 1999) and indicate that, although women may have been at a disadvantage in terms of access to debt capital at one time, that is no longer the case.

Increased access to debt capital for women business owners may be due to a variety of factors including the increased number of women holding degrees in business or positions of responsibility in the corporate sector, greater outreach to women business owners and training for bank lenders, and increased awareness of the importance of equal access due to affirmative action programs and legislation in general.

The more worrisome finding associated with these results is the lower level of loan approvals for black and Hispanic borrowers. This discrepancy is evident, even holding other firm and owner variables constant. Further investigation into why black and hispanic borrowers are less likely to be approved for loans than non-minority borrowers

provides an opportunity for further research on the borrower practices of small firms and the lending practices of their financial service providers.

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Table 1
 Characteristics of Firms Included in the 1998 NSSBF

Women=796 firms
 Men=2,765 firms

Variable	Women	Men	t>value	prob>t
Sales				
Mean	1,470,126	4,000,331	5.6210	0.0001
Median	103,849	323,862		
Total Assets				
Mean	837,948	1,637,176	3.5760	0.0001
Median	40,000	123,570		
Total Employees				
Mean	14.88	28.59	7.4414	0.0001
Median	3	5		
Firm Age				
Mean	11.70	15.23	7.9251	0.0001
Median	9	12		
Owner Age				
Mean	49.14	51.17	4.4753	0.0000
Median	48	51		
Owner Experience				
Mean	15.14	20.38	11.8948	0.0001
Median	13	20		

Table 2
 Characteristics of Firms included in the 1998 NSSBF

Women=796 firms
 Men=2,765 firms

Variable	Women	Men	Chi-square	Pr>chi-square
Org	42.71	58.34	60.913	0.001
Family	92.09	83.36	37.525	0.001
Ed	55.40	55.62	0.012	0.912
Highrisk	31.28	29.15	1.347	0.246
Badcred	23.24	22.97	0.026	0.871
Serv	50.25	39.13	31.451	0.001
Manuf	7.91	11.79	9.541	0.001
Transp	3.39	4.23	1.123	0.289
Retail	27.64	26.44	0.455	0.500
Ins/RE	5.28	6.08	0.712	0.399
Construc	4.90	11.68	31.132	0.001
Mining	0.25	0.43	0.527	0.468

Table 3
Recent Loan Application Experience

Variable	Women	Men	Chi-square	Pr>chi-square
MRLapp	22.11	28.43	12.506	0.001
MRLget	73.86	74.17	0.007	0.932
MRLcomp	4.17	12.38	2.725	0.099
MRLguar	50.72	56.53	1.560	0.212
MRLcoll	55.80	64.59	3.786	0.052
Noapply	26.01	21.19	8.266	0.004

Table 4
Loan Type for Most Recent Loan

Loan Type	Women	Men
Line of credit	34.8	31.9
Lease	3.6	5.8
Mortgage	15.9	10.8
Vehicle	15.9	17.0
Equipment	19.6	18.8
Other	10.1	15.7

Table 5
Source of Most Recent Loan

Source	Women	Men
Commercial Bank	52.2	50.0
Savings Bank	23.9	19.5
S&L	13.8	16.6
Credit Union	2.9	6.0
Finance Company	3.6	3.7
Insurance Company	0.7	1.8
Brokerage/Mutual Fund	1.4	0.9
Leasing Company	0.0	0.6
Mortgage Company	0.0	0.5
Venture Capital Firm	1.4	0.0
Other Business Firm	0.0	0.3
Government Agency	0.0	0.2

Table 6
Results of Logistic Regression Model
Dependent Variable: MRLapp

Variable	Parameter Estimate	Wald Chi-square	Pr>Chi-square
Intercept**	-2.4927	13.2505	0.0003
Female	-0.1991	2.5091	0.1132
Black*	0.3973	4.7310	0.0296
Hispan	0.3226	3.3749	0.0662
Ownage**	-0.0231	21.5518	0.0001
Ed	-0.0230	0.0557	0.8134
Family	-0.1214	0.8990	0.3431
Logsales**	0.2979	108.8665	0.0001
Firmage**	-0.0191	15.5335	0.0001
Org	-0.1131	0.9138	0.3391
ROE*	-0.0058	0.1855	-0.0379
Badcred**	0.5281	20.7693	0.0001
Highrisk*	0.1435	0.1732	0.0353
Serv	-0.9778	3.3352	0.0678
Manuf	-0.8299	2.3175	0.1279
Transp	-0.6404	1.2438	0.2647
Retail*	-1.1619	4.6700	0.0307
InsRE	-1.0379	3.3162	0.0686
Construc	-0.8833	2.5764	0.1085

*results significant at the .05 level

**results significant at the .01 level

Table 7
Results of Logistic Regression Model
Dependent Variable: MRLget

Variable	Parameter Estimate	Wald Chi-square	Pr>Chi-square
Intercept	-0.9374	0.3171	0.5734
Female	0.2594	0.8462	0.3576
Black**	-1.2804	15.1655	0.0001
Hispan*	-0.7644	5.5319	0.0187
Ownage	-0.00052	0.0020	0.9645
Ed	-0.2395	1.1908	0.2752
Family	-0.0438	0.0217	0.8829
Logsales**	0.2475	15.1090	0.0001
Firmage**	0.0428	7.9264	0.0049
Org	0.2404	0.9060	0.3412
ROE	0.0008	0.0062	0.9371
Badcred**	-1.3524	37.2837	0.0001
Highrisk	-0.3926	3.1663	0.0752
Serv	-0.9511	0.5562	0.4558
Manuf	-1.0548	0.6649	0.4148
Transp	0.6423	0.2028	0.6525
Retail	-0.7932	0.3842	0.5354
InsRE	0.1307	0.0085	0.9266
Construc	-0.9596	0.5463	0.4598

*results significant at the .05 level

**results significant at the .01 level

Appendix 1: Definitions

Org: coded as 1 if the firm was a limited liability corporation or partnership, or if it was an s-corporation or a c-corporation

Family: coded as 1 if more than 50% of the firm was owned by a single family

Ed: coded as 1 if the owner had attended college

Highrisk: coded as 1 if the firm's D&B credit score was significant risk or high risk

Badcred: coded as 1 if:

- a) the firm or its principal owner had declared bankruptcy within the last 7 years, or
- b) the principal owner had been delinquent on personal obligations within the past 3 years, or
- c) the firm had been delinquent on business obligations within the past 3 years, or
- d) judgements had been rendered against the owner within the past 3 years

Serv: coded as 1 if the firm was in a service industry

Manufacturing: coded as 1 if the firm was a manufacturer

Transp: coded as 1 if the firm was in transportation

Retail: coded as 1 if the firm was in retail or wholesale trade

Ins/RE: coded as 1 if the firm was in insurance or real estate

Construc: coded as 1 if the firm was in construction

Mining: coded as 1 if the firm was in mining

MRLapp: coded as 1 if the firm had applied for a loan within the last 3 year

MRLget: coded as 1 if the most recent loan application was approved

MRLcomp: coded as 1 if the most recent loan carried a compensating balance requirement

MRLguar: coded as 1 if a personal guarantee, cosigner, or other guarantor was required for the most recent loan

MRLcoll: coded as 1 if collateral was required for the most recent loan

Noapply: coded as one if the business owner did not apply for a loan within the last 3 years because she/he feared denial