Gender-Based Attitudes and Preference Regarding Start-up and Ongoing SME Financing, Financial Structure and Risk

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ABSTRACT

This paper discusses the results of a statistical analysis of gender differences identified from a recent survey analyzing financing options for small businesses, owners attitudes toward different financing options, and real or perceived difficulties encountered in gaining financing for growth.

The survey instrument was designed to address two primary aspects of financing within small businesses – availability/use of outside debt or equity funds, and owner attitudes toward various funding options. The instrument was administered to businesses in the Arkansas Small Business and Technology Development Center (ASBTDC) data base. Selected results of the statistical analysis will be presented in this paper.

INTRODUCTION

According to the U.S. Small Business Administration (SBA, 2007), small businesses accounted for all of the net new jobs in the U.S. economy in 2004. Small firms had a net gain of 1.86 million jobs, while large firms with 500 or more employees had a net loss of 181,000 jobs. Small firms employed 50.9 percent of the private sector work force and generated 50.7 percent of the non-farm private gross domestic product.

In addition, about 99.9 percent of the employer businesses fall in the small business category (SBA, 2007). The average (mean) small employer had one location and ten employees, while the average large employer had 62 locations and 3,313 employees. The median employer size was about four employees for small firms and 1,000 employees for large firms.

With such significant economic statistics, gaining a better understanding of small businesses and their opportunities for financing for growth becomes critical to researchers. Without the ability to finance business startups or expansion, entrepreneurs cannot maintain their place as the primary engine of the U.S. economy. With this in mind, the researchers created a survey to provide information on (1)
options for financing in small businesses, (2) ownership attitudes towards financing options, and (3) difficulties involved in getting business financing needs met. Both equity and debt financing were reviewed.

This paper is a report on an analysis of a gender subset of the statistical data resulting from the above financing survey. It is a look into what the statistical results from the survey tell us about male versus female-owned client businesses of the Arkansas Small Business and Technology Development Center. In some areas, these analyses continue to provide corroboration of information from both Federal reports and academic analyses. In other areas, however, it appears that the analysis of the survey data contradicts at least some of the national data on small businesses. The authors intend to continue to complete follow-on projects to analyze the survey results in more detail.

LITERATURE REVIEW

While there are many under-researched areas within the domain of entrepreneurship, female entrepreneurship is, arguably, the area with the largest discrepancy among perceived research importance (in terms of number and extent of projects, researchers and publications on the subject) and social and economic importance (in terms of numbers and extent of the phenomenon). In the 1970s, a few studies addressed the issue, but still most gender studies in the field focused on the similarly new theme of women as managers (Moss Kanter, 1977). In the early 1980s, female entrepreneurship began to emerge on the research agenda. By the 1990s, female entrepreneurship had become well established on the research agenda. In this period, research focusing on women entrepreneurs started to appear in the top journals, a sign of maturity of this small and rather diverse field. Even though women’s entrepreneurship currently appears well on the way into the mainstream entrepreneurship research agenda, we should remember that the “frontier” of entrepreneurship research is not fixed; rather there
is a bricolage of topics, theories and methods. Some of these take on a mainstream character, but there are many side streams. Women’s entrepreneurship is still such a side stream, but the work of the Diana Project has contributed a great deal to widening this side stream and may even transform it into a mainstream. (Holmquist & Carter, 2008)

The formation and growth of businesses is directly related to their ability to access an uninterrupted supply of critical resources, particularly finance (Cowling & Harding, 2005). While there is a significant body of literature regarding the financing of women-owned/led businesses, relatively few studies have focused specifically on the demand side of transactions from the female perspective (Amatucci & Sohl, 2004)

Gender differences in entrepreneurial activity are well documented in the literature (Gatewood, Carter, Brush, Greene, & Hart, 2003) (Reynolds, Bygrave, & Autio, 2003). Though in recent years the number of women entrepreneurs has increased dramatically (DeBruin, Brush, & Welter, 2006), empirical evidence indicates that still almost twice as many men as women become entrepreneurs, and that these differences are consistent across countries (Bullvaag, Acs, Allen, Bygrave, & Spinelli Jr., 2005). However, entrepreneurship scholars have limited understanding of the factors and decision processes that influence men and women differently to pursue (or not) entrepreneurship and become self-employed (Verheul I., 2005) (Zhao, Seibert, & Hills, 2005).

Women-owned firms tend to be significantly smaller than firms owned by men. In terms of performance, previous studies have revealed that women-owned firms are more likely to fail and have lower levels of sales, profits, and employment (Rosa, Carter, & Hamilton, 1996) (Robb A., 2002) (Watson J., 2002). Though well educated on average, women owners are less likely to have degrees in business or technical fields (Menzies, Diochon, & Gasse, 2004).
Women-owned firms also remain heavily concentrated in the service and retail sectors (Loscocco, Robinson, Hall, & Allen, 1991) (Brush, 1992) (Du Rietz & Henrekson, 2000) (Fairlie & Robb, 2008). Conversely, a very small percentage of women-owned firms are in rapid growth or high technology lines of business (Menzies, Diochon, & Gasse, 2004) (Morris, Miyasaki, Watters, & Coombes, 2006).

Prior research suggests that women start their businesses with smaller amounts of capital and are less likely to raise capital from external sources (Robb & Wolken, 2002) (Constantinidis, Cornet, & Asandei, 2006) (Orser, Hogarth-Scott, & Riding, 2000). Access to capital is a frequently cited problem for women business owners, and a recent study by Lee and Denslow (Lee & Denslow, 2004) noted that it is more of a problem during the early stages of a firm’s development. In a study of over 1,000 Canadian firms, Orser et al. (Orser, Hogarth-Scott, & Riding, 2000) found that women were more concerned about access to capital than with any other business problem.

Some researchers have suggested that the desire for control and a higher level of risk aversion lead women business owners to keep their firms small and manageable (Cliff, 1998) (Orser & Hogarth-Scott, 2002) (Morris, Miyasaki, Watters, & Coombes, 2006). By the same token, women are more likely to avoid external sources of financing which would force them to give up control and take on higher levels of risk (Verheul & Thurik, 2001) (Constantinidis, Cornet, & Asandei, 2006). Taken together, these various characteristics and motivations for women-owned firms may have an effect on the types of capital they seek and are able to obtain.

It is noteworthy that for 2004, 2005, and 2006, credit cards, either personal or business, were the major source of debt financing for both women and men. Women use smaller amounts of start-up capital and rely on personal rather than external sources for financing. (Ballou, et al., 2008)
In conclusion, Constantinidis et al. (Constantinidis, Cornet, & Asandei, 2006) found a high level of risk aversion in the women entrepreneurs they interviewed and concluded that women may choose lifestyle types of businesses to balance family and business demands and to avoid dependence on external sources of capital. Yet, in the study by Robb and Wolken (Robb & Wolken, 2002) they found that women were more likely to borrow through the use of credit cards (carried an outstanding balance on personal or business credit cards following regular monthly payments) than were male-owned businesses. By doing so, women avoided the necessity of dealing with banks or lending officers. Generally credit obtained from credit cards and trade credit (“imperfect substitutes for loans”, Robb and Wolken p. 15) are likely to be more expensive than other loans and are usually extended for short periods of time. And interestingly, they were more apt to use personal credit cards rather than business credit cards. (Robb and Wolken, 2002)

**METHODOLOGY**

In small business development studies, probably the most binding constraint of the researchers is to acquire relevant information about the target population. Due to its relevance and ease of accessibility, we have structured our sampled data from the Arkansas Small Business and Technology Development Center (ASBTDC) client pool. ASBTDC provides a broad variety of consulting services to different client groups, from entrepreneurs in the planning stage to small companies that have been in business for many years. Clients of the center are generally classified into three broad groups: casual clients; clients having training services from the center; and finally small companies getting significant counseling from ASBTDC staff. For our target population, we first chose going-concern companies receiving any counseling services from the center. This created a population of 2807 clients, based on March 2008 records. The authors used a simple random sampling strategy. The sample was further refined by requiring that companies had started their operations at the beginning of 2006 or earlier and
that they were still in business at the time of the survey. This created an a priori sample population of 1,476 clients.

The authors then developed the Internet survey instrument and placed it on-line with assistance from the Arkansas Small Business and Technology Development Center (ASBTDC). Prior to the release of the survey, three email messages were written and sent to the selected survey population. The researchers provided ASBTDC with text of the email messages and the ASBTDC contacted persons via email regarding the study. The first email was sent a week before the survey was available to potential respondents. The second email was sent when the survey was available and requested that potential respondents complete the survey. The third email was sent the following week as a reminder that the survey was on-line and available for responses.

As required by Institutional Review Board guidelines, potential survey respondents were assured of confidentiality and anonymity. It was also noted that participation was strictly voluntary among those contacted. No incentives of any kind were offered by the researchers or ASBTDC for participation in the survey. The researchers are unaware of the identities of the respondents and are not personally involved with any respondents to this study.

After collecting the data, the respondent pool was revisited. Cases where there were duplicate respondents from the same company were sorted and the primary respondent was retained. Between these duplicates and bounced e-mails, 173 of the potential client population (equal to 11.7% of the total clients sampled) were removed from the a priori sample population. A total of 162 survey responses were collected from the 1,303 remaining valid e-mails, which equates to a 12.4% response rate.

The ASBTDC is composed of the central state office in Little Rock, and six satellite offices throughout the state. The target list of respondents was collected from the client database of all seven offices. The authors understand that constructing a sample from ASBTDC clients probably creates a
“survivor bias” in our population. Surveying ASBTDC clients, who presumably benefit from ASBTDC training and counseling, likely means the survey sample is more successful than the population of “all business startups”. However, this inherent bias does not mean that the data collected is not valuable in helping researchers to understand the financing methods used and the financing options available to SMEs. In fact, it could be argued that because the sample population has in some form been successful, that the information provided could be more valuable to individuals considering a new business startup or growth financing options in their existing business.

Survey respondents were asked to review and complete a 28-item survey instrument. Items one through four asked about founders’ ownership of, and allocation of equity within, the firm. Items five, seven and eight asked questions related to the owners knowledge level concerning business financing as well as their financial contributions to the business startup. Items nine through eighteen address information items on external funding for the firm. Item 21 asked the respondent to provide data on the company’s current capital structure. Items 19, 20 and 22 to 24 deal with owner attitudes toward funding options for the firm, both historical funding and potential future resources. Item 25 requests information on purposes for previously received debt or equity funding, while item 26 asks about plans for raising additional capital. Finally, items 6, and 26 through 28 asked the owners about their use of business planning and whether they had used a business plan for raising funds in the past.

In each of the questions, the authors subjected the response data to chi-square testing, breaking down the responses by gender. Questions where the responses differed significantly by gender are noted in the Discussion section of this paper.

DISCUSSION

Broadly speaking the survey instrument from which this paper is derived was designed to analyze the financing structure in companies within a specific geographic region by tabulating the results
obtained from a recent survey. The ASBTDC maintains coding within its customer database that allows them to complete statistical analyses based on a large number of demographic variables. For the purposes of this paper, the authors chose to analyze the difference in responses based on the gender of the primary business owners in our sample. Highlights from this analysis are shown in the following sections.

**Financial Structure**

The first differences based on gender begin to come to light in questions 5, 9 and 10, which provide introductory statistics representing the financial structure of the population companies. Information on initial investment and current capital structures can be seen in figures 1, 2 and 3 below (based on questions 5, 9 and 10). In each of these three questions there was a significant difference between the male and female population in the survey.

Survey question 5 requested that respondents provide information on actual business startup costs, and the surveyed population (see graph 1 below) shows significantly different results (chi-square p<0.04) between the male and female subgroups, with male owned firms having significantly higher start-up costs, in line with Robb and Coleman (Robb & Coleman, 2009). There is much speculation concerning the reasons for the lower cost of female-owned businesses in the research literature. Robb and Coleman (Robb & Coleman, 2009) note that women-owned businesses tend to be “smaller and less growth oriented than men-owned firms” and that a “higher percentage of women had ‘low’ business credit scores” in their research. Verheul and Thurik (Verheul & Thurik, 2001) and Aurenius and Autio (Aurenius & Autio, 2006) both break out what they refer to as an “indirect” gender effect, noting that women run businesses in different sectors/industries, pursue different goals, are more likely to run their businesses part-time and structure their businesses differently than men. In their work, Robb and Coleman (Robb & Coleman, 2009) also conclude that “… women may place less value on firms size and
profits than do men-owned firms. Alternatively, women may have a higher level of risk aversion for the perceived risks associated with firm size, growth, and a possible loss of control." (See Appendix Graph 1)

Survey question 9 begins to break down Start-up Capital between internal and external funding sources when it asks how much of the total funds required to start the business were obtained from outside sources. While the overall population in the study falls reasonably in line with Cassar’s findings (Cassar, 2004) of 40.2% of startup capital coming from external sources (our results show a mean of 35.8%) this question again shows a significant difference (chi-square, p<0.05) between the male and female populations (see graph 2 below) in the study. In this case, the female population requested and received significantly smaller amounts of outside capital in starting their business. Again, this may be the result of a propensity for risk aversion in the female population surveyed. Cassar (Cassar, 2004) notes that information asymmetries exist between the firm and its potential financiers. “The greater the exposure to the risk associated with the information asymmetries... the higher the return of capital demanded by each financing source (Cassar, 2004)”. Therefore, because of the risk aversion noted in female business owners by Robb and Coleman (Robb & Coleman, 2009) and (Cassar, 2004) among others, it would be expected that we would see lower levels of external startup capital. (See Appendix Graph 2)

Survey question 10 asked how much of the requested external financing was ultimately provided to the business startup. Here again, we see significant differences (p<0.02) between the male and female population. In this situation, the male business owners received less of the requested funding (see graph 3) than did the female business owners. These results fall in line with Irwin and Scott (Irwin & Scott, 2006), which notes that in their survey, males were more likely to have had difficulties raising funds than their female counterparts. There are several possible reasons for this issue.
As noted in a previous conference proceeding (authors), “There is also some preliminary evidence supporting Brewer et.al. (Brewer III, Genay, Jackson Jr., & Worthington, 1996) that the smallest firms in our sample are ‘more likely to obtain debt than non-debt (equity)’ financing”, and as noted earlier in this paper, female-owned businesses tend to be smaller than male-owned businesses for a number of reasons. It is possible that this has a bearing on the higher levels of debt financing received by the female-owned companies in our sample. However, more analysis needs to be completed before this relationship can be confirmed.

Also noted in the above proceeding (authors), “almost one-third of the entire respondent group indicated they went forward with their business venture with less than half of the capital requested. Further study of this subgroup might provide more useful insights into the attitudes toward outside financing in entrepreneurial groups.” (See Appendix Graph 3)

Owner Attitudes and Preference

Questions 20 and 22 were two of the survey questions dealing with owner attitude toward financing of their business. Question 20 provides the next item for discussion in our survey (see graph 4 below). Here respondents were asked when it would be appropriate to borrow money to make a business investment. While the question does not differentiate between the male and female subgroups to a statistically significant degree, one of the answer choices provided interesting contrast between the male and female populations. The answer choice “my main goal is to remain debt free” was chosen by only 17% of the male population, but 32% of the female population identified this is their primary goal. Could this again be the result of a propensity for risk aversion in the female business owners? The remainder of the answer choices within question 20 were much more similar between the two populations. (See Appendix Graph 4)
The last of the questions to show a significant difference between the male and female populations in the survey was question 22 (see graph 5 below). This question stated "Credit cards are an invaluable way to provide my business temporary working capital". The analysis of the question shows that the male population was much more disagreeable with this statement than the female population in the study. While 44 of the 90 male respondents (48.8%) either disagreed or strongly disagreed with this statement and only 29 (32%) agreed or strongly agreed, only 19 of the 65 female respondents (29.2%) disagreed or strongly disagreed with the statement and 24 of 65 (36.9%) strongly agreed or agreed. A question for further research would be “how does the commonly accepted aversion to risk in female business owners reconcile with these results?” (See Appendix Graph 5)

In an interesting side note to this question, less than 33% of the overall population agree or strongly agree that credit cards are a valuable means of providing temporary working capital, while over 40% disagree or strongly disagree. However, when reviewed in light of question 11 of the survey, which asks what types of financing the owners have received over the life of the business, in line with Mach and Wolken (Mach & Wolken, 2006) nearly 44% of the respondents said that they had used credit cards for financing of the business. There is a discontinuity here between the opinions of the surveyed population and their actions.

We then divided these responses down between the male and female populations in our sample and found that in consonance with Robb and Wolken (Robb and Wolken 2002) females were more likely to utilize credit card debt than their male counterparts. Of the male population, 40% had used credit cards for business financing while 50.8% of the females had used such credit. However, when you begin to look at the information contained in questions 20 and 22, we find that the opinion bias against credit cards in question 22 doesn’t match up very well with the actual use of credit cards in organizational financing (48% of males either strongly disagree or disagree with using credit cards in question 22, but
40% have used them in financing their business while 36.9% of the females agreed or strongly agreed with credit card use, but more than 50% of the group used them in financing their own firms. However, in both male and female subgroups, we did see some evidence for the “pecking order” in firm financing noted by (Myers & Majluf, 1984), (Watson & Wilson, 2002) and (Ou & Haynes, 2006). The evidence presented by Ou and Haynes (Ou & Haynes, 2006) specifically shows a preferential order in borrowing from “internal sources to traditional lenders to nontraditional lenders”.

**IMPLICATIONS FOR FUTURE RESEARCH**

There are a number of possibilities for future research based on the results of this survey. Analysis of the correlation between firm size and funding type (for example, credit card use, bank loans, etc.), and for part-time vs. full-time businesses might provide useful information for both owners and potential lenders. Another area of research interest would be attempting to determine reasons for the higher incidence of credit card use in the female population, considering the overall evidence in this and other research showing higher risk aversion in this group.

The authors’ future research will continue to break down the survey data in an attempt to identify correlational relationships and to gain a better understanding of SME financing. The authors’ intent in administering the survey was to evaluate both the ability of the respondent population to obtain necessary organizational financing and their attitudes toward various financing options. Further analysis of the information contained in the study should provide the small business community with valuable information concerning financing for their businesses.

Additional opportunities may be available through providing the survey instrument to researchers in other geographic locations in order that they may duplicate the research and compare results to our findings. Such comparisons could show, despite the survivor bias evident in the ASBTDC sample, that some financing options may be more readily available as well as more acceptable to the
small business community than others. Comparison studies might also illuminate regional differences regarding both availability of financing and owner preferences concerning firm financing options.

SUMMARY AND CONCLUSION

The primary purpose of this study was to gain a better understanding of the knowledge and the practices of small businesses in financing their operations, both startup and going concerns. Some of the preliminary evidence from the survey verifies other existing research, such as average number of SME owners and standard sources of financing - both internal and external. (As an example, it appears that commercial banks continue to be significant sources for small business growth funds.) However, this survey went further in trying to identify the owners’ attitudes towards funding options, their outside investors, and their financing options.

In general, the survey results would seem to imply that female SMEs are still more risk averse than their male counterparts when it comes to financing of their firms, although the one issue that stands out in contrast to this statement would be the greater use of credit cards by the female business owners. Further study concerning the attitudes about, and reasons for, credit card use would add to the body of information on small firm financing.

The resulting information from the survey questions will provide the authors with rich continuing research opportunities concerning SME financing. With the knowledge gained through this research we hope that more specific guidance can be provided to owners and managers of small businesses concerning both methods and options for financing future growth.
Appendix Graph 1: Cost of start-up by % of Male/Female Population

Appendix Graph 2: Percent of funds obtained from outside sources
Appendix Graph 3: Percent of original request ultimately provided by lender/investors
Appendix Graph 4: When is it appropriate to borrow to make a business investment?
Appendix Graph 5: Value of credit cards for working capital

Credit Cards are invaluable to provide working capital
REFERENCES


