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The efficacy of SBA loans on small firm survival rates

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ABSTRACT

In an attempt to support entrepreneurs, the U.S. Small Business Administration (SBA) offers loans to small firms. The SBA claims that it not only offers capital to small firms, but that it offers services and support to help them build capabilities. This study investigates whether the empirical evidence demonstrates an improvement in four-year survival rates for SBA-aided firms over the general population of small firms, and if there is any correlation between loan size and survival rates. Additionally, the study examines if women and minority-owned SBA-aided small firms (who are a traditionally under-represented demographic) improve their four-year survival rate. The results suggest that small firms that receive SBA loans do improve the four-year survival rate over the general population of small firms. However, loan size was not correlated with higher survival rates. The results also suggest that women-owned small firms experience a similar increase in survival rate, while minority-owned small firms do not receive a statistically significant increase.

Introduction

Small firms have an extremely high rate of failure—the average rate of survival for new firms is only two years and only 44% survive at least four years (Headd, 2003; Knaup, 2005; Sonfield, 2007). Moreover, 81% of small firms fail within ten years (Dawitt, 1983). Because of the inherent risk of starting a new venture, many suppliers of capital (e.g., banks, capital markets, venture capitalists) are wary to fund many small firms—particularly historically under-represented demographics like women and minorities.

The U.S. federal government established the SBA to provide capital to small firms that otherwise could not obtain it (Craig et al., 2009). Moreover, the SBA maintains a special focus on providing capital to certain underserved groups like women and minorities (Dilger & Gonzales, 2012). The SBA also offers a host of consulting and other services (e.g. training and education) that it claims helps entrepreneurs survive (SBA, 2019a).

The results of studying SBA loan effectiveness have important implications for both theory and practice. Areas of theory impacted include small business success, capital availability, and minorities-in-business literature. Practical results for the SBA could include knowledge of the effectiveness of their programs and possible suggestions for changes to make their loans and services more effective. However, the effectiveness of SBA loans in improving small business survival rates has not been extensively analyzed in the academic literature. Do SBA loans improve the survival rates for a small business? Do they positively impact minority and women owned firms? If so, what are the underlying causes of the positive impact— does the SBA do a better job of selecting successful entrepreneurs, or does the loan and related consulting services actually improve the likelihood of small firm survival? Through combining the theoretical background on small firm success with empirical evidence around small firm survival, this paper attempts to address these questions.

Specifically, this paper will look at whether SBA-aided small firms experience greater survival rates over the general population. This paper begins by understanding the underlying mission and programs of the SBA itself is required. Then, the paper explores small firm survival rates and the reasons why small firms fail, which will set up the analysis of SBA effectiveness in improving small business survival rates. In addition, the literature around capital availability leads to an analysis of whether the size of SBA loans affects survival rates. Lastly, the paper discusses the special situations facing minority and women entrepreneurs, which will setup the analysis of SBA effectiveness for these traditionally challenged groups.

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The United States SBA

Small firms are an important part of the U.S. economy, as they represent over 99% of all firms and 44% of U.S. economic activity (SBA Office of Advocacy, 2019b). According to SBA Office of Advocacy (2019b), there were approximately 30.7 million small firms in the U.S. in 2016. Despite their strong presence, small firms face great difficulty obtaining financing by securing capital (Ang, 1992; Jarillo, 1989; Petersen & Rajan, 1994; Stinchcombe, 1965; Vesper, 1990; Weinberg, 1994). In order to provide greater assistance to small firm development, the SBA (2019a) was developed as a part of the Small Business Act passed by Congress in 1953. The main purpose of the SBA is to "aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation" (SBA, 2019a, para 2).

Since its creation, the SBA has provided assistance for small firms to obtain loans and access its services. Between the fiscal years of 1991 and 2000 alone, the SBA has assisted approximately 435,000 small firms in obtaining an estimated $94.6 billion in loans (Carruthers & Ariovich, 2010). SBA loans are not directly provided by the SBA, but by banks with a guarantee from the SBA. As a result of the guarantee, the loans become less risky and more attractive for banks—thus increasing access to capital for small firms. The SBA also offers several programs, including their venture capital program and the minority small business program, to help small firm owners to start and operate successful firms. Moreover, they offer numerous training and counseling services (such as mentoring) around the country through their local offices, targeting both the general population of small firm owners as well as specific groups (such as Native Americans and women) through their Office of Entrepreneurial Development (SBA, 2019b).

Academic research has looked at small firms and the differences that may influence their growth and survival, but very little research has focused directly on the SBA itself. Instead, research has concentrated on the factors that contribute to small firm performance (Dodge & Robbins, 1992; Kalleberg & Leicht, 1991; Rasheed, 2005), growth (Burns & Dewhurst, 1996; Morrison et al., 2003; Muse et al., 2005), and failure (Dawit, 1983; Headd, 2003; Watson, 2003) in order to determine the support needed for small firms to survive. Although the literature has addressed small firm survival against many variables, the literature has not extensively explored the SBA and its direct impact on small firm survival.

Small Firms and Survival Rates

Defining small firms. Small firms (also referred to as "small businesses") have numerous and sometimes conflicting definitions in the academic literature. Most researchers utilize certain variables to define small firms, traditionally classified by its size of revenue per year or the number of employees. For the purposes of this paper, the classification provided by the SBA will be followed. The SBA Office of Advocacy (2019a) identifies small firms as those with less than 500 employees.

Small firm success. The definition of "success" has been discussed and observed by the academic literature through different outputs, whether through market share, profit increase, or increase in stock value (d'Amboise & Muldowney, 1988; Robinson & Pearce, 1984). However, there is disagreement whether success for a small firm is the same as for large firms or publicly held firms. There are numerous traditional ways of defining success for large firms, such as high revenue growth, above industry average profits, and other financial levers like ROI (Buzzell & Gale, 1987; Mahajan et al., 2002; Sharma & Mahajan, 1980). Although small firms may define success by means similar to large firms (e.g. ROI, ability to gain a specific percentage of market share), they may also use other factors such as survival, access to capital, positive cash flow.

Some authors believe that survival is not enough to call a small firm "successful". Although the probability of a firm's closing declines with age, merely staying open without being able to generate a positive cash flow or gain access to capital for expansion cannot be called success in terms of growth strategies (Kalleberg & Leicht, 1991). However, continued existence is often seen as the outcome of self-sustaining success (d'Amboise & Muldowney, 1988). Indeed, survival is the prerequisite for any other form of success (e.g., growth, positive cash flow). Therefore, for purposes of this paper, I measure survival rate as the "base case" of small firm success, as no other success is possible without it.

Impediments to small firm survivorship. Despite small firms' considerable presence in the U.S. economy, small firms have a very low rate of survival. Some research has found the average rate of survival for new firms is approximately two years and 44% survive at least four years (Headd, 2003; Knaup, 2005). According to SBA Office of Advocacy, the average one-year survival rate for new businesses from 2008 to 2018 is 78.7% (September 2019). Major factors that influence survival rates include a sufficient capital supply, the fact that a firm is large enough to have employees, and the education level of the owner (Headd, 2003). The literature concerning the survivorship of small firms also focuses on the small firms' need for access to sufficient personnel and financial resources (Headd, 2003; Knaup, 2005).

Small firms lack dedicated personnel resources, as they cannot hire specialists. Their limited resource pool normally forces every employee to be somewhat of a generalist—doing roles across traditional functions such as sales, marketing, finance, and general management. Thus, the lack of job specialization prevents the firm from creating competitively differentiated competency in certain areas (Mintzberg, 1979; 1983). Smaller firms also tend to have

a loose division of labor as there are less formal practices present, such as training or strategic planning (d'Amboise & Muldowney, 1988; Robinson & Pearce, 1984; Welsch & White, 1981). In addition, academic studies have positively connected the educational level of the owner to both firm performance and survivorship (Bates, 1990; Coleman, 2004). Small firms typically rely on a "one-person strategic apex" whereby the owner and founder is also the chief executive officer who maintains all of the control and decision making (Mintzberg, 1983, p. 158). Many small firms face a major impediment when the owners are unaware of their own limitation in regards to their personal knowledge, vision and ability.

Moreover, small firms generally lack the financial resources required for expansion opportunities (Ang, 1992; Jarillo, 1989; Petersen & Rajan, 1994; Stinchcombe, 1965; Vesper, 1990; Weinberg, 1994). Specifically, small firms find it difficult to access more than a small amount of capital, especially long-term capital, due to certain requirements of the capital market. Venture capitalists offer a few select firms' large amounts of capital, but most of these have large aspirations of growth. Many small businesses have desire to grow, and thus need to turn to banks for capital—banks which typically have a relatively low tolerance for lending to risky new businesses (Fabowale et al.,1995). Small firms are thus unable to seize opportunities that could facilitate advancement of the firm (e.g. acquiring needed resources).

SBA loans and survival rates. As the academic literature shows, small firms encounter several challenges to their survival deriving from a lack of financing and human talent (Headd, 2003; Knaup, 2005; Sonfield, 2007). SBA loan effectiveness can be defined in a number of ways for a small firm—as providing capital they otherwise could not get, as helping build management capabilities through consulting services, or as choosing the best and brightest to receive additional government support. However, the most fundamental difference an SBA loan might make is improving the survival rate for a small firm. Therefore, this paper looks at SBA loan effectiveness and if there is a difference between survival rates for those companies that get loans from the SBA in their first four years of incorporation. Specifically, this paper suggests:

Hypothesis 1. Small firms that receive an SBA loan within their first four years of operation have higher survival rates than the general population of small new firms.

Capital Availability and Small Firms

Small firm survival is highly dependent on access to capital, which is necessary to provide sufficient cash to overcome critical issues (such as a crisis or turnaround) or to make investments (such as marketing, operations, or additional personal). In one study, it was found that closure rates for new firms with no starting capital was high, while firms with at least $50,000 in starting capital had lower closure rates (Headd, 2003). Despite the importance of access to capital, small firms are usually unable to access the public capital markets due to their size and limited influence. Moreover, small firms tend to be perceived as "more risky" by banks (Ang, 1992; Coleman & Cohn, 2000; d'Amboise & Muldowney, 1988; Dilger & Gonzales, 2012; Jarillo, 1989; Petersen & Rajan, 1994; Stinchcombe, 1965; Vesper, 1990; Weinberg, 1994). Small firms may also be unable to access capital due to their geographic location. In Immergluck and Smith's (2003) study, the results showed that a disparity existed between small firm lending to firms in higher and lower income areas indicating that small firms in lower income areas face greater difficulty in obtaining loans.

Small firms need to maintain sufficient cash flow in order to cover the firms' expenses as well as their near-term cash obligations (d'Amboise & Muldowney, 1988; Dilger & Gonzales, 2012; Weinberg, 1994; Welsch & White, 1981). Generating sufficient cash flow also generates additional capital that can be reinvested in order to help the firm not only survive, but grow (Weinberg, 1994; Welsch & White, 1981). However, maintaining sufficient cash flow is a major issue for small firms, often limiting their chance for growth (Dodge & Robbins, 1992). Moreover, a study by Dodge and Robbins (1992) found that small firms with cash flow issues early on would not only continue to have those issues throughout its life cycle, but also find the need for additional capital in order to cover the daily expenses of the firm.

For that reason, the size of the SBA loan may be correlated with survival rates. Larger loans may improve survival rates as they improve liquidity for the small firms. If capital availability is one of the main benefits of SBA loans, one would expect that survival rates (within first four years of operation) would be positively correlated with the size of loans that small firms receive. Therefore, the paper suggests:

Hypothesis 2. Small new firms with higher SBA loan size (within their first four years of operation,) have higher survival rates than small new firms with lower SBA loan size.

Women and Minorities Entrepreneurs in Small Firms

According to the SBA Office of Advocacy (2017), in 2012 there were approximately 9.9 million women owned small firms producing an estimated $1.4 trillion in sales, and approximately 1.1 million minority owned small firms producing approximately $1.3 trillion in total annual receipts. Despite these impressive figures, women and minority owners of small firms experience difficulty in obtaining financing as they tend to confront issues concerning education, financial skills, racism, social norms, and family conflicts (Cavalluzzo & Cavalluzzo, 1998; Cohn & Coleman, 2001; Coleman, 2002; 2004; Goffe & Scase, 1983).

Some studies show that although men and women are just as likely to receive loans, women are less likely to ap-

ply for them in the first place (Cavalluzzo & Cavalluzzo, 1998; Coleman, 2004). In another study, the researcher found that women owners of small firms were less likely to acquire external financing as compared to men owners (Coleman, 2002). Women entrepreneurs are also likely to start businesses in less capital-intensive industries, and therefore receive less loans (Fabowale et al., 1995; Watson, 2003). These results may be partially explained by general dissatisfaction women owners of small firm have with accessing capital and contending with banks (Coleman & Carsky, 1996b; Fabowale et al., 1995; Neider, 1987). Some research has also shown that women were treated differently than men when receiving loans, such as being asked to provide collateral or pay a higher interest rate (Coleman, 2000; 2002; Riding & Swift, 1990).

Some studies have implied that cultural biases may still exist when it comes to providing loans. In a study by Susan Coleman (2004), she investigated the relationship between the firm owner's education level and ability to secure loans. Coleman (2004) found that even when the differences of education were controlled, black men were significantly less likely to be approved for a loan. In another study, the results showed that both Hispanic and Asian owners of small firms experienced discrimination in accessing credit when compared to white male owners (Cavalluzzo & Cavalluzzo, 1998).

The SBA recognizes the needs of the underrepresented women and minority small firm owners and specifically seeks to help these groups. The SBA offers specialized assistance to women and minority owners through their services, in addition to securing loans, from their several programs. In particular, the Minority Enterprise Development provides information and guidance on procurement opportunities to minority owned small firms (SBA, 2019c). Moreover, the Office of Women's Business Ownership offers counseling and business training in addition to access of capital for women owned small firms (SBA, 2019d).

Helping traditionally underrepresented groups has always been a mission of the SBA. Special categories of loans are set aside for minority owned businesses to help them gain access to capital that might otherwise not be available to them. In the SBA definition, "minority owned firms" may be owned by racial minorities or by women. For that reason, this paper looks at these unique populations and whether SBA loans significantly help the survival rate of female and minority owned firms. Therefore, this paper suggests:

Hypothesis 3. Women owned small firms that receive an SBA loan within their first four years of operation, have higher survival rates than the general population of small new firms.

Hypothesis 4. Minority owned small firms that receive an SBA loan within their first four years of operation, have higher survival rates than the general population of small new firms.

Method

Sample

In constructing the study sample, the original database provided by the SBA consisted of 233 firms who received loans in the year 1999. However, the original data did not include the year the firms were founded since the SBA does not require, nor inquire about that information. Therefore, the founding years of the firms (e.g. year the firm was founded in) were collected by the author using the records from local government offices and those obtained from the office of the Secretary of the State of Connecticut C.O.N.C.O.R.D.'s website (which maintains legally required documents of the formation and changes to firms in Connecticut.) Of the 233 firms, 67 firms were unusable because no founding year of the firms were recovered. An additional 65 firms were unusable because their founding date was beyond the four years prior to 1999 (e.g. firms founded in 1994 and earlier) and thus had already succeeded in exceeding the four year survival rate.

In order to verify the status of the 101 small firms in the sample as either failed (e.g. no longer in existence) or survived (e.g. still in existence), several methods were employed. It is worthwhile to mention that discontinuance of the firm is a common measure of small firm failure (Bates, 1990; Watson, 2003). Five methods were used to check the firms' existence in 2003: (a) local phone books and other forms of telephone directory assistance (b) personal company websites on the Internet with a clear indication of the webpages' current year such as posted press releases or newspaper articles; (c) local newspapers, both paper and electronic versions, that featured the firm and its date of publication; (d) a public website that shows loans approved by the SBA; and (e) the office of the Secretary of the State of Connecticut C.O.N.C.O.R.D.'s website which provides the status of the firm, changes in the firms' name, merges/buy outs with another firm (which there were none in the sample,) and other relevant information about the firm. The combination of methods resulted in providing data for the firms' existence in 2003.

Measures and Results

Data analysis consisted of the non-parametric method of Yates' chi-square and logistic regression. The results are displayed in the tables of the Appendix. Chi square tests were used since we compared observed proportions against an expected proportion, with an alpha at 0.05 for all analyses (Sheskin, 2000). For the purposes of our paper, the expected value is based on previous academic literature that states 44% of new firms survive four years after their "birth" (Headd, 2003; Knaup, 2005). Moreover, to correct for the limitations associated with using chi square with only two categories (or in other words because there is only one degree of freedom) we apply Yates' correction for continuity to our data (Siegel & Castellan Jr., 1988; Upton, 2000). There is a significant difference from the expectation when

the value of the calculated chi squared (X^2) is greater than the critical value of chi squared (x^2).

To test the first hypothesis concerning SBA loan effectiveness, we tested our ratios of survival rates for firms that received loans from the SBA in their first four years of incorporation (e.g. the observed value) to the survival rate of small new firms in the general population (e.g. the expected value). The calculated chi squared (X^2 equals 36.3) is greater than the critical value of chi squared (x^2 equals 3.84) at the 0.05 level of significance as well as the critical value of chi squared (x^2 equals 10.83) at the 0.001 level of significance, indicating that the result is statistically significant.

To test the second hypothesis, binomial (or binary) logistic regression was used in order to estimate the explanatory power and strength of the independent variable loan amount for the dichotomous dependent variable of survival (Hosmer & Lemeshow, 2000). As shown in Table 1, there is no significance between loan amount and survival as the *p*-value (0.864) is greater than the critical value (0.05).

Table 1
Loan amounts and survival rates – logistic regression

	Chi Square	*df*	Significance
Step	0.029	1	0.864
Block	0.029	1	0.864
Model	0.029	1	0.864

To test the third hypothesis concerning SBA loan effectiveness, we tested our ratios of survival rates for firms owned by women that received loans from the SBA in their first four years of incorporation (e.g. the observed value) to the survival rate of small new firms in the general population (e.g. the expected value). The calculated chi squared (X^2 equals 7.2) is greater than the critical value of chi squared (x^2 equals 3.84) at the 0.05 level of significance, which again shows statistical significance as well as displays a departure from expectation.

To test the fourth hypothesis concerning SBA loan effectiveness, we tested our ratios of survival rates for firms owned by minorities that received loans from the SBA in their first four years of incorporation (e.g. the observed value) to the survival rate of small new firms in the general population (e.g. the expected value). The calculated chi squared (X^2 equals 2.2) does not exceed the critical value of chi squared (x^2 equals 3.84) at the 0.05 level of significance, which shows that it is not statistically significant. Table 2 presents the results for Hypothesis 1, 3, and 4.

Discussion

Based on the analysis of 101 companies in New Haven County, Connecticut, some conclusions can be drawn around effectiveness of SBA loans. Figure 1 presents the small firm survival rates for the sample and general population.

Table 2
Non-parametric method of Yates' chi-square

	Firms Survived	Firms Failed	Calculated chi Square	Critical Value of chi Square
Hypothesis 1 (All)	75	26	36.3**	3.84
Hypothesis 3 (Women)	17	6	7.2*	3.84
Hypothesis 4 (Minorities)	11	6	2.2	3.94

* Significant at the 0.05 level of significance
** Significant at the 0.001 level of significance

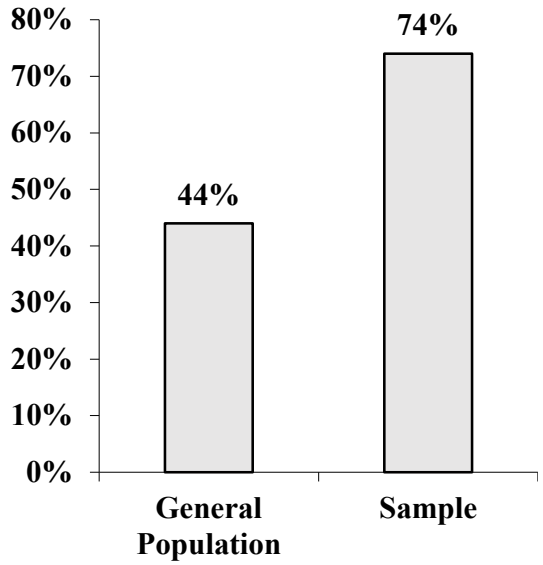

Figure 1. Comparative Survival Rates for Small Firms

For the first hypotheses regarding loan effectiveness, several explanations exist for why firms have such a high survival rate when they receive SBA loans. First, increased capital availability might improve survival rates. Small firms may seek capital for expansion efforts against competitors—for anything from marketing to increased operations to hiring personnel. If they do not have access to capital, their better-funded competitors may be more likely to take advantage of market opportunities. SBA loan availability may help small firms have a greater survival rate by allowing them to pursue their strategies. To further test this explanation, an analysis of the underlying cause of small firm failure would need to be conducted. Specifically, one would want to examine whether lack of capital is a greater reason for failure among the general population than among small firms receiving SBA loans.

Second, improved management capabilities may im-

prove survival rates. The SBA offers a number of consulting services, mentoring, and business training through several programs including their Small Business Training Network (SBA, 2019e). Increased management capabilities could lead to better business plans and execution, and hence a higher survival rate. To further test this explanation, a qualitative study of successful and failed small firms could be conducted in both populations (i.e., companies with and without SBA loans) to determine if the owners feel they tangibly increased their skills through interactions with the SBA.

Third, the SBA might simply be better at picking "winners" in screening their loans. The SBA may target those small firms who are most likely to succeed and be able to pay back the loan—based on their business plan and management capability. In order to believe this is true, one would have to believe that the SBA is better at picking winners than private banks or other sources of capital. Small firms may prefer the SBA over other sources of capital because of preferential capital costs and the perceived usefulness of their services, and thus the SBA may attract the best applications relative to private banks. The SBA loans and consulting services themselves may have no effect on survival rates—the SBA simply picks the cream of the crop.

For the second hypotheses, no significant relationship existed between the size of the SBA loan and the survival rate. While this might at first appear to be counterintuitive given the academic literature around capital availability, several explanations may exist for the observed phenomenon. Academic literature discusses how firms in general increase their probability of survival when they have more working capital (Dodge & Robbins, 1992; Headd, 2003). Firms are able to survive downturns in business or unexpected negative events if their current assets are significantly greater than their current liabilities. Furthermore, small firms are especially vulnerable to failure due to a working capital shortage (Gaskill, Van Auken, & Manning, 1993). Even a single negative event can cause a small firm to fail if it is not properly capitalized. Given this academic literature, one would expect a larger loan to improve survival rate because it would improve working capital for the small firm (all else being equal).

However, the size of the SBA loans does not necessarily correlate to survival, and there may be several reasons for this. First, the SBA loans are likely not maintained for working capital. Small firms may seek loans to utilize for marketing, operations, or other business needs (Dodge & Robbins, 1992). They are likely to be expended rather than used to increase working capital. Thus, capital availability may not actually be improved by the loans. Second, the capital needs of small firms is not homogenous where some firms will have a "burn rate" of $10,000/month in working capital while others would have $100,000/month. One would expect that firms would adjust their request for the size of the loan based on their underlying business needs. Thus, the size of the loans would not correlate with success because the size is not an independent variable, as firms have pre-adjusted their requests to their business needs. Third, our data may be inherently limited due to the size of and specific geographic location of the small firms in the sample. While further empirical testing is needed to determine if any of these explanations are true, they do demonstrate how the results of our analysis are not in conflict with the existing literature on capital availability.

For the third hypotheses, women-owned firms saw a statistically significant improvement of their survival rate over the generate population (74% vs. 44%). Improved management capabilities targeting women owned small firms may improve survival rates. The SBA offers a number of services (including mentoring and training) that focus on the needs of women small firm owners through the Office of Women's Business Ownership (SBA, 2019d). Increased management capabilities could lead to better business plans and execution, and hence a higher survival rate. Further research should be conducted to determine if the SBA actually addresses these issues that are specific to women-owned firms, or if they help women-owned firms in the same ways that they help male-owned firms.

For the fourth hypotheses, minority-owned firms did not see a statistically significant improvement of their survival rate over the general population (65% vs. 44%). While the actual rate appears to be much higher, perhaps the sample size of 17 was too small to identify the result significant. Even though the improvement of 21% appears to show a large improvement, statistically it cannot be concluded. Figure 2 presents the firm survival rates for women and minority-owned firms in the sample.

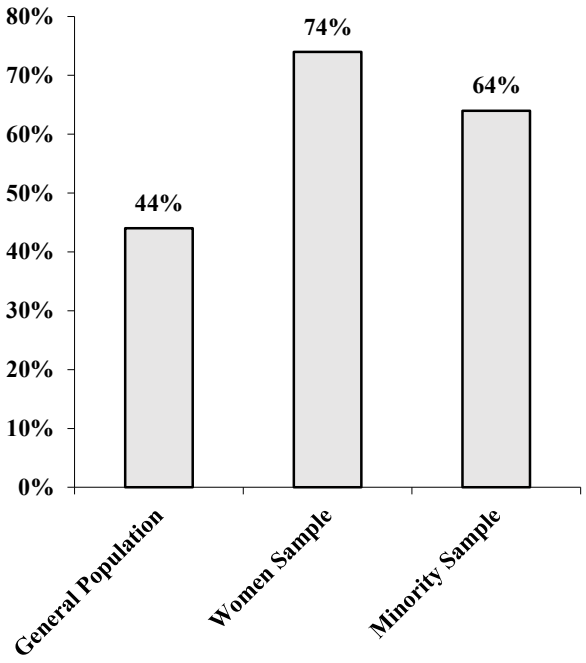

Figure 2. Small Firm Survival Rate by Segment

Limitations

Though the present study provides support for the existence of SBA loan effectiveness and loan effectiveness for firms owned by women, it has some limitations. Specifically in regards to the geographic setting and additional data availability. While the SBA generously provided information on loan recipients, the study uses small firms explicitly located in one county (New Haven County in Connecticut). It is possible that the county may not be representative of the country as a whole, and having more respondents in additional counties would improve the confidence in the findings. Moreover, data in the study was limited in that the SBA did not provide any additional information like whether the firms in this sample received additional support (e.g., consultative services) from the SBA and whether these were effective. It is possible that having this additional information could have influenced the results.

Implications

The concepts and results of the present study have important implications for both research and practice. Specific areas of research impacted are small business success, capital availability, and minorities-in-business literature. Small firm success literature has traditionally focused on the factors that determine if a company succeeds or fails (Dawit, 1983; Headd, 2003; Watson, 2003). The results of this SBA effectiveness study could lead research into the qualitative impact that SBA loans and consulting services have on firm success. Specifically, additional literature can review what loans are used for and how consulting services may improve management capability. Capital availability literature needs to address why a correlation does not exist with size of SBA loans and survival—and potentially address some of the explanations in this paper. For example, capital availability theory may only hold true for firms that require a certain level of working capital to survive. Minorities-in-business literature could also be impacted by further delving into the qualitative reasons that minority-owned businesses did not see a significant increase in survival rate (although further testing is also needed to determine if this was merely a sample size issue). Practical results for the SBA include an acknowledgement of the impact their services have. More important for the SBA would be follow-up research into the specifics of what makes their loan program successful and what changes might be made to improve their services.

Although the literature has extensively discussed the barriers to small firm survivorship, the effectiveness of SBA loans in improving small business survival rates has been overlooked. The aim of this paper attempts to address that deficiency. Specifically, the results of the present study show support concerning SBA loan effectiveness and SBA loan effectiveness for firms owned by women. Although, the results also found that SBA loan size and SBA loan effectiveness for minority owned firms were not supported. While further investigation is needed, the results provide an indication of the effectiveness of SBA loans and the need for additional empirical research around this important topic.

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