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Latino-Owned Businesses: Startup Fund Sources and Implications in Comparison to Other Racial/Ethnic Groups

by

Rubén O. Martinez, Bette Avila, Olga Santiago. and Jennifer Tello Buntin

Research Report No. 48
September 2011

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MICHIGAN STATE UNIVERSITY

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Abstract

Using the Kauffman Firm Survey (KFS) longitudinal dataset (2004-2009), this study examined the type of startup funding sources that Latino business owners utilized in their first year of operation, compared the results with businesses owned by other races/ethnicities, and explored the impact on firm survivability. Based on previous literature that suggests that formal (bank and financial institution) funds are vital to long term business success, we explored this hypothesis using a sample of 4,815 businesses at the baseline year (2004) with n=244 Latino-owned businesses. Overall, our results suggested that Latinos utilized a significantly ($p > .05$) larger percentage of informal funds as compared to Whites and a smaller percentage of formal funds and that Latino-owned businesses are at greater risk of going out of business compared to White-owned businesses regardless of startup fund type.

About the Authors

Dr. Rubén Martinez *is the director of JSRI at Michigan State University. He is a nationally known scholar with expertise in the areas of higher education, race, and ethnic relations and diversity leadership. His areas of specialization include leadership and institutional change, education and ethnic minorities, youth development, and environmental justice.*

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*We are thankful to the Kauffman Foundation for allowing us to utilize the Kauffman Firm Survey data to conduct this study and to their staff for the prompt and helpful assistance provided whenever we requested it.

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Latinos in Michigan -- A focused approach to disseminating information on Latinos in the state of Michigan. These specialized reports include documents, charts, and graphs that utilize primary data from JSRI's researchers and initiatives.

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Working Papers -- For scholars who want to share their preliminary findings and obtain feedback from others in Chicano and Latino studies.

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Latino-Owned Businesses:
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Latino-Owned Businesses: Startup Fund Sources and Implications in Comparison to Other Racial/Ethnic Groups

Introduction

The number of Latino businesses is on the rise, with an increase of 43.7% between 2002 and 2007 (U.S. Census Bureau, 2010). This increase is double the overall national rate of 18%. Latino-owned businesses are an important and growing segment of the U.S. economy. According to recent statistics from the Survey of Business Owners, Latino-owned businesses generated $345.2 billion in sales in 2007, up 55% from 2002. Moreover, the number of Latino-owned businesses with $1 million in receipts grew by approximately 52% between 2002 and 2007. Still, Latinos face critical barriers to obtaining formal funds for their business ventures, including age, lack of assets, and discrimination from lenders and lending agencies (Contreras & Griffith, 2009; Robles & Cordero-Guzmán, 2007). Not unlike other minority groups, Latino business owners are forced to rely on family loans, personal savings, or credit cards to fund their business ventures. Latinos also often lack the necessary educational backgrounds, experience, and training vital to successful business operation (Robles & Cordero-Guzmán, 2007). Consequently, Latino business owners have to rely on "trust networks" developed in primarily co-ethnic communities to compensate for their lack of access to formal credit and business saavy. Currently, the existing literature on Latino businesses fails to look at both the individual (owner) and firm characteristics that impact business success. This analysis helps to fill the void in the literature using a dynamic dataset that provides both owner and firm characteristics.

Background

The following section summarizes previous findings on Latino businesses in the United States and the factors that impact their success. Currently, the available literature is limited and more research needs to be conducted to identify the specific factors affecting Latino business success.

Latinos are motivated by several factors to start their own businesses. For example, previous research suggests that Latinos are driven by a high level of intrinsic motivation to start up new businesses (Cardon, Shinnar, Eisenman, & Rogoff, 2008). Additionally, the perceived potential for higher income and improvement in their economic situation also motivates Latinos to start up their own businesses. Other factors that impact Latinos' decisions to start a business include low educational attainment, blocked mobility, the prevalence of ethnic enclaves, discrimination in previous jobs, childcare constraints, and poor work conditions in employment (Raijman & Tienda, 2000; Shinnar & Young, 2008; Zarrugh, 2007). Once in business, however, Latinos are more likely to leave new businesses behind due to several reasons, including the lack of access to financial capital and the vulnerability of the sectors in which their businesses are located (Fairlie, 2005; Fairlie & Woodruff, 2010; Georgarakos & Tatsiramos, 2007).

Latinos tend to concentrate in the most economically vulnerable sectors, such as the services (Puryear, et al., 2008; Robles & Cordero-Guzmán, 2007), construction, wholesale trade, and retail trade sectors (U.S. Census Bureau, 2010). Other studies find that Latino business clientele are mainly other Latinos, suggesting that many Latino-owned businesses are located within an ethnic enclave and thereby remain outside of the major sectors of the U.S. economy (Delgado, 2006; Granier, 2006; Grey, Rodriguez, & Conrad, 2004).

Another major factor impacting Latino business success is the lack of financial resources. Previous research suggests that Latinos primarily finance their businesses with personal savings and informal loans from friends and family, and "prestamistas" or moneylenders (Granier, 2006; Haynes, Onochie, & Lee, 2008; Raijman & Tienda, 2000). For example, results from a study of four rural Iowa communities suggest that Latino businesses utilized financial capital from business or home ownership in a previous location, family capital, and/or savings from previous jobs to fund their new business ventures (Flora, Thompson, Prado-Meza, & Flora, 2010). Similarly, data from the 2005 NMBOS suggests that in comparison to Korean-Americans, Mexican-American business owners borrow more from finance companies, family, friends, suppliers, and credit cards and have a lower proportion of bank loan debt (Haynes, Onochie & Lee, 2008).

Latinos have lower net worth which also impacts their ability to obtain formal startup funds. Specifically, because of their lower net worth, Latinos have double the rate of bank loan denials, and lack of home ownership is one of the primary reasons for those denials (Cavalluzzo & Wolken, 2005). Other reasons for denials include a lack of a credit report for new immigrants (Granier, 2006). However, even after controlling for credit history, credit rating, characteristics of firms and owners, lenders and lending institutions, and region there is still discrimination against Latino business owners (Blanchard, Zhao, & Yinger, 2008). Often, Latinos receive higher interest rates on loans, which also discourages them from seeking formal funds for their businesses (Blanchard, Zhao, & Yinger, 2008). Finally, culturally-related obstacles such as language barriers, identification requirements, and previous negative experiences of friends or family members may also deter Latinos from seeking formal loans (Steven Shepelwich quoted in Medley, 2010).

In addition to the level of financial assets that Latinos often lack, they also face human capital (education and work experience) deficits compared to Whites. Consequently, Latinos are limited in their ability to access the "high barrier" industries that generate higher profits but require more human and financial capital investments. For example, Bates, Lofstrom, and Servnon (2010) describe high barrier industries as those requiring advanced educational credentials or large amounts of startup capital. Industries such as professional services, finance or insurance are examples of high barrier industries while low barrier industries include personal services, construction or repair. Low barrier industries are easier to access, but limit business owners' ability to expand or profit (Bates, Lofstrom, & Servnon, 2010). Fairlie (2005) corroborates these findings and also found that Latinos' younger age contributes to higher exit rates from business.

Despite the preliminary findings that the preceding analyses provide, there are still several limitations in the current literature on Latino entrepreneurship. For example, some studies have limited their study samples to Latinos living in ethnic enclaves—a unique geographical context that is not usually generalizable to other areas (Logan, Alba, & McNulty, 1994; Raijman & Tienda, 2000). Other studies include a limited number of cases (Smith-Hunter, 2006). Other analyses are not longitudinal in nature and therefore fail to capture information over the life course of businesses (Fairlie & Woodruff, 2010). This study offers new insight into the success of Latino-owned businesses by providing results from a secondary analysis of longitudinal data (five years) from a nationally representative cohort of new business owners.

Given the results of previous analyses, the goals of this study were to describe the characteristics of Latino business owners and their businesses; to examine the types of funds that Latino-owned businesses and businesses owned by other racial/ethnic groups utilized at startup; and to compare how the type of startup funds affected business survivability across racial/ethnic groups, with Whites as the reference group.

Data and Study Sample

To address our research goals, we utilized the Kauffman Firm Survey (KFS) (See Robb et al., 2009 for a detailed description.). The KFS contains a longitudinal dataset representing five years of business operations (2004-2009) for newly established firms in the U.S. The survey monitors 4,928 firms started in 2004, identified through the Dun & Bradstreet database and federal tax information. Owners of the businesses were contacted via telephone and online surveys to provide information on owner and firm characteristics, financial structure, and business performance.

The Kauffman Foundation released three years of follow-up data (2005-2008) in April 2010 in addition to the baseline (2004) data. Additionally, the Kauffman Foundation released the 2009 follow-up data in March 2011, which we incorporated in this analysis. The KFS is the largest available longitudinal dataset on small businesses that includes both owner and firm characteristics. Only those businesses legally identified as sole proprietorships, partnerships, or corporations (including franchises) are incorporated in the data. Other types of businesses such as non-profits, inherited businesses, or firms that are out-of-business are excluded.

The KFS provides detailed information on up to ten owners of each firm, including age, gender, education, and previous work experience; firm characteristics such as the legal status and technology level of a firm; and financial information about firms such as the types of funds utilized at startup (debt and equity) as well as the source of the funds (family, friends, non-bank institutions, banks, other businesses, etc.). The KFS also includes an oversampling of minority business owners including Latinos, African Americans, and Asians. For the purposes of this analysis, we used all waves of the KFS data, which spanned from 2004 to 2009.

Study Sample

The KFS data include a sample of 4,928 firms. Each firm can have up to ten owners; however, we identified one primary owner using a method suggested by Alicia Robb at the Kauffman Foundation to extract the individual level information for owners necessary to accomplish our research goals. For example, if a firm has more than one owner, then the owner with the most equity in the firm is considered majority owner. If all owners have equal equity in the business, then the next level of classification used to identify the primary owner was the number of hours each owner worked. Since a majority of the firms in the data had a single owner only (60%) these methods were used only in 40% of the cases. After selecting the primary owners, our sample consisted of 4,815 firms with 3,722 White-owned firms, 383 African American-owned firms, 244 Latino-owned firms, and 211 Asian-owned firms (an additional 205 firms were identified as owned by "other/mixed race" primary owners but were not incorporated in this analysis).

Dependent Variables

Firm Survivability

To examine firm survivability we created a binary variable with values representing whether a firm survived or went out of business (0=survived, 1=out of business) for each of the five years of the survey (2004-2005, 2005-2006, 2006-2007, 2007-2008, and 2009-2009).

Independent Variables

The literature suggests that Latinos are constrained in their access to formal funding sources because of discrimination in the lending market, relying too heavily on friends or family members for financial support, poor or no credit history, or lack of access to or mistrust of banks (Granier, 2006; Haynes, Onochie, & Lee, 2008; Raijman & Tienda, 2000). Modeling after Lee & Zhang (2010) we formulated three types of startup funds: personal, formal and informal. These variables represent three separate types of startup funds in the data, but are not mutually exclusive for owner usage, indicating that an owner could use both informal and personal funds or formal and informal funds at start-up, for example.

Personal Funds

Personal funds include owner investments and money any owner put forth for an ownership share in the business in the form of debt or equity. We coded the values for this variable as 0=firm did not use personal funds alone or in combination with other types of funds in the first year of operation and 1=firm used personal funds alone or in combination with other types of funds in the first year of operation.

Formal Funds

Funding from other companies, venture capitalists, or government agencies, either in the form of investments or loans to the business, are considered formal funds. We coded this variable as 0=firm did not use formal funds alone or in combination with other types of funds at the first year of operation and 1=firm used formal funds alone or in combination with other types of funds in the first year of operation.

Informal Funds

Informal funds include investments or loans to a business by family, friends, or spouse(s) of the owner(s). We coded this variable as 0=firm did not use informal funds alone or in combination with other types of funds in the first year of operation and 1=firm used informal funds alone or in combination with other types of funds in the first year of operation.

Control Variables

Based on previous research findings, we control for both individual level (owner) and firm characteristics deemed influential to business failure or success.

Individual Level Variables

Race/Ethnicity

We constructed a nominal variable with four categories where 1=Whites, 2=African Americans, 3=Latinos, and 4=Asians. For the purposes of this analysis, we used Whites as the reference group.

Gender

Gender is an important factor impacting business success (Jones & Tullous, 2002; Robb & Coleman, 2009). Previous research suggests that women-owned firms are smaller and less growth-oriented compared to men-owned firms (National Women's Business Council, 2006; Robb, 2009). Latina entrepreneurs experience even lower labor force participation than other women, but 5% nationally are business owners (National Women's Business Council, 2010). They are also the least likely to use bank loans and are much less likely to use capital to start up businesses than Latinos (Smith-Hunter, 2006). For the purposes of this analysis, we use males as the reference group.

Age

Previous research suggests that Latino business owners are younger than their White counterparts (Raijman & Tienda, 2000). Age is a continuous variable in its original form for the purposes of this analysis.

Education

Latino business owners have lower levels of education than their White counterparts (Raijman & Tienda, 2000). Previous research suggests that business owners with higher levels of education are more likely to survive as businesspersons because of the greater base of knowledge and the ability to learn faster or deal with financial institutions such as banks that can provide them with the necessary startup capital. Therefore, Latinos are at a disadvantage without the educational background that would enable them to take advantage of these resources. We coded education as 0=less than a college degree and 1=college degree or above.

Work Experience

Previous research suggests that work experience is important to business success (Fairlie & Robb, 2007). Similar to education, owners with more work experience have better access to sources of financial capital (Lee & Zhang, 2010). The KFS asked respondents the following question: "how many years of work experience have/has you/owner had in this industry—the one in which the business operates?" Respondents answered with the raw number of years and we kept this variable in its original form.

Business Level Variables

Business Technology Level

The KFS classified businesses as high, medium, or non-technology based on Standard Industrial Classification (SIC) codes (See Bates, Lofstrom, & Servnon, 2010 for a description of the methodology used to categorize businesses into the various technology strata). High technology businesses are more likely to survive compared to low-technology businesses in the personal services sector, for example. However, minority business owners are less likely to have the personal financial capital necessary to purchase the required infrastructure and inventory to start up a high- or even medium-technology business (Bates, Lofstrom, & Servnon, 2010).

Home-based Business

Small "microenterprises" are a common business venture for new business owners (Robles, 2007). Additionally, because of poor language proficiency, racism, an inability to obtain funds for new business ventures, and difficulty finding employment in the mainstream labor market, Latinos commonly occupy "niche" markets or engage in informal economic activities such as babysitting, street vending, home repair services, or ethnic food preparation for the local community (Robles, 2007; Hondagneu-Sotelo & Ramirez, 2009). These businesses may be located in an ethnic enclave or literally operate from an individual's home (Grey, 2006; Zhou, 2004). While the KFS does not provide an ethnic enclave variable, we constructed a home-based business variable to reflect the tendency of Latino business owners to occupy smaller, niche markets. The original variable available in the Kauffman Firm Survey asked respondents the following question: "how would you describe the primary location where the business operates?" Respondents chose from the five following categories: 1) a residence such as a home or garage, 2) a rented or leased space, 3) a space the business has purchased, 4) a site where a client is located, and 5) other. We coded this variable as 0=non-home-based business and 1=home-based business.

High Barrier vs. Low Barrier Industries

Evidence from a study by Bates, Lofstrom and Servon (2010) suggests that minority business owners have greater difficulty than Whites entering into high barrier or high capital-intensity industries. According to the authors, "barriers" include the human and financial capital resources that business owners need to enter into a particular industry. High barrier industries commonly include the professional services, manufacturing, finance and insurance, and wholesale trade industries, while common low barrier industries include personal or repair services and construction. We coded this variable as 0=professional services, finance, insurance, wholesale, and manufacturing sectors and 1=personal services, repair services and construction fields.

Analytical Strategy

The goals of this study were to compare Latinos to other racial/ethnic groups in terms of owner and business characteristics, the types of funds utilized at startup, and how the type of startup funds affected business survivability, with Whites as the reference group.

In the first stage of our analysis, we generated descriptive statistics for the individual-level (primary owner characteristics) and firm (business characteristics) variables for the study sample. We used bivariate analyses to test differences among racial/ethnic groups using t-test and chi-square as appropriate, with Whites as the reference group. We ran frequencies for each type of startup fund by racial/ethnic group to examine the type of startup funds that Latino business owners utilize compared to others.

In the second phase of our analysis we used Cox regression models for survival analysis to test for an association between startup fund type and business survivability over the first five years of operation, controlling for the owner and firm characteristics. The Cox proportional hazards model is a statistical technique used to model the expected time to an event (Lane, Looney, & Wansley, 1986). In this case, business closure is the event. The Cox proportional hazards model allows for the inclusion of covariates and measures whether the event of interest varies systematically when incorporating one or more covariates into a model (Bewick, Cheek, & Ball, 2004). In this instance, startup fund type and owner and firm characteristics are our covariates. The significance level was set to the conventional $p<.05$ for all the statistical tests.

Findings

Descriptive Statistics

Table 1 presents selected characteristics of the study sample by racial/ethnic group. Compared to all other racial/ethnic groups at baseline (2004), Latinos (n=244 or approximately 5% of the sample)

Table 1. Primary Owner and Firm Characteristics at Baseline by Race/Ethnicity (2004).[1]

	Population		White		Black		Latino		Asian	
Primary Owner Characteristics by Race/Ethnicity	Percent (%)	Mean (SE)	Percent (%)	Mean (SE)	Percent (%)	Mean (SE)	Percent (%)	Mean (SE)	Percent (%)	Mean (SE)
Gender[2]	25.6		24.6		34.3***		25.0		28.0	
College Degree[3]	87.5		86.8		91.3***		84.0		96.7***	
Business Characteristics by Race/Ethnicity										
Technology Sector										
High Technology	14.4		15.4		7.6***		9.8*		13.7	
Medium Technology	26.8		26.5		30.0***		23.8*		31.3	
Low Technology	58.8		58.2		62.4***		66.4*		55.0	
Barrier Level to Entering Industry										
Low Barrier Sector[4]	34.4		34.2		36.6		36.9		28.9	
Home-based Business (0=no, 1=yes)	50.5		51.1		59.8***		42.2**		40.8**	
Mean Yrs of Wk Exp		12.9		13.4		10.8		11.5		10.2
		(.16)		(.18)		(.48)***		(.66)**		(.64)***
Mean Age		45.0		45.7		42.0		42.6		40.7
		(.16)		(.18)		(.53)***		(.68)***		(.67)***
Fund Types										
Formal funds	68.6***		70.3		53.5***		68.0		68.2	
Informal funds	16.1***		14.7		21.9***		22.5***		21.8**	
Internal funds	80.9		80.9		84.1		79.1		80.6	

[1] *Significant race differences using t-test or Chi-Square test ; ***p<.001; **p,.01; *p<.05.*

[2]male=reference group, [3]<college degree=reference group, [4]high barrier=reference group

represented the lowest percentage of businesses with a college degree or above (84.0%), the second lowest percentage of businesses within the high technology sector (9.8%), the lowest percentage of businesses within the medium technology sector (23.8%), the highest percentage of businesses within the low technology sector (66.4%), and the highest percentage of businesses within the low barrier sector (36.9%).

Latinos also significantly differed from Whites in terms of mean age and mean years of work experience. Specifically, Latinos were significantly younger (42.6 years old vs. 45.7 years old) and had fewer years of work experience (11.5 years vs. 13.4 years) as compared to Whites. Furthermore, Latinos represented a significantly larger percentage of the low-technology sector businesses (66.4% vs. 58.2%), and a significantly smaller percentage of the high- and medium-technology sector businesses (23.8% vs. 26.5% for the medium technology sector and 9.8% vs. 15.4% for the high technology sector). Latinos also represented a smaller percentage of the home-based businesses compared to Whites (42.2% vs. 51.1%).

African Americans were also younger on average (42.0 vs. 45.7), had fewer years of work experience on average (10.8 vs. 13.4), and represented a significantly larger percentage of low technology businesses (62.4% vs. 58.2%) compared to Whites. However, Latinos had a higher percentage of businesses within the low technology sector compared to both Whites and African Americans.

Compared to Whites, Asians were significantly younger, on average, (40.7 vs. 45.7) and had fewer years of work experience (10.2 vs. 13.4). Asians also represented a smaller percentage of home-based businesses compared to Whites (40.8% vs. 51.1%).

Table 2. Hazard Ratios for Firm Survival by Startup Fund Types (2004-2009)

Variables	Model I	Model II	Model III
Fund Types			
Formal	.89 (.04)**	---	---
Informal	---	1.1 (.05)**	---
Personal	---	---	1.0 (.05)
Owner Characteristics			
Gender (male=reference group)	1.2 (.05)***	1.2 (.05)***	1.2 (.05)***
Age	1.0 (.00)	1.0 (.00)	1.0 (.00)
Education (<college=reference group)	.79 (.04)***	.78 (.04)***	.78 (.04)***
Work Experience	.99 (.00)***	.99 (.00)***	.99 (.00)***
Firm Characteristics			
Barrier Level (High barrier-reference group)			
Low Barrier	1.2 (.05)***	1.2 (.05)***	1.2 (.05)***
Home-based	.95 (.04)	.96 (.04)	.96 (.04)
Technology Level (High Technology=reference group)			
Medium	.91 (.06)	.92 (.06)	.91 (.06)
Low	1.1 (.06)	1.1 (.06)	1.1 (.06)
Race (White=reference group)			
African American	1.2 (.08)*	1.2 (.08)*	1.2 (.09)*
Latino	1.4 (.11)***	1.3 (.10)***	1.4 (.10)***
Asian	.94 (.10)	.93 (.10)	.95 (.10)

****p<.001; **p,.01; *p<.05.*

With regard to startup funds, Latinos, African Americans and Asians were significantly (p > .05) more likely to utilize informal funds as compared to Whites. Furthermore, Latinos, African Americans, and Asians were less likely than Whites to utilize formal funds, but the results were statistically significant only for African Americans.

Cox Survival Analysis

Table 2 presents the results of the Cox survival analysis. They suggest that formal funds were associated with a significantly lower likelihood of going out of business, while informal funds were associated with a significantly higher likelihood of going out of business, after controlling for primary owner and firm characteristics. Specifically, businesses that utilized formal funds alone or in combination with other types of funds at startup were approximately 11% less likely to go out of business compared to those businesses that did not use formal funds. In contrast, those businesses that utilized informal funds alone or in combination with other types of funds at startup were approximately 10% less likely to go out of business compared to those businesses that did not use informal funds. Finally, personal funds were not significantly associated with business survivability.

At the individual level (primary owner characteristics), the factors associated with business survivability included racial/ethnic group, gender, years of work experience, and education. At the business level, the type of industry (high versus low-barrier) also influenced the likelihood of staying in business during the first five years of operation. The next section presents the results for these factors found to be significantly associated with business survivability.

Racial/ethnic Group

From 2004 to 2009, businesses owned by Latinos were 1.4 to 1.3 times more likely to go out of business compared to White-owned businesses, controlling for the primary owner and firm characteristics and startup fund type. These results suggest that despite the type of startup funds utilized, Latino-owned businesses were still at a greater disadvantage in their ability to stay open compared to White-owned businesses.

Similarly, African American-owned businesses were more likely to go out of business compared to White-owned businesses, controlling for the primary owner and firm characteristics and startup fund type. Specifically, African American-owned businesses were 1.1 to 1.2 times more likely to go out of business compared to White-owned businesses controlling for primary owner and firm characteristics and startup fund type.

Finally, Asian-owned businesses were slightly less likely than White-owned businesses to go out of business, controlling for primary owner and firm characteristics and the type of startup funds utilized, although the result was statistically insignificant.

Education and Work Experience

Businesses owned by someone with a college degree or more were significantly less likely to go out of business compared to those businesses with an owner with less than a college degree, after controlling for primary owner and firm characteristics and type of startup funds utilized. Additionally, work experience significantly reduced the hazard of business failure, after controlling for primary owner and firm characteristics and the type of startup funds utilized.

Gender

Being a female business owner was significantly and positively associated with business failure, after controlling for other primary owner and firm characteristics and the type of startup funds utilized. Specifically, businesses with a female primary owner were 1.2 times more likely to go out of business compared to businesses with a male primary owner.

High vs. Low Barrier Industries

Businesses within the low barrier sector were 1.2 times more likely to go out of business compared to businesses within the high technology sector, controlling for primary owner and firm characteristics and the type of startup funds utilized.

Discussion

The results of this analysis lend support to the findings of previous studies. Specifically, we found that Latinos are younger and have fewer years of work experience, on average, compared to Whites (Fairlie, 2005). However, contrary to the results of previous studies, we did not find that Latinos had significantly less education (Fairlie & Woodruff, 2010) or operated more home-based businesses (Delgado, 2006; Granier, 2006; Grey, Rodriguez, & Conrad, 2004) compared to Whites. However, these contrary findings could be related to the small number of Latinos in the KFS sample, or because of the methods that were used to capture the information contained in the data. For example, newly formed businesses were identified using the Dun & Bradstreet database and federal tax information, both of which would fail to capture any informal business activities. Latino business owners also tend to participate in smaller "informal economic activities", such as street vending businesses. Consequently, these formal sources of identification would not capture the full range of self-employment opportunities in which Latinos participate. As Raijman (2001) suggests, "caution must be exercised in using official sources for the study of ethnic entrepreneurship…census data do not cover other types of economic activities, such as part-time and irregular work or informal self-employment" (p. 47).

Our findings lend support to the hypothesis presented by Bates, Lofstrom, & Servnon (2010). For example, Latinos in our sample operated a greater percentage of businesses within the low technology or low capital intensity sectors as compared to Whites. As Bates, Lofstrom, & Serynon (2010) suggest, individuals with personal net worth of at least $150,000 or more are able to open businesses within the higher technology, or so-called high capital intensity industries. Because racial/ethnic minorities tend to have lower personal wealth levels and limited borrowing power compared to Whites (Fairlie & Robb, 2008; Cavalluzzo & Walken, 2005), they are less able to penetrate the high barrier, high capital intensity sector.

Our findings contradicted those of previous studies on the types of startup funds that Latino business owners utilize, as we did not find that Latino business owners used significantly fewer formal funds compared to Whites (Haynes, Onochie, & Lee, 2008; Cavalluzzo & Wolken, 2005; Granier, 2006; Blanchard, Zhao, & Yinger, 2008; Bill, 2010). Instead, African Americans were the only race group significantly less likely to use formal funds compared to Whites. Nevertheless, Latinos were significantly more likely to use informal funds compared to Whites, consistent with previous findings in the literature (Granier, 2006; Onochie &

Lee, 2008; Raijman & Tienda, 2000). For example, 22.5% of Latino primary owners utilized informal funds compared to 14.7% of White owners, a significant finding. In comparison, 21.9% of African American owners and 21.8% of Asian owners utilized informal funds. While both of these findings significantly differed from Whites, they were not as pronounced as the results for Latinos compared to Whites.

The results of the Cox analysis suggest that Latino-owned businesses were at greater risk of going out of business compared to White-owned businesses, irrespective of the type of startup funds they utilized. Additionally, education and work experience of owners are important to business success for all racial/ethnic groups (Bates, Lofstrom, & Servnon, 2010; Fairlie, 2005). Women business owners also have more difficulty keeping their businesses in operation compared to male business owners, regardless of the startup funds utilized (Robb & Coleman, 2009). Finally, businesses within the low technology sectors or low barrier industries face a greater likelihood of going out of business compared to businesses within the high technology sectors or the high barrier industries (Bates, Lofstrom, & Servnon, 2010).

Study Limitations

The primary limitation of the KFS data is the relatively small number of Latinos in the sample (n=244). However, the KFS provides a relatively better sample of minority business owners compared to other datasets and also represents an important step in the right direction in terms of the type of data that need to be collected on Latino businesses. Additionally, we were unable to analyze the social capital aspects that also impact business success, such as the utilization of training programs, which was not added as a variable until 2008. Finally, because of the small number of Latinos in the sample, we were unable to include other variables deemed important to business survivability in the literature such as industry, region where the business is located, or whether the business was located in an ethnic enclave. This could be done by merging variables from other datasets.

Implications for Practice

This analysis is a first step in analyzing the impact of startup funds on Latino business survivability. To our knowledge, no other analyses have focused specifically on Latinos using the KFS data. Unfortunately, this study's findings are limited in terms of generalizability due to the small number of Latino cases in the sample. A much stronger analysis would emerge from a dataset with a larger sample of Latinos. We argue that cultural and social capital factors have a greater impact on business survivability for some groups, but that startup capital has an impact on overall business survivability regardless of the race/ethnicity of the owner(s). Although the results of our analysis suggest that Latinos have a greater chance of going out of business compared to Whites regardless of the type of startup funds that they utilize, formal funds were still a significant factor determining business survivability as evidenced in our models. Additionally, informal funds were associated with a significantly higher likelihood of going out of business, also evidenced in our models.

We take into consideration several factors when recommending that businesses need greater access to formal funds. First, we acknowledge that relying too heavily on credit to fund business ventures may put businesses at a disadvantage later on if they are unable to generate the money necessary to pay back loans. This is readily apparent with the Great Recession of 2008 that continues to plague the U.S. economy and future business development. However, we also argue that relying too heavily on friends, family, or other personal contacts is problematic, considering the limited financial resources that these sources are able to provide. Business owners who rely on these limited sources of capital are limited to smaller ventures that may not prove as viable or profitable in the long run. As Bates, Lofstrom, & Servnon (2010) suggest, business owners with large amounts of personal capital to spend on business startup will be able to open more lucrative businesses in the high-technology, high-barrier industries, while others languish in the vulnerable low-technology, low-barrier businesses.

Implications for Future Research

Interventions are needed to improve Latinos' access to formal sources of startup capital, although more research is also needed to address the specific obstacles that they face in obtaining formal funding for their new business ventures. Some research has begun to address this issue (Fairlie 2005; Fairlie & Woodruff, 2010; Raijman & Tienda, 2000) but more data need to be collected from both the business owners' and lenders' perspectives to glean the full scope of the problem. The currently available data are sorely lacking in a sufficient number of cases, as well as variables that measure the specific barriers that Latinos face when starting up new businesses. As this study suggests, the barriers that White, African American, or Asian business owners face are not the same as those that Latino business owners face in business survival, growth and profitmaking. Additionally, because Latinos are a very heterogenous group comprised of a large number of subgroups from different Latin and South American countries, an additional step that must be taken when collecting data on Latinos is the consideration of specific Latino subgroups.

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