Minority Businesses in the U.S.: An Economic Review of Scholarly Research 2000-2013

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STUDY DESCRIPTION

The U.S. small business sector is a key engine that drives U.S. competitiveness by employing more than half of its citizens and spawning business innovations that result in high economic growth. In the upcoming years, firms composing the small business sector will increasingly be owned by people of color as the U.S. population becomes more racially and ethnically diverse, and as minority persons start businesses at a faster rate than do their non-minority peers. Yet, small businesses owned by minorities are underperforming small businesses owned by non-minorities. The key ingredients for the success of any small-business are (1) the leadership of a skilled and capable entrepreneur, (2) access to sufficient financial capital to achieve scale, buffer losses and exploit business opportunities, and (3) awareness of and access to markets in which to successfully sell the firm's products. What do we know about the issues of new and existing minority businesses in achieving and utilizing these ingredients? This study is a literature survey that examines recent scholarly research related to this question. In order to implement appropriate programs and policies that sustain a thriving minority business sector, we must understand the challenges that minority entrepreneurs face. This study analyzes and reports key results from economic-related research conducted related to minority businesses and published in peer reviewed scholarly journals since 2000.

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ABSTRACT

As a useful starting framework to analyzing research on minority entrepreneurship one can decompose the sources of gap in the performance of minority businesses into management, money and markets (Bates, 2011). The key ingredients for any successful small-business are (1) the leadership of skilled and capable entrepreneurs possessing appropriate human capital for operating the business venture ("management"), (2) assembly of sufficient financial capital to achieve efficient scale and to exploit business opportunities ("money"), and (3) identification of and access to markets in which to sell the firm's products ("markets"). For entrepreneurs these venture prerequisites are barriers to be overcome before successful firm creation and operation are achieved. For this study I searched for articles in the economics-related literature on minority businesses published in peer reviewed scholarly journals between January 2000 and May 2013 (including forthcoming articles). These articles form the basis of our knowledge of minority owned businesses as we move further into the 21st Century. I reviewed 210 journal articles, some dealing directly with minority businesses, others more general but had considered minority as a descriptor in models concerning business behavior; others having implications for minority businesses in the three areas of concern. Much of the research has been a validation of research done during the latter 25 years of the 20th Century.

Since 2000, scholars interested in entrepreneurship have gained knowledge about the entrepreneurship process from four new sets of data: the Panel Study of Entrepreneurial Dynamics (PSED), the Global Entrepreneurship Monitor (GEM), the National Minority Business Owner Surveys (NMBOS), and the Kauffman Firm Survey (KFS). Although each set of data has limitations, on a net basis these sets of data have added substantial knowledge to our understanding of the issues of business creation and operation. On the other hand, government sponsored data sets such as Survey of Small Business Finances (SSBF) and the Characteristics of Business Owners (CBO) of the U.S. Census Bureau, have ceased or not been improved. Thus studies in 2000 – 2013, for example, include data for the CBO relating to 1992; the quality of the CBO data subsequently (with different nomenclature) has not been sufficiently detailed to undertake more than broad-brush analyses.

The overall findings in 2000 - 2013 have been impressive, and we should look forward to new emerging findings. I have categorized the findings into management (human capital), money (financing) and markets (location and line of business). The research has either been confirmation of ideas already studied before 2000 or new findings altogether. An overview of the findings that I discuss in the report follows:

Section 3. Management: Human Capital

- ***Nascent entrepreneurs (NEs)—those seeking to start a business—have higher educational attainment than comparable non-NEs. Relative to comparable non-NEs,***

higher educational attainment for NEs is greater among black men and women, and Hispanic men than for non-Hispanic whites.

- ***Education is not a predictor of successful movement from nascent entrepreneur to business creation.***
- ***The relationship between education and business entry is moderated by the interaction of education, financial capital and industry: The higher one's level of educational attainment, the higher the attraction to high-barrier fields like professional services, where one's human capital can be effectively employed, and the stronger the aversion to low-barrier fields offering prospects of low returns.***
- ***For African-Americans, the more segregated the individual's K through 12 education, the less likely the individual enters self-employment.***
- ***For established businesses, owner education is positively related to firm performance.***
- ***Drawing research conclusions on the relationship between owner experience and firm performance has been complicated by researchers using different measures of experience combined with different measures of performance.***
- ***Serial entrepreneurs exist: Those with more startup experience are more likely to undertake a business startup.***
- ***Managerial experience and industry experience are positively related to firm performance.***
- ***Ownership/Entrepreneurial experience and start-up experience are not found to be consistently and strongly related to firm performance.***

Section 4. Money: Financial Capital

- ***The magnitude of personal net worth does not differ between NEs and others.***
- ***The magnitude of the NE's net worth is not statistically significant in predicting transition from NE to business startup.***
- ***The magnitude of financing available affects the line of business that the NE will pursue.***
- ***For operating firms, the higher the amount of start-up capital, the better the firm performance.***
- ***Minority-owned—black-owned and Hispanic-owned businesses in particular—experience higher loan denial rates than do non-Hispanic white owned businesses, after controlling for firm and owner traits.***
- ***For each ethnic group of businesses, most business start-ups use no debt financing.***
- ***Differences exist across ethnic groups in how new businesses are financed.***

Section 5. Markets: Line of Business and Location

- ***The theories on successful location provide conflicting conclusions about the requirements for desirable location for minority businesses.***
- ***Minority businesses are disproportionately located in urban areas and disproportionately serve co-ethnic retail markets.***
- ***Minority businesses that focus on co-ethnic retail markets do not perform as well as those that do not focus on co-ethnic retail markets.***

- ***Minority businesses that cater to government markets achieve increased sales through affirmative action programs.***
- ***There is not sufficient evidence that increased government revenues through affirmative action programs sustain the viability of individual minority businesses. On the question of whether such programs have been positive or negative for individual firms, there is mixed evidence.***

Section 6. Topics for Future Research

- ***How to best develop entrepreneurial skills and knowledge within education programs.***
- ***The degree to which the positive effect of education on entrepreneurial choice holds for all modes of entry into entrepreneurship.***
- ***The relationship between education and financial capital in business entry and performance.***
- ***The importance of owner's balanced skills ("jack of all trades") versus deep skills for entrepreneurial success.***
- ***The importance of teams in minority business entry and performance.***
- ***Changes over time in the unexplained gap in bank lending to minority businesses.***
- ***The role of loan maturity in addressing the supply of capital to small and minority businesses.***
- ***Reasons for co-ethnic clientele focus.***
- ***Degree of ethnic mix of clients among other ethnic minorities.***
- ***The effect of differences in the mix of other ethnicities among clientele on firm performance.***
- ***The benefits and effects of programs that increase diversity in government and private contracting.***
- ***Interacting ethnicity with other owner traits in predicting firm outcomes will result in better understanding of how ethnic differences affect differences in firm outcomes.***

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Problems do not go away. They must be worked through or else they remain, forever a barrier to the growth and development of the spirit.

-- *Scott Peck*

INTRODUCTION

In their March 2012 HBR article *The Looming Challenge to U.S. Competitiveness*, Porter and Rivkin (2012, p. 54) state that "The U.S. is a competitive location to the extent that companies operating in the U.S. are able to compete successfully in the global economy while supporting high and rising living standards for the average American." A major part of a strategy to enrich U.S. global competitiveness and support rising living standards is to enable U.S. residents with talent and innovative business ideas to actualize their potential contributions to the U.S. economy. The small business sector is a key engine that drives U.S. competitiveness by employing more than half of U.S. citizens and spawning business innovations that result in high economic growth.

When today's dominant corporations fall by the wayside—as some of them surely will—today's upstarts will need to take their place. These upstarts will increasingly be owned by people of color as the U.S. population becomes more racially and ethnically diverse and as minorities start businesses at a faster rate than do non-minorities. Yet, today, small businesses owned by minorities are underperforming small businesses owned by their non-minority peers. In order to reduce the minority business achievement gap, we must understand the issues and challenges that minority businesses face. This study seeks to enhance our understanding of these issues and challenges. I will review the research literature on minority businesses and draw conclusions about the issues surrounding minority entrepreneurship.

If minority-owned entrepreneurial firms become more successful today, the U.S. economy will be more successful tomorrow. In addition, minority-owned enterprises have the greatest propensity to employ minority workers: if minorities earn wages, they spend money and energize the multiplier effect. In the U.S. ethnic minorities already outnumber non-minorities in six of America's eight largest cities and will become the national majority before mid-century. A significant key to national economic growth in the U.S. is the full utilization of this growing population segment not only as consumers but as job creators and innovators.

However, despite years of efforts and numerous programs to encourage and support minority entrepreneurship at the federal, state and local government levels, and numerous non-profit agencies, there is a persistent performance disparity between minority and non-minority businesses in the small business sector. We have learned over the years that minority business certification and advocacy alone are not enough, that access to capital is a waste of money if recipients do not have the acumen to use capital wisely, and that the access to contracts facilitated by supplier diversity programs can create a net negative impact if diverse companies cannot perform adequately.

What have we learned about the challenges and barriers to achieving a strong minority business sector? This study examines the extant literature to answer this question—and related follow up questions—based upon my analysis of the research on minority businesses. I will focus on studies published in peer-reviewed academic journals since the year 2000. Empirical and theoretical research subsequent to 2000 is more relevant to the recent environment that minority business owners in the U.S. have faced: the internet bubble, the terrorism attack in September 2001, the housing bubble and liberal debt financings by banks between 2002 and 2007, the 2007-2009 economic downturn and the ensuing economic recovery. However, I will refer to earlier studies as needed in order to provide perspective on the research conducted during the first 13 years of the 21st Century.

This report is organized as follows. Part 2 provides the background on the minority business gap using data from the U.S. Department of Commerce and the Survey of Small Business Finances. Part 3 discusses research on how the sources, amounts and mix of managerial skills differ among ethnic and racial groups; why these differences exist; and how these differences affect business entry and performance. Part 4 reviews the research on the differences between minority and non-minority entrepreneurs in the amount of and access to financial capital at business entry and after business entry. Part 5 reviews the research on the differences between minority and non-minority entrepreneurs in lines of business and physical location, and how these differences affect the performance of minority and non-minority firms. Part 6 discusses future research that would be helpful in understanding minority businesses.

PART 2: BACKGROUND

2.1. Purpose

The provision, from an economics perspective, of a roadmap to the entrepreneurship literature relating to minority businesses is not a simple task. The field of entrepreneurship does not cleanly correspond with an established academic discipline such as economics, let alone any particular sub-discipline within economics, such as labor economics or financial economics. Rather, the subject of entrepreneurship has been the topic of scholarship and research in a variety of academic fields, including psychology, sociology, demography, geography, regional science, and others. The interdisciplinary nature of entrepreneurship scholarship reflects that entrepreneurship itself is a multifaceted, complex social and economic phenomenon.

2.2. Parameters of the study

The value of defining who is a minority entrepreneur may seem quite meaningless to the practitioner or general public. However, to understand the literature and how it relates to various groups of entrepreneurs, it is important to define the terms used. Often the terminology sets the basic parameters of the research being reported. While there is not wholesale agreement among all scholars as to these definitions, I have chosen to use the definitions that appear to be closely aligned with most of the scholarly work reviewed.

Minority business ownership in this study is defined to be ownership by a person who is not "white", where white is defined as a non-Hispanic Caucasian person. U.S. federal categories include African-American ("black") persons, Americans of Hispanic or Latin American ancestry, and Americans of Asian, Pacific Islander, American Indian, or Alaska Native descent.

I do not look at immigrant businesses separately from non-immigrant businesses for a particular minority group; although, I discuss the trajectory of Hispanic and Asian businesses in the context of immigration patterns. Since I include both immigrant and non-immigrant business owners in my definition of minority businesses, my definition of minority entrepreneurs is equivalent to ethnic entrepreneurs as used in many studies. My definition links immigrants, former immigrants, and non-immigrants with a common origin and culture.

I observe however, that studies on minority entrepreneurs conclude that differences exist within minority subgroups: Hispanic entrepreneurs include Mexican, Puerto Rican, Cuban and other Hispanic subgroups, for example. Various studies, which I will later discuss from different contexts, have looked at subgroups of Hispanic businesses. Lofstrom and Wang (2009) and Fairlie and Woodruff (2010) include only Mexican-American entrepreneurs in their analyses. Aguilera (2009) separately examines Mexican-American entrepreneurs in California and Texas, and Cuban-American entrepreneurs in Florida. Haynes et al. (2008) and Raijman and Tienda (2003) compare Mexican-American to Korean-American owned businesses.

Lunn and Steen (2005) examine differences in entrepreneurship across Asian subgroups in the U.S. For black-owned businesses, Oyelere and Belton (2011) analyzed subcategories within African-American entrepreneurs. While non-trivial differences have been found within Asian subgroups (Lunn and Steen, 2005) African-American subgroups and Hispanic subgroups are more similar to each other than they are to non-Hispanic white entrepreneurs. I will generalize the dominant findings for categories of minority entrepreneurs as part of my analysis. Similarly, this review does not sub-categorize the research on minority businesses by gender. There is a growing literature on the gender classification (e.g. Robb and Watson, 2012), but I restrict this study to the ethnic category. My economic exploration of the research on minority businesses is focused on the research on the impact of owner demographics and firm traits on business entry and firm performance. I include research on human capital, owner demographics, firm traits—including location and industry—within the purview of my analysis. I will not focus on studies of the sociological and psychological makeup of entrepreneurs: this set of issues, although important, is not within the core context of economic analysis. Finally, the empirical analyses that I will discuss are restricted to those analyses that include data on firms in the U.S.

2.3. The Minority Business Performance Gap

Table 1 shows that as of 2007 (the latest available data), minorities own about 21% of the total firms in the United States. The fraction ownership ranking is Hispanics, blacks, Asians, and American Natives.

Table 1: Firms by Race and Ethnic Origin, 2007

	Number of Firms	**Percent of Firms**
Total U.S. Firms	27,097,236	100.00%
Non-Minority-Owned Firms	20,107,000	74.20%
All Minority-Owned Firms	5,762,940	21.27%
Black-Owned Firms	1,921,881	7.09%
Hispanic-Owned Firms	2,260,309	8.34%
American Indian/Alaska Native-Owned Firms	236,967	0.87%
Asian Pacific Islander-Owned Firms	1,549,664	5.72%

Source: U.S. Census Bureau, 2007 Survey of Business Owners

Table 2 (next page) displays the size of minority-owned firms by number of employees. The vast majority of all businesses are firms with no paid employees.

For minority owned firms, black-owned firms have the highest percentage of firms with no paid employees (94.5%), while Asian firms have the lowest percentage with no paid employees, 74.3%. Some 78% of nonminority firms have paid employees compared to 87% overall for minority firms.

Table 2 Employment Sizes of Minority-Owned Businesses, 2007

Group of Business Firms	All Firms	Firms with No Paid Employees	No employees	1-9	10-19	20-99	100 or more
All U.S. Firms	27,097,236	21,357,346	619,295	3,882,516	617,809	510,321	105,710
Nonminority	20,107,000	15,763,391	508,566	3,181,534	499,093	390,611	59,939
All Minority	5,762,940	4,992,676	95,755	557,784	72,074	45,779	5,114
Black	1,921,881	1,815,298	14,011	76,034	8,854	6,663	1,004
Hispanic	2,260,309	2,011,141	32,045	176,717	23,779	14,467	1,844
American Indian/Alaska Native	236,967	213,029	3,114	16,693	2,048	1,645	163
Asian Pacific Islander	1,549,664	1,152,134	46,585	288,340	37,393	23,004	2,103
All U.S. Firms	100%	78.8%	2.3%	14.3%	2.3%	1.9%	0.4%
Nonminority	100%	78.4%	2.5%	15.8%	2.5%	1.9%	0.3%
All Minority	100%	86.6%	1.7%	9.7%	1.3%	0.8%	0.10%
Black	100%	94.5%	0.7%	4.0%	0.5%	0.3%	0.1%
Hispanic	100%	89.0%	1.4%	7.8%	1.1%	0.6%	0.1%
American Indian/Alaska Native	100%	89.9%	1.3%	7.0%	0.9%	0.7%	0.1%
Asian Pacific Islander	100%	74.3%	3.0%	18.6%	2.4%	1.5%	0.1%

Source: U.S. Census Bureau, 2007 Survey of Business Owners

Table 3 (next page) shows the revenues of minority and non-minority businesses. Unlike employee data, for minority firms, the rankings by total revenue is Asian, Hispanic, black and American Native.

Table 3 Receipts Sizes of Minority-Owned Businesses, 2007

Group of Business Firms	Total Receipts ($1,000)	Firms with <$5,000	$5,000-9,999	$10,000-24,999	$25,000-99,999	$100,000-499,999	$500,000 or more
All U.S. Firms	10,840,998,687	5,984,154	4,104,934	5,648,520	6,307,643	4,235,403	2,287,874
Nonminority	9,816,196,729	4,672,117	3,036,780	4,192,689	5,108,171	3,574,964	2,010,424
All Minority	1,024,801,958	1,312,037	1,068,154	1,450,831	1,199,472	660,439	277,450
Black	135,739,834	556,241	410,962	510,053	309,083	105,514	30,011
Hispanic	350,661,243	442,979	407,478	587,613	486,395	245,572	90,232
American Indian/Alaska Native	34,353,842	61,121	41,108	53,562	49,353	22,804	8,743
Asian Pacific Islander	506,047,751	251,696	208,606	299,603	354,641	286,549	148,464
All U.S. Firms	100%	42.4%	38.5%	35.2%	25.8%	16.0%	10.8%
Nonminority	90.5%	78.1%	74.0%	74.3%	81.0%	84.4%	87.9%
All Minority	9.5%	21.9%	26.0%	25.7%	19.0%	15.6%	12.10%
Black	1.3%	9.3%	10.0%	9.0%	4.9%	2.5%	1.3%
Hispanic	3.2%	7.4%	9.9%	10.4%	7.7%	5.8%	3.9%
American Indian/Alaska Native	0.3%	1.0%	1.0%	0.9%	0.8%	0.5%	0.4%
Asian Pacific Islander	4.7%	4.2%	5.1%	5.3%	5.6%	6.8%	6.5%

Source: U.S. Census Bureau, 2007 Survey of Business Owners

Among minority firms, black-owned firms have the highest percentage of firms with less than $5,000 sales, American Native firms the lowest. Overall, minority firms earn 9.5% of small business revenues. When viewed by revenues, Black-owned and Hispanic-owned firms have the largest share of the very small firms (<$5,000). Furthermore, Blacks have a disproportionately low share of the very large firms ($500,000 and more) while Hispanics have about the same share of the very large as they have of the very small. Asian-owned businesses have the greatest share of the very large businesses.

Table 4 displays the number of firms as well as the growth rates for 1982, 1987, 1992, 1997 and 2007. As these data show, minority-owned firms outpaced non-minority owned firms substantially in each period. In 1997-2007, minority-owned firms grew at a rate of 107% compared to nonminority-owned firms' rate of 29%.

Table 4 Growth in Numbers of Minority-Owned Firms, 1982-2007

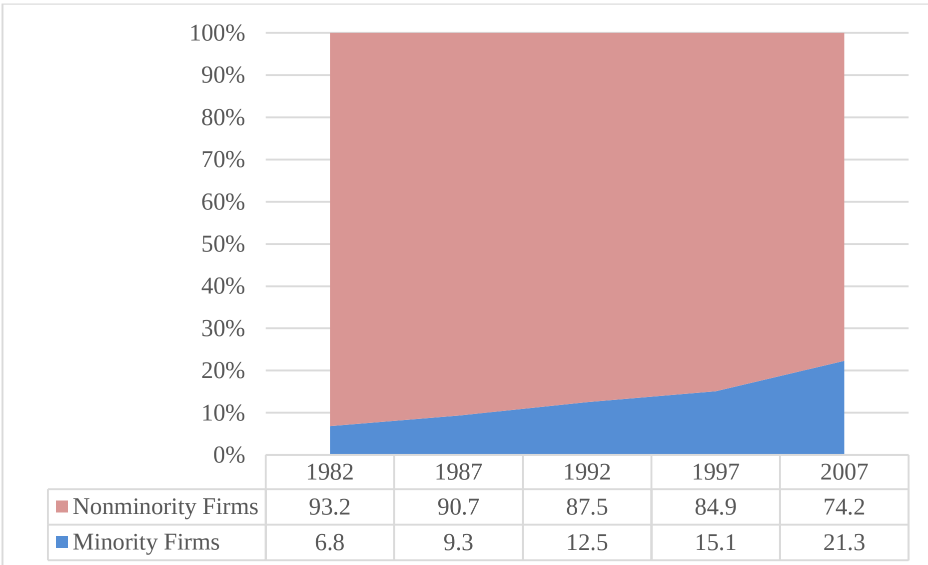
	Number of Firms					Growth Rates (%)			
	1982	1987	1992	1997	2007	1982-1987	1987-1992	1992-1997	1997-2007
All U.S. Firms	12,059,950	13,695,480	17,253,143	18,431,456	27,097,236	14%	26%	7%	47%
Nonminority Firms	11,234,999	12,419,170	15,103,959	15,645,358	20,107,000	11%	22%	4%	29%
All Minority Firms	824,951	1,343,910	2,149,184	2,786,098	5,762,940	63%	60%	30%	107%
Black	308,260	424,166	620,912	780,770	1,921,881	38%	46%	26%	146%
Hispanic	284,011	489,973	862,605	1,121,443	2,260,309	73%	76%	30%	102%
American Indian/Alaska Native	17,100	24,981	102,271	187,921	236,967	46%	310%	84%	26%
Asian/Pacific Islander	240,806	414,340	603,426	785,480	1,549,664	72%	46%	30%	97%

Source: U.S. Department of Commerce, Bureau of the Census, Survey of Minorith-Owned Business Enterprises, Company Statistics Series 1982, 1987, 1992, 1997, 2007

The growth rates coincide with the population growth in the U.S. and this factor probably accounts for at least a portion of the growth found in minority-owned firms, especially Hispanic and Asian. Nevertheless, black-owned business growth was greater than black population growth for 1997-2007. Figure 1 (next page) shows the change in composition of firms comparing minority- and nonminority-owned firms.

Figure 1 Change in Minority Composition of U.S. Firms, 1982-2007

	1982	1987	1992	1997	2007
Minority Firms	6.8	9.3	12.5	15.1	21.3
Nonminority Firms	93.2	90.7	87.5	84.9	74.2



There are several ways to gauge the performance and status of businesses owned by minority owners relative to non-minority owners. Parity of participation among small business (those with less than 500 employees) would have the fraction of the number of small businesses and total business revenues match the perspective fraction of the population. As of 2007, people of Hispanic ethnicity, who represent 16% of the U.S. population, owned 2.3 million businesses. Although the number of Hispanic-owned firms increased by 43.7% between 2002 and 2007, Hispanic-owned firms accounted for 8.3% of all non-farm businesses in the United States; and these firms received only 1.1% of total business receipts.

In 2007, African-Americans, who represent 13% of the U.S. population, owned 1.9 million businesses, an increase of 60.5% from 2002. These firms accounted for 7.1% of all non-farm businesses in the U.S. and generated only 0.5% of all U.S. business receipts. I focus on these two groups because Asian-owned businesses are close to parity for White-owned businesses in the U.S. Despite increases in participation rates for minorities there remains a lack of parity in the private business sector of the U.S.—business ownership and business receipts are dominated by non-minorities.

2.4. Approach: Management, Money and Marketing as Underlying Sources of the Minority Business Gap

The underlying reasons for the gap in the performance of minority businesses are multi-tiered and complex. I will not set forth a theory of minority entrepreneurship as have Ibrahim and Galt (2011), Shelton (2010) and Danes et al. (2008). However, as a useful starting framework to analyzing research on minority entrepreneurship one can decompose the sources of gap in the performance of minority businesses into management, money and markets (Bates, 2011). The key ingredients for any successful small-business are (1) the leadership of skilled and capable entrepreneurs possessing appropriate human capital for operating the business venture ("management"), (2) assembly of sufficient financial capital to achieve efficient scale and to exploit business opportunities ("money"), and (3) identification of and access to markets in which to sell the firm's products ("markets"). For entrepreneurs these venture prerequisites are barriers to be overcome before successful firm creation and operation are achieved.

I will take the framework of research related to how each of the three areas affects 1) nascent entrepreneur distinctive traits: the proportion and characteristics of the adult minority population involved in attempts to start new businesses, 2) nascent minority entrepreneur activities: the kinds of activities minority nascent entrepreneurs undertake during the business startup process, 3) nascent minority entrepreneur performance: the proportion and characteristics of the start-up efforts that become infant firms, and 4) the performance characteristics of minority operating firms. As additional background, it should be observed that studies of nascent entrepreneurship find that ethnic minorities—in particular black Americans—have a higher propensity to attempt to start a business (e.g., Reynolds et al. 2004, Kim et al. 2006; and Köllinger and Minniti 2006). The reason for the difference has not been fully explained.

PART 3: MANAGEMENT: HUMAN CAPITAL

How do the sources, amounts and mix of managerial skills differ among ethnic and racial groups? Why do these differences exist? How important are these differences in affecting business entry and performance?

3. 1. Human Capital and Minority Businesses

Human capital is the stock of competencies, knowledge, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value (Becker, 1993). Entrepreneurship researchers have long been interested in the relationship between human capital – including education, experience, knowledge, and skills – and firm performance. A number of arguments suggest a positive relationship between human capital and entrepreneurial success. Human capital increases the owner's ability to discover and exploit business opportunities. Human capital helps owners to acquire business resources such as financial and physical capital, and it assists in the accumulation of new knowledge and skills. Haber and Reichel (2007) found strong evidence of the contribution of human capital to firm performance. Kim et al. (2006) using data from the Panel Study of Entrepreneurial Dynamics (PSED) concluded that neither financial nor cultural capital resources are necessary conditions for entrepreneurial entry, while human capital—advanced education and managerial experience—are significantly positively associated with entrepreneurial entry. However, they also conclude that uncertainty remains over the magnitude of the relationship between human capital and firm performance as well as the circumstances under which human capital is more or less strongly associated with success. The concern for this study is the human capital that minorities have that is available for business entry and business success.

In their study, Unger et al. (2011) meta-analytically analyze results from three decades of human capital research in entrepreneurship. Based on 70 independent samples (N=24,733), they found a statistically significant relationship between human capital and business performance. Thus the dominant finding is that human capital is positively associated with business success. This finding is not unanimous among researchers, however. For example, Montgomery, Johnson and Faisal (2005) find that human capital differs in relative importance of starting a business and keeping it open. They use data from the Washington Self-Employment and Enterprise Development Demonstration (SEED) to model the decision to start a business jointly with the probability that the business will succeed. They find that when start-up and survival are modeled simultaneously, human capital appears to increase the probability of pursuing self-employment, but not the probability of succeeding at it.

We will now look at human capital in more detail. The barriers of acquiring appropriate human capital to successfully start and manage the business are in three categories: (a) educational attainment, (b) acquisition of generalist and specific managerial skills through experience and training and (c) the availability of business owner mentors, coaches and role models who pass on successful entrepreneurial perspective and savvy (for example, see Baumol, 2005; Stuetzer et al., 2012; Unger et al., 2011). The first two, educational attainment and experience, have been well-researched since 2000.

3.2. Sources and Mix of Human Capital of Minority Entrepreneurs

It is helpful to provide a perspective on the human capital levels of minority and non-Hispanic whites. With regard to education, table 5 (next page0 shows the business degrees acquired by white, black, Hispanic and Asian persons in the U.S. in 1997-8, 2007-8 and 2009-10. It shows that in the twelve-year period observed, the proportion of business degrees earned by minorities has increased. But in each case the percentage in 2009-10 is lower for the black and Hispanic degrees than the percentage of that group in the population.

Table 5 Business Degrees

Bachelor’s Degrees in Business
1997-8, 2007-8 and 2009-10 US

	Total	White	Black	Hispanic
1997-1998	293,549	170,139	20,626	12,478
Percent	100.0%	58.0%	7.0%	4.3%
2007-2008	335,254	229,211	37,981	26,099
Percent	100.0%	68.4%	11.3%	7.8%
2010-2011	365,093	238,786	42,572	32,394
Percent	100.0%	65.4%	11.7%	8.9%

Source: U.S. Department of Education National Center for Education Statistics

The implications are that a) there is a disparity in the ethnicity of educational attainment that prepares persons for successful business ownership; b) the racial and diversity of those preparing for business ownership is increasing; and c) the business community in the U.S. will become more diverse as an outcome of the increased diversity in individuals whose educational attainment prepares them for successful entry into business ownership.

With regard to business experience, an example of the differences among ethnic groups is shown in table 6 (next page). Table 6 summarizes owner and firm traits for firms in the Federal Reserve’s Survey of Small Business Finances (SSBF) for 2003. I use the weights provided with these data which results in the figures in table 6 reflecting nationally representative firm and owner traits for small businesses in the U.S. for that year. The experience captured in the table is the response to the survey question: “How many years of experience has [the principal owner] had managing or owning a business, including this business?”

Table 6 Selected Owner and Firm Traits, SSBF 2003

Principal owner traits		White	Asian	Black	Hispanic
Age (years)	Mean	52.05	48.35	50.07	46.06
	Median	52	47	52	45
Education (level)*	Mean	4.59	5.48	4.36	4.03
	Median	6	6	4	3
Experience (years)	Mean	20.29	16.81	14.21	15.25
	Median	20	15	13	15
Number of owners	Mean	1.73	1.66	1.41	1.55
	Median	1	1	1	1
% One owner firms		0.61	0.60	0.69	0.67
Firm age	Mean	14.78	10.56	10.96	11.07
	Median	12	7	8	7
Firm employees	Mean	9.44	8.69	5.57	7.53
	Median	3	3	3	3
Total firm sales ($)	Mean	10,307,858	1,625,992	295,493	698,671
	Median	200,000	280,999	40,000	130,000

* Education levels
1: Less than high school degree (grade 11 or less)
2: High school graduate or equivalent (GED)
3: Some college but no degree granted
4: Associate degree occupational/academic program
5: Trade school/vocational program
6: College degree (BA, BS, AB, etc.)
7: Post graduate degree (MBA, MS, MA, Ph.D., JD, MD, DDS, etc.)

Source: Federal Reserve, Survey of Small Business Finances, 2003, and author's calculations

While I will discuss the various definitions of experience below, the differences in response between the non-Hispanic white businesses and the others highlight differences in this aspect of human capital. The 20-year plus average of the non-Hispanic white businesses is higher than that of the other ethnic groups. In addition, the 14 year average for the black owners is the lowest of all groups. Both the Hispanic and the black businesses have lower levels of two key components of human capital.

3.3. Research Findings: Education and Minority Entrepreneurship

Perhaps the most consistently agreed upon component of human capital is education. How do minorities differ in education from non-minorities, how do nascent minority entrepreneurs differ in education from nascent non-minority entrepreneurs, and how does the education of minority entrepreneurs differ from that of non-minority business owners?

At any point in time, the number of MBEs that we observe in operation is a function of number entering business and the survival of those who have entered business. Thus I will examine first the studies that consider education and business entry, and then the effect of education on the performance of existing firms. The title of each subsection is the finding that will be discussed.

3.3.1. Finding: Nascent entrepreneurs (NEs)—those seeking to start a business—have higher educational attainment than comparable non-NEs. Relative to comparable non-NEs, higher educational attainment for NEs is greater among black men and women, and Hispanic men than for non-Hispanic whites.

There are two different channels through which the level of education might influence the propensity to become self-employed (Van der Sluis, Mirjam van Praag and Wim Vijverberg, 2008). First, education enhances managerial ability, which in turn increases the probability of entrepreneurship. The second channel generates an opposite, negative effect on entrepreneurship entry: higher levels of education may generate better outside options (i.e., more lucrative age employment under better working conditions) and thus decrease the likelihood of entrepreneurship as the preferred choice.

Numerous studies have been conducted that consider the effect of education on business entry of individuals. Van der Sluis et al. (2008) conducted a meta-analysis of 94 studies that analyzed the relationship between education and business entry and subsequent performance. These studies occurred from 1997 through December 2002. They included U.S. studies and studies from outside of the U.S. in their analysis. Van der Sluis et al. (2008) used meta-analytical models to determine the dominant results of the studies. They found that the effect of college graduation on entry into self-employment is higher in the USA than elsewhere, implying either that the U.S. has an educational environment that is more conducive for entrepreneurship development, or better business conditions that attract more highly educated individuals. Using a minority non-minority indicator variable (the studies used various specifications), they summarize the studies as not finding consistent racial differences in the relation between education and business entry. Thus their meta-analysis of previous studies concludes that the effect of education on business selection does not differ between minorities and non-minorities.

PSED is a research program focused on studying how people begin the process of starting new businesses. The PSED data derives from surveys of a representative sample of entrepreneurs active in business creation in the U.S. *PSED I* began with screening in 1998–2000 to select a cohort of 830 with three follow-up interviews. The second part of the study, *PSED II*, started in 2005–2006. A total of 31,845 individuals were screened and 1,214 nascent entrepreneurs were identified out of a total population of 12 million 18–74 year-olds based on the following four criteria: (a) reported being involved in business creation; (b) involved in start-up activity over the past year; (c) full or part owner of the business; and (d) person is not yet considered the owner of an "operating" business. Additional waves of data collection were conducted to follow up with the nascent entrepreneurs and their start-up activities. Blacks and Hispanics are well represented in the sample (Reynolds and Curtin, 2007). The PSED come with weights to make them representative of the U.S.

population. The PSED classifies an individual as a nascent entrepreneur if they answer ‘‘yes’’ to the question ‘‘Are you, alone or with others, now trying to start a new business?’’, and meet several additional criteria designed to identify ‘‘genuine’’ NEs. PSED includes the ethnicity information on each respondent.

Davidsson and Gordon (2012) perform a methods-orientated review of all 83 peer reviewed journal articles that have used PSED and similar types of data sets. They included articles published in 2011. While Van der Sluis et al. (2008) did not categorize the entry studies; Davidsson and Gordon (2012) categorize the entry studies into three groups: 1) characteristics of nascent entrepreneurs (“Person”), 2) antecedents and characteristics of the new venture creation process (“Process”) and 3) explaining new venture creation process outcomes (“Outcomes”). Davidsson and Gordon (2012) conclude that the Person studies consistently show NEs have higher average education than otherwise comparable non-NEs. This relationship is typified by the PSED results of Reynolds et al. (2004), which showed that among NEs, the most dramatic difference in patterns for different ethnic groups is associated with educational attainment.

Among both white men and women, there is a slight increase of participation among those with more education. Among black men and women and Hispanic men there is a substantial difference, with those reporting any graduate training two to three times more likely to be involved in a firm start-up. Black and Hispanic men with graduate experience are at least twice as likely to be involved in a start-up compared to white men with graduate experience (Reynolds et al., 2004). There are few systematic differences among Hispanic women in terms of education and nascent entrepreneurship. Although those with the least education are more likely to report participation in a start-up, the difference is not statistically significant.

Singh and Crump (2007) conducted a multivariate analysis and concluded that black NEs have higher educational levels than their black non-NE control group, while the white NEs did not differ in educational levels compare to their non-NE control group. They utilize the Global Entrepreneurship Monitor (GEM) data, which is similar to the PSED data, but does not follow the respondents over time.

In another study not included in Davidsson and Gordon (2012), Thomas (2009) uses data from the High School and Beyond Fourth Follow-Up survey, and controlling for detailed educational histories, she found that most variables associated with academic success actually reduce the likelihood one will aspire to own their own business at an early age. She considers the survey of respondents who were between 20 and 24 years in age, and the question asked about their aspirations: did they plan to be self-employed by the age of 30? She finds that positive developers of self-employment aspirations include financial resources and having a parent who is already self-employed. Asians and males are also more likely to anticipate owning their own business.

Block et al. (2013) analyzed the effect of education on business entry using a dataset of more than 10,000 persons from 27 European countries and the U.S. They find that the effect of education on the decision to become self-employed is strongly positive. Similar to other studies, Köllinger and Minniti (2006) analyze the GEM data and find that blacks are 6.2% more likely to be in the nascent entrepreneur status than otherwise comparable white Americans. However, they do not interact the black and education variables to determine if the effect of education is greater or smaller for blacks than for non-Hispanic whites.

Fairlie and Woodruff (2010) uses the Current Population Survey (CPS) data to estimate that the lower levels of education among Mexican-Americans explain nearly 40 percent of the gap between non-Hispanic whites and Mexican-Americans in business formation rates. Using data from the 1996 Survey of Program Participation (which come from the same source as CPS) Lofstrom and Wang (2006) find that education differences explain an even greater percent of the gap between non-Hispanic whites and Mexican-Americans in business entry rates. Neither of these two studies could specify whether the cause related to nascent entrepreneurship person, process, or outcomes.

3.3.2. Finding: Education is not a predictor of successful movement from nascent entrepreneur to business creation.

After going through the nascent entrepreneur processes, what are the outcomes of those who were nascent entrepreneurs? In analyzing studies on the outcomes of nascent entrepreneurship activities, Davidsson and Gordon (2012) find that the performance measures used ranged from reporting that the venture is still underway to achieving sales or achieving positive cash flow or profitability. The differences in performance measures weaken the ability of analysts to generalize about the effect of management attributes on firm success. Of the 54 studies that considered the relation between education and performance outcome of the nascent entrepreneur, 7 found a positive relationship, 46 no relationship and 1 a negative relationship. Consistent with these results, Köllinger and Minniti (2006) do not find a statistically significant relationship between education and transition from NE to business startup. Köllinger and Minniti (2006) focus on black and non-Hispanic whites in their study.

Davidsson and Gordon (2012) noted, however, that a closer examination of the studies suggests that those studies that focused on level issues and looked beyond general, direct and linear effects were more likely to yield credible evidence of effects of education on nascent entrepreneur startup performance. For example, the positive results for education for the U.S. studies were obtained with nonlinear specifications. Kim et al.'s (2006) analysis of PSED is an example of a finding of a nonlinear relationship between education and nascent entrepreneurship. Specifically, they conclude that advanced education is significantly positively associated with entrepreneurial entry. However, their results are more indicative of a concave relationship between education and nascent entrepreneurship. That is, while college graduates were twice as likely to be nascent entrepreneurs as persons with high school degree or less, graduate education made no additional contribution to being a nascent entrepreneur. There was no statistically significant difference between persons with graduate degrees and those with high school or less education in nascent entrepreneurship.

Another example is Parker and Belghitar (2006), who used the PSED to estimate which personal and economic characteristics are associated with venture start-up – and which are associated with remaining a nascent entrepreneur, or giving up entirely. They find that education is of only marginal importance in successful movement into business creation.

3.3.3. Finding: The relationship between education and business entry is moderated by the interaction of education, financial capital and industry: The higher one's level of educational attainment, the higher the attraction to high-barrier fields like professional services, where one's human capital can be effectively employed, and the stronger the aversion to low-barrier fields offering prospects of low returns.

Lofstrom and Bates (2013) conduct an important study that includes the relation between education and entry for minorities. The meta-analysis by Justin van der Sluis et al. (2008) did not consider the industry of the new firm. Some industries require greater financial capital to enter because of the required machinery and equipment necessary to produce services or products in that industry. Other industries require that the owner has acquired more human capital—e.g., technical knowledge—in order to successfully operate in those industries. Lofstrom and Bates (2013) explain racial diversity in entry into industries based upon entry barriers. They analyzed data from the Survey of Income and Program Participation (SIPP) to track self-employment entry patterns among blacks and non-Hispanic whites from 1996 to 2004. The barriers facing aspiring entrepreneurs seeking entry into low barrier industries (low financial and human capital required) differ substantially from those limiting entry into high barrier industries; where retailing is an example of a low barrier industry, and highway construction is an example of a high barrier industry. In addition, firms in high barrier industries are larger and have lower failure rates than firms in low barrier industries: since it is easier to enter into a low barrier industry, more entrants result in more competition, leading to higher failure rates. Bates, Lofstrom and Servon (2011) and Lofstrom, Bates and Parker (2013) provide additional evidence and discussion on this topic.

While educational background is a powerful predictor of self-employment patterns in the low barrier industries, advanced educational credentials actually predict lower entry in low barrier industries: college graduates are less likely to select into low-barrier small business ownership (Lofstrom and Bates, 2013). Köllinger and Minniti (2006) find no significant evidence that blacks are involved in different types of businesses than whites at any stage of the entrepreneurial process (nascent, baby, and established). However, Lofstrom and Bates (2013) find that in the high barrier fields, in contrast, college-educated individuals are more likely than less educated persons to enter into self-employment. For example, the presence of African-Americans in high-barrier fields is held down by lower wealth—thus lower capital to start a business—and weaker educational credentials of potential and actual entrepreneurs.

3.3.4. Finding: For African-Americans, the more segregated the individual's K through 12 education, the less likely the individual enters self-employment.

The issue here is whether segregation tends to enhance or reduce the likelihood of minority self-employment. The arguments pro and con have tended to fall into three areas: protected markets theories, in which segregation is positively associated with self-employment; and wealth difference or market discrimination theories, in which segregation is negatively associated with self-employment (Fairchild 2008a discusses these approaches).

Fairchild (2009) examines whether the diversity of the environment of educational attainment in the earlier levels of education affect self-employment status: he explores the role of racial segregation in the public schools (K – 12) on adult occupational stratification and the tendency to be self-employed.

He used the Integrated Public Use Microdata Series (IPUMS) of the 2000 U.S. Census and indices of public school segregation of the public school data project (Logan and Oakley 2004). He found that after controlling for financial, family and location traits, among the cohort of blacks that completed their schooling in 1967, those that lived in metropolitan areas with higher levels of public school segregation were less likely to be self-employed than blacks with lower levels of public school segregation. He suggested that one of the primary conduits to establish social relationships in a society is through the educational system.

Minorities that attend highly segregated schools during formative years are less likely to access information vital to locating jobs and resources helpful in founding and managing their own firms (Fairchild 2008). In a related series of papers, Fairchild concludes that controlling for other factors, segregation per se has a negative impact on the growth of African American businesses (Fairchild 2008b, 2008c).

Fairchild's results indicate that, after controlling for a number of individual, household and metropolitan-area factors, lower rates of segregation during public schooling results in higher likelihood of wage-salary employment and self-employment among a cohort of black Americans that attended public schools during the 1960s. His findings are particularly important for black Americans, since the school segregation of blacks is far greater than that of other racial groups of students (Logan and Oakley, 2004).

It is worth noting that ethnic communities used to concentrate in inner-city neighborhoods, forming Chinatowns and barrios in many cities. Recent years have witnessed the emergence of ethnic communities of various socioeconomic statuses in both central cities and suburban areas (Logan, Alba, & Zhang, 2002). Cross-city evidence indicates that rather than enhancing business opportunities, a high degree of residential segregation may create unfavorable entrepreneurial environments, especially when combined with poverty concentration (Fischer & Massey, 2000).

3.3.5. Finding: For established businesses, owner education has a positive relationship with firm performance.

Problems that have plagued the studies on the relationship between education and performance are sample selectivity bias and endogeneity (omitted variable) bias. The first difficulty in comparing the returns to education between entrepreneurs and employees is selection into self-employment. Selection bias exists if entrepreneurs are systematically different from the type of people who choose to be employees. If people who are smarter, more independent, more creative, more risk loving, or more ambitious are more likely to become entrepreneurs, then the returns to education for entrepreneurs is capturing the interactions between education and these unobserved variables. The selection problem is reduced if personal characteristics like ability are observed in the data. But, unobserved characteristics like creativity are impossible to control for.

Another complication when comparing the returns to education between the two groups is the endogenous nature of the education. Education is endogenous because people with higher ability are more likely to acquire schooling. Therefore, the correlation between education and earnings is partially driven by unobservable differences between people who get more schooling and those who do not. The predictions of the theoretical model can only be tested if the researcher can control for differences in ability due to education.

Van der Sluis et al. (2008) included in their meta-analysis an exploration of studies that analyzed the relationship between owner education and business performance. They observed the endogeneity and self-selection problems in their meta-analysis. Of the studies that used years of education as the measure, 67% found that there was a positive and statistically significant relationship between education and business performance. For those that considered earning degrees (dummy variables), 72% found that firms of college graduates (bachelor's) outperformed those with lower than a college degree education. Some 86% found that firms of post-bachelor degrees outperformed those with lower levels of education.

Fairlie and Robb (2007) consider the effect of owner education on firm performance, and how differences in education between black entrepreneurs and non-Hispanic white entrepreneurs translate to differences in firm performance. They use the 1992 Characteristics of Business Owners (CBO) data from the U.S. department of commerce to compare black-owned businesses and non-Hispanic white businesses. They find that education is positively related to firm performance for both black-owned and white-owned firms. In addition, they found that the lower performance outcomes of the black businesses are partially explained by the black owners' lower education. In a study of Asian-owned firms, Robb and Fairlie (2009) also use the 1992 CBO to measure the relation between education and four measures of business performance for the combined ethnic groups. They find that education is positively associated with business performance.

Shinnar et al. (2011) included education in their comparison of the performance of small firms. The data used the 2003 and 2005 National Minority Business Owner Surveys (2003 and 2005 NMBOS). Between 2003 and 2005, using nationwide samples, telephone interviews were completed with the following four groups of business owners, with at least 200 responses from each group: Korean Americans, Mexican Americans, African Americans and whites. To qualify for the survey, an owner–manager had to have been in business for at least one year, worked at least 320 hours per year in the business, been involved in the day-to-day management of the business, and resided with another family member. Shinnar et al. (2011) found that higher education leads to better performance, where performance in their models was measured by business profits.

The literature on entrepreneurial income and returns to education is less straightforward than the much older and broader literature regarding employee income and returns to education (Bosma et al. 2004, Van der Sluis et al. 2008, Iversen et al. 2010, 2011). In addition to endogeneity, measurement issues concerning entrepreneurial income (tax evasion, income underreporting, high non-response rates, incomparable legal structures, nonpecuniary benefits, heterogeneities in entrepreneurial activities, etc.) are important obstacles in accurately measuring the relation between education and entrepreneurial returns.

Another aspect of the relation between education and entrepreneurial performance, Van Praag et al. (2013) evaluate the effect of education on performance by exploring the relative income performance outcomes of entrepreneurs compared to employees. That is, to what extent is an extra year of formal education translated into income returns when being an entrepreneur instead of a wage employee? They explore this difference by analyzing the National Longitudinal Survey of Youth (NLSY), for the period 1979 to 2000. They find evidence for premium returns to formal education for entrepreneurs relative to employees. After testing for six reasons for the premium returns to formal education for entrepreneurs, they conclude that the most statistically valid reason is fewer (organizational) constraints faced by entrepreneurs when optimizing the profitable employment of their formal education.

Bradford (2003, 2013) approached the performance of entrepreneurship by considering the change in the family wealth of black and non-Hispanic white self-employed. He used the nationally representative Panel Study of Income Dynamics (PSID), identified those who were entrepreneurs, and followed their movement in the overall wealth distribution of families over a 4 year or 5 year period. For the entrepreneurs, he did not find that education was statistically significant in predicting upward or downward movements in the wealth distribution. In interpreting his results, I observe that his measure of the family wealth of those who are self-employed is not necessarily a reflection of how the business owned by the entrepreneur fared over the period observed.

3.4. Research Findings: Experience and Minority Entrepreneurship

Previous research has shown that in addition to education, work experience is an important component of human capital for nascent entrepreneurs (Unger et al., 2011). Individuals may be influenced to pursue entrepreneurship through multiple forms of work experience (Peake and Marshall, 2011). As I overview the research since 2000, I will categorize my discussion of experience into four types of experience: previous start-up experience (serial entrepreneurship), general full-time work experience, managerial experience, and current self-employment. However, it should be observed the type of experience of the entrepreneur can vary broadly and deeply.

3.4.1. Finding: Drawing research conclusions on the relationship between owner experience and firm performance has been complicated by researchers using different measures of experience combined with different measures of performance.

Based upon their survey of research on experience and entrepreneurship conducted from 1980 through 2007, Peake and Marshall (2011) find 17 measures of experience that had been used by researchers. The top six in terms of use are 1) management experience, 2) ownership/entrepreneurial experience, 3) traditional experience, 4) start-up experience, 5) related activities experience and 6) industry experience. Another inconsistency in the experience-firm performance studies is the performance measures used. Peake and Marshall (2011) and Song et al. (2008) both observe that the different measures of firm performance include employment, profits, marginal survival, earnings reaching an economic threshold, and earnings ratios such as return on assets. These inconsistencies provide difficulty for those who want to come away with a consensus on the relationship between experience and performance.

3.4.2. Finding: Serial entrepreneurs exist: Those with more startup experience are more likely to undertake a business startup.

Serial entrepreneurs are those who start-up more than one business. Based upon evidence in Headd (2003), Plehn-Dujowich (2010) estimated that serial entrepreneurs account for about one-eighth of entrepreneurial activity in the US. Furthermore, firms founded by serial entrepreneurs are equally or more likely to survive than firms founded by novice entrepreneurs (Headd 2003), and serial entrepreneurs are more likely to remain entrepreneurs than are novice entrepreneurs (Burke et al. 2008). Research also shows that entrepreneurs who exited their previous ventures by selling them are more likely to re-enter entrepreneurship. They seem to have not only accumulated more financial and social resources but also gained confidence in their own skills (Amaral et al. 2009; Ucbasaran et al. 2010).

3.4.3. Finding: Managerial experience and industry experience are positively related to firm performance.

Based upon their survey of research on experience and entrepreneurship conducted from 1980 through 2007, Peake and Marshall (2011) reviewed 39 studies relating to experience and performance. They conducted an ordered probit analysis of the experience measures used across the studies. The marginal effects indicated that industry experience had the largest impact on the probability of finding a positive relationship between experience and performance, followed by management experience.

In a meta-analysis of factors affecting the success of new ventures, Song et al. (2008) analyzed 31 studies and identified the 24 most widely researched factors of success for new technology ventures (NTV). Using Pearson correlations, they concluded that both founders’ marketing experience and industry experience were positively and significantly correlated to the success of NTV’s. Song et al. also observed that the inconsistent relations between experience and performance found by previous studies are likely the result of a variety of experience and performance measures employed, the wide range of control variables used and large differences in model specifications.

Ahn (2011) used detailed work history data in the 1979 National Longitudinal Survey of Youth for his study on employment background and self-employment performance. He concludes that blacks and Hispanics do not lag behind whites in their rates of self-employment entry nearly as dramatically as they lag behind whites in their self-employment survival rates. He finds that lack of prior industry experience contributes to minority entrepreneurs’ lower survival rates in self-employment compared to non-Hispanic white entrepreneurs.

Using a novel sample of 2,304 entrepreneurs who have started new businesses, Cassar (2010) investigates the role of experience on entrepreneurs' forecast performance regarding new business growth and scale. He finds that entrepreneurs with greater industry experience have more realistic expectations. The benefit of industry experience on entrepreneurial expectations is present across various industry classifications, with the evidence suggesting that the benefits of industry experience are greater in industries with greater uncertainty, such as high-technology. Robb and Fairlie (2009) used the 1992 CBO to determine the relation between experience—measured in four ways—and firm performance. They find that work experience in a similar business is positively associated with firm performance. This work experience in a similar business captures industry experience in content. Robb and Fairlie (2009) also find that work experience in a family member’s business has the strongest relationship with performance of the four measures.

3.4.4. Finding: Ownership/Entrepreneurial experience and start-up experience are not found to be consistently and strongly related to firm performance.

Song et al. (2008) concluded in the studies of NTVs that founders’ experience with start-ups was not significant in determining NTV success. Of the 35 studies that considered start-up experience, only 8 found that start-up experience had positive impact on performance, while 25 found no statistically significant effect and 2 found a negative effect. With regard to ownership/entrepreneurial experience, only 13 of 43 studies found a positive impact, while 29 found no statistically significant effect and 1 found a negative effect. Similarly, Peake and Marshall (2011) did not find ownership/entrepreneurial experience and start-up experience to be statistically significant in predicting performance.

Consistent with those findings, Cassar (2012) found no support for startup experience, whether within the industry or otherwise, improving entrepreneur forecast performance. This suggests that better prediction of new business performance by entrepreneurs is achieved by those with industry, but not entrepreneurial, experience. He observes that this raises doubt as to the benefits from failed or serial venturing, but highlights the benefits of industry knowledge when entrepreneurs make the decision to start new businesses (Cassar, 2012). Parker (2012) used PSED to examine the outcomes of serial entrepreneurs' performance. He concludes that the performance trajectories of serial entrepreneurs exhibit mean reversion: although good performance in one venture appears to be associated with good performance in subsequent ventures, these positive effects are nearly completely exhausted by the end of the next spell. These findings are consistent with the notion that benefits from venturing are temporary, and depreciate over time.

PART 4: MONEY: FINANCIAL CAPITAL

What are the differences between minority and non-minority entrepreneurs in the amount of and access to financial capital at business entry and during the business growth phase? Why do these differences exist? How do the amount and access to capital affect business entry and business success?

The barriers for accessing financial capital come from two factors: (a) the amount of wealth available to start the business and (b) the access to capital that will support business entry and growth (see Cassar, 2004, Carreira and Silva, 2010 and Casey, 2012). Financial barriers can discourage aspiring minority entrepreneurs from ever taking the plunge into self-employment. In addition, since different industries require different amounts of capital for entry, the amount of financial capital can also affect which line of business the entrepreneur enters. A lack of financial capital can also reduce the firm's survival chances after startup and its ability to grow when it does survive. One can examine the impact of financial capital on minority businesses in three contexts: 1) financial capital and nascent entrepreneurship, 2) financial capital and the transition from nascent entrepreneurship to an operating business, and 3) financial capital for ongoing businesses. I will examine the questions posed in the title to this section in the context of these three aspects.

4.1. Finding: The magnitude of personal net worth does not differ between nascent entrepreneurs and others.

In their multivariate analyses, Kim et al. (2006) used the PSED to find that net worth is not statistically significant in distinguishing between NEs and others.

4.2. Finding: The magnitude of the NE's net worth is not statistically significant in predicting transition from NE to business startup.

Parker and Belghitar (2006) used the PSED to trace the outcome of NEs. They found that the amount of the NE's net worth is not important in predicting business startup. This finding is consistent with Kim et al.'s (2006) contention that most business founders invest modest sums in their start-up attempts.

4.3. Finding: The magnitude of financing available affects the line of business that the NE will pursue.

Cassar (2006), Liao and Welsch (2003), and Singh, Knox and Crump (2008) all report that NEs with more financial capital have higher growth aspirations for their ventures.

As mentioned earlier, Lofstrom and Bates (2013) conclude that capital (along with education) are important in predicting the industry that minority entrepreneurs enter. Bates, Lofstrom and Servon (2011) provide additional evidence on this. Lofstrom, Bates and Parker (2013) expand this to consider entrepreneurs in general. Lofstrom et al. (2013) criticizes and disagrees with the widely quoted article by Hurst and Lusardi (2004) that concludes that capital constraints are not significant in restricting business entry. The Hurst et al. article was also concluded to be incorrect by Fairlie and Krashinski (2012). Kim et al. (2006) provided evidence that financial capital intensive industries exhibit higher external funding requests by nascent entrepreneurs.

4.4. Finding*: *For operating firms, the higher the amount of start-up capital, the better the firm performance

Head (2003) used the used the CBO data of the U.S. Department of Commerce. He found that start-up capital is statistically significant in predicting performance of operating firms.

4.5. Finding: Minority-owned—black-owned and Hispanic-owned businesses in particular—experience higher loan denial rates than do non-Hispanic white owned businesses, after controlling for firm and owner traits.

My search of articles in peer reviewed articles in scholarly journals found 11 papers published since 2000 that focused on the borrowing experience of ethnic minority firms in the U.S. The table below categorizes the studies in terms of data used and findings with regard to evidence of lending discrimination. All of the 11 reported evidence that black and Hispanic borrowers experience lending discrimination. I will discuss these papers.

	Unexplained Differences Found? *	SSBF 1987	SSBF 1993	SSF1998	SSBF 2003	PSED II	CPS
Asiedu et al. (2012)	Yes			x	x		
Blanchard et al. (2008)	Yes		x	x			
Blanchflower et al. (2005)	Yes		x	x			
Cavalluzzo & Wolken (2005)	Yes			x			
Cavalluzzo et al. (2002)			x				
Coleman (2008)	Yes				x		
Chatterji & Seamons (2012)	Yes						x
Mitchell & Pearce (2011)	Yes			x			
Gartner et al. (2012)	Yes					x	
Mijid & Bernasek (2013)	Yes	x	x	x	x		
Casey (2012)	Yes					x	

* Racial differences in loan outcomes not explained by owner and firm traits

Blanchflower, Levine, and Zimmerman (2003) analyzed the 1998 SSBF data and found that black-owned businesses were about twice as likely to be denied loans after controlling for creditworthiness and other factors. The 1998 NSSBF included Dunn and Bradstreet credit ratings as well as housing and non-housing personal net worth data that were not available in the 1989 and 1993 SSBF. Cavalluzzo et al. (2002) used the 1993 SSBF to show the evidence of discrimination against black and Hispanic firms. Cavalluzzo and Wolken (2005) used the 1998 SSBF to find substantial unexplained differences in loan denial rates between minority and white-owned firms after controlling for credit characteristics and personal wealth variables. The wealth variables were a new addition in 1998 to the SSBF data. While personal wealth was associated with a lower probability of loan denial, they found that large differences in denial rates across ethnic groups remained after controlling for personal wealth.

There are mixed results on disparities in applicant behavior. In a study using the 1993 NSSBF data (which had a larger sample of minority firms), Cavalluzo et al (2002) found evidence of a "discouraged borrower effect". This effect reflects that minority firms did not apply for loans because they assumed that they would be denied. Coleman (2002) also found that black and Hispanic owned firms were significantly more likely to avoid applying for loans because they believed they would be denied.

In their study of 1993 and 1998 NSSBF data, Blanchflower, Levine, and Zimmerman (2003) found black-owned firms were less likely to apply for credit than were firms owned by non-minorities. On the other hand, Cohn and Coleman (2001), who used the 1993 NSSBF, found that black-owned firms were no less likely to apply for a loan than white-owned firms were. However, Mitchell and Pearce (2011) estimated a model of loan denials jointly with a model of loan applications. They separated out banks from non-banks (finance companies, government agencies, factoring companies) and separated out relationship loans (line of credit loans) from transaction loans that require collateral and have less soft information.

Mitchell and Pearce (2011) use the 1998 SSBF, and found evidence consistent with minority equal access to bank credit lines and nonbank non-line-of-credit loans in highly competitive loan markets; in less competitive markets we find evidence consistent with unequal access to these loans. They also found evidence consistent with unequal minority access to bank non-line-of-credit loans, regardless of loan market competitiveness.

Coleman (2008) used the 2003 SSBF data to compare the debt financing patter of black and non-Hispanic white firms. After controlling for firm and owner traits, she found that black-owned firms were significantly more likely to be turned down for loans and more likely to refrain from applying because they assumed they would be turned down. Further, black firm owners who were approved for loans paid significantly higher rates of interest.

Asiedu et al. (2012) used the 1998 and 2003 SSBF to examine 1) whether the influence of race/ethnicity changed in the 1998 to 2003 period, and 2) whether race/ethnicity impact the denial rates for application for a renewal of an existing loan. Information on loan renewals was first collected in 2003. They found that black-owned firms faced more discrimination in obtaining credit in 2003 than in 1998. They find the opposite for Hispanic firms—they faced discrimination in 1998 but none in 2003. They conclude that nonetheless, both Black- and Hispanic-owned businesses faced discrimination in obtaining loan renewals in 2003. In addition, the interest rate paid by Black firms on approved loans was comparable to the rate paid by White male firms in both 1998 and 2003. However, while there was no interest rate gap for Hispanic firms in 1998, one existed in 2003.

Chatterji and Seamans (2012), using CPS and state specific data on credit cards, verify that that credit cards are an important means of entrepreneurial finance, and that black entrepreneurs faced discrimination-based financial barriers to entry in the 1970s and 1980s. The black entrepreneurs used credit cards as a mechanism to overcome those barriers.

4.5. Finding: For each ethnic group of businesses, most business start-ups use no debt financing.

Bates and Robb (2008) outlined the financing patterns of non-Hispanic white, black and Asian businesses. Some 71.2% of black firms started with either equity or no capital, compared to 62.8% of white firms and 53.8% of Asian firms. Although differing financing patterns are apparent across these racially defined groups, similarities are actually more prominent. Most start-ups—whether White-, Asian-, or Black-owned—used no debt financing to launch business operations. Bates and Robb (2008) report that among firms owned by nonminority Whites, 23.7% started out with zero financial capital; corresponding figures for Blacks and Asian immigrants were 28.9% and 16.2%, respectively. Zero-capital start-ups were largely zero-employee firms concentrated in service industries.

Gartner et al. (2012) report similar relationships using the PSED II sample of start-up efforts of nascent entrepreneurs. They observe that Reynolds and Curtin 2007 provide evidence that the majority of financing for emerging ventures comes from nascent entrepreneurs themselves. Reynolds and Curtin (2009) estimate that the total amount of capital provided by nascent entrepreneurs for starting businesses in 2005 was approximately $69 billion. In the same period, venture capital firms invested $0.8 billion (Reynolds and Curtin 2009). This is a ratio of 86 to 1.

4.6. Finding: Differences exist across ethnic groups in how new businesses are financed.

Ortiz-Walters and Gius (2012) use the KFS data to compare the financing of new firms across ethnic groups, and to relate financing strategy and profitability across ethnic groups. They find differences in financing and the effect of financing. After controlling for other factors, firms owned by black and Hispanic entrepreneurs are less likely to be profitable than non-minority owned firms. They find no differences between Asian and non-minority owned firms in profitability. They also find that personal debt is positively associated with profitability for Hispanic and black-owned micro firms, while business debt increases the likelihood of being profitable for Asian-owned micro firms. In contrast, both sources of debt enhanced the profitability of non-minority owned firms relative to the use of internal equity.

Raijman and Marta Tienda (2003), in their study of ethnic firms in Chicago, conclude that Koreans and Mexicans differ in their access to capital from ethnic and family sources. Koreans are at a clear economic advantage over Mexicans because they have access to greater amounts of financial capital (either from personal savings, loans or gifts) to invest in a business. Raijman and Tienda (2003) agree that persons commanding significant household wealth are more capable than the less wealthy of overcoming financial barriers to business entry and business survival. They also observe that Koreans have access to another ethnic resource that enables them to mobilize capital, namely the *kye*. The average *kye* loans are substantially larger than the Mexican *tanda*, which is mainly used for personal consumption. Although ethnic informal organizations facilitate the process of entrepreneurship, their importance should not be overstated because Koreans' use of *kye* resources is moderate (Min and Bozorgmehr 2000). Nevertheless, its insurance function and psychological role are probably not trivial. Gartner et al. (2012) use the PSED to analyze the financing pattern of firms of entrepreneurs that moved from nascent entrepreneur to firm startup. They found that black entrepreneurs were more likely to use personal sources compared to non-Hispanic white entrepreneurs, while Asian and Hispanic NE were less likely than non-Hispanic white NEs to utilize personal sources.

PART 5: MARKETS: LINE OF BUSINESS AND LOCATION

What are the differences between minority and non-minority entrepreneurs in lines of business and physical location? Why do these differences exist? How do these differences affect the performance of minority and non-minority firms?

5.1. Background

5.1.1. Introduction

The decisions that the entrepreneur must make include both the clientele (s) served and the physical location (s) of the business (Dencker et al., 2009; Ireland et al., 2003, Rensky, 2008). The recent growth of minority-owned firms has occurred in a period in which U.S. urban and rural areas have experienced significant spatial, economic and demographic changes. The changes include the suburbanization of employment and economic activities (Hill and Brennan, 2005), and the residential redistribution of minority and immigrant populations in urban areas (Frey 2006; Singer, 2008). A growing interest among researchers is the geographic (re)distribution of minority firms on the sub-metropolitan level, i.e., their evolving spatial pattern between central cities and the suburbs in a restructured urban economy.

Minority businesses historically tend to locate in the urban areas instead of the suburban and rural communities. Ethnic enterprises might be highly tied to inner city areas to carve out their businesses operations as they rely on these communities for a protected market, workforce and consumer base, as well as financing and other needs (Bates, 2008; Zhou, 2004). But at the same time, like other employers, ethnic entrepreneurs are also concerned with the business cost and market, labor pool and clientele access across different urban locations. Thus they are attracted to suburban locations if economies of scale along the cost curve are sufficiently large and their product/service market can also be served from the suburban location. Thus minority businesses might follow the residential suburbanization of minority populations as well (Frey 2006; Singer 2008). In this section, I first overview the location and industry trajectories of minority businesses in the context of past racial discrimination, immigration patterns and intra-group cultural traits. This is followed by the review of research on location and industries of minority businesses, and then by the research on the performance of minority businesses as it relates to location and lines of business.

5.1.2. Background: The lines of business and physical location of minority businesses are functions of past racial discrimination, immigration patterns, and intra-group cultural traits.

Consider first African-American entrepreneurship. Throughout most of the 20^{th} century, black businesses predominately catered to a minority clientele, tended to be small, generated few jobs, and were rarely owned by college graduates. Typical black firms were located in urban areas and were mom-and-pop food stores, small restaurants, barbershops, and beauty parlors. These traditional personal service and retail businesses were located in black residential areas. They served neighborhood clienteles rather than breaking into larger scale lines of business because of constraints deeply rooted in American society. The large traditional sector of black business developed because of the obstacles created by racial segregation—black consumers could not buy in white establishments, so black businesses provided those goods and services in a protected market. As the reductions in segregation occurred in the workplace, public accommodations, and retail establishments, traditional black businesses suffered because of the greater competition provided by white firms (Bates, 2008; Bogan & Darity, 2008).

Black consumers purchased more goods and services from white businesses as the racial barriers declined, and thus many traditional black-owned businesses suffered in sales and profits. Starting in the 1960s and continuing to the present, African-Americans have become more educated in fields that are directly related to successful business ownership. African-American–owned businesses have expanded in size and scope, as highly educated and experienced entrepreneurs have become the norm in many fields. Fields in which black-owned firms are emerging after historically low involvement include skill intensive services like finance, business and professional services, and construction. These firms often serve racially diverse or largely non-minority clienteles and have been growing steadily while creating growing numbers of paid employees. Bates (2008) traced the development of African-American businesses over the 20th century.

Research on Hispanic self-employment has not received as much attention as African-American entrepreneurship. Hispanics are of particular interest given the fact that they are the fastest growing ethnic group in the U.S., primarily fueled by immigration from Mexico. The evolution of Hispanic businesses can be generally tied to immigration from

Mexico, Cuba and the Carribean, and other Hispanic countries. Like African-Americans, Mexican-Americans are a disadvantaged minority group, but there are a number of differences between the two groups, including family composition, educational attainment, English proficiency, immigration status, period of immigration, historical experiences in the U.S and possibly discrimination. Given this, and the size and growth of Hispanics in the U.S, mainly due to immigration from Mexico, this important ethnic group deserves separate attention, particularly the largest group of Hispanics - Mexicans.

Hispanic firms tend to concentrate in the most economically vulnerable business 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).

Unlike African-American and Hispanic businesses, Asian business owners come from backgrounds in which numerous languages are spoken; that is, the native Chinese language, Indian and Filipino language differ. According to the U.S. Census Bureau, the Asian-American population grew by 43% between 2000 and 2010 to more than 15 million. Six groups account for 86% of the Asian-American population: 22% Chinese, 20% Indian, 18% Filipino, 11% Vietnamese, 10% Korean, and 5% Japanese. The three next largest groups, Pakistanis, Hmong, and Cambodians together account for another 6% of the Asian-American population.

On average, Asian-Americans have higher earnings and lower unemployment rates than other workers in the U.S. These measures are deceiving because the population of Asian-Americans is quite heterogeneous. Some Asian-Americans from East Asia, such as those from Japan and India, are generally more prosperous, while others, such as native Hawaiian and Pacific Islanders and those from Southeast Asia, do quite poorly in terms of their jobs and earnings (see Mar, 2005; Kim and Mar, 2007). Consequently, these latter workers have very high poverty and unemployment rates.

Tran and Poon (2011), using the American Community Survey 2005-7, report that the self-employment rates of Asians vary widely, from the 21.9% of Koreans to 5% for the Filipino ethnic group. Approximately 21% of Korean Americans were self-employed in their own businesses, which was twice the rate of the general population. Vietnamese (12%) and Japanese Americans (12%) reported self-employment rates similar to that of non-Hispanic whites, while Filipino (5%) and other Southeast Asian-Americans (6%) were least likely to be self-employed. These findings, which are similar to those reported by Lunn and Steen (2005) based upon the 1990 U.S. Census, underscore the diversity among Asian-Americans and suggest some Asian-American ethnic groups may have more propensity, access, and/or capacity to start their own businesses compared to others.

5.2. Finding: The theories on successful location provide conflicting conclusions about the requirements for desirable location for minority businesses.

The recent growth of minority-owned enterprises has occurred concurrently with metropolitan areas undergoing significant spatial, economic and demographic changes. These include the suburbanization of employment and economic activities (Hill and Brennan, 2005), and the residential redistribution of minority and immigrant populations in urban areas. They might follow the residential suburbanization of minority and immigrant populations as well (Frey 2006; Singer 2008).

It is important to understand the effect of residential mobility and metropolitan socio-economic structure on the intra-metropolitan location and performance of minority enterprises. The relative size and performance of minority businesses in central city and suburban communities can inform policymakers and planners about the unique roles they can play in the local economy and design targeted policies that address their needs. Through identifying the potential factors that drive the spatial (re)location of these firms we can also predict their future growth and potential economic impact in various jurisdictions.

Two broad sets of theories of regional economic analysis seek to explain the factors influencing the creation of new firms in a metropolitan region. The creative class theory is advocated by Richard Florida (Florida 2002, 2004; Lee, Florida, and Acs, 2004). This theory is that urban economies grow because they are tolerant, diverse and open to creativity, which in turn attracts certain groups of people, the so-called creative class. Lee et al. (2004) expand the theory into the realm of entrepreneurship. They argue that new firm formation is positively associated with a creative and diverse social environment. In other words, those regions that are alluring to creative talent, open to newcomers and tolerant of those who are different, will also have more people taking the risk of founding a firm, leading to increased economic growth. Thus creative persons—ranging from super-creative occupations such as computer programmers, engineers, life scientists and artists to creative professionals like managers, lawyers and high-end sales professionals—gravitate toward places that are tolerant, diverse and open to creativity. This in turn translates into innovation, jobs and new firm creation (Florida, 2002, 2004). Thus, it is argued that the location choice of this creative class in turn leads to regional economic competitiveness.

The creative class theories, however, contrast with explanations that consider structural factors such as access to financial resources and markets, among others, as important markers of entrepreneurial success. Creative class theories have been widely criticized and refined (Fainstein, 2005; Markusen, 2006; Peck, 2005; Scott, 2006a; Thomas & Darnton, 2006). Peck notes that a focus on attracting the creative class allows policymakers to follow a neoliberal agenda by diverting their attention away from more difficult policies that address redistribution issues and urban problems (Peck, 2005). Findings about the link between a creative class milieu and entrepreneurship might distract policymakers from a focus on important structural factors that need to be in place to support business owners (i.e., procurement programs, small business loans, etc.).

Although a ‘‘local technical community’’ is often examined in the creative class studies, most of them seldom explicitly discuss ethnicity and gender. One fundamental reason for such neglect is the traditional ‘‘elite’’ perspective of entrepreneurship. Classic entrepreneurship studies emphasize the venture-creation functions that ‘‘generate development through the innovation’’ (Schumpeter 1934). Accordingly, the concept of entrepreneurship is often focused on technological changes and high-tech industries (see Blake and Hanson, 2005 for a review). Thus, the creative class theories of entrepreneurship do not consider the specific needs of certain types of entrepreneurial groups that may depend on a very different social environment. Minority entrepreneurs might experience a region’s social characteristics in very different ways than white business owners.

Audretsch and Lehmann (2005) and Audretsch and Keilbach (2007) find that the number of new firms located close to external knowledge sources (like a university or incumbent firms) is positively affected by the knowledge capacity of the region, with higher knowledge contexts found to generate more entrepreneurial opportunities. Lee et al. (2004) also demonstrate that firm formation is *insignificantly* related with the percentage of population that is foreign-born (melting pot index), also a measure of diversity in Florida’s work (2002). They hypothesized that the presence of immigrants has a positive effect on firm formation. Explaining this finding, they argue that their measure does not differentiate between the well-educated and wealthy immigrants and their less-educated and poor counterparts and thus the effect of the index may become negated. Another explanation, however, may be that by overemphasizing the creative milieu as a social habitat of entrepreneurs, the creative class theories fail to take into account the importance of the region’s opportunity structures.

After reviewing and contrasting the creative class and opportunity approaches, Hackler and Mayer (2008) provided evidence that the opportunity existence approach is more powerful in explaining the location of minority businesses. They examine the effect of regional opportunity structures and creative milieu on black and Hispanic business ownership for the 50 largest metropolitan statistical areas (MSAs) in the United States in 2002. They found that opportunity structures, whether opportunity or barrier, better explain the location dynamics for these entrepreneurs. Minority firms benefit from a regional environment that builds human capital and skill bases, enables access to a variety of financial resources and facilitates market access. Their finding has implications on the policies that are most fruitful in supporting the growth of minority businesses.

5.3. Finding: Minority businesses are disproportionately located in urban areas and disproportionately serve co-ethnic retail markets

Marion (2009) examined the location of minority-owned construction firms in California. He concluded that minority-owned firms are more likely to locate in zip codes with a high concentration of minority residents. Aguilera (2009) found that self-employed Cubans in Florida and Mexicans in Texas and California were disproportionately located in ethnic conclaves. He used the U.S. census data from 2000 for his study. Bates and

Robb (2008, 2013) examined the ethnic ownership of businesses located in and serving minority communities. The used both the CBO data relating to 1992 (Bates and Robb 2008, 2013) and the Kauffman Foundation study (2013) which includes the ethnic background of the firm and its customers. They found that minority businesses disproportionately served minority clientele. Cooke (2005) looked at data from data from Broward County, Florida and found that African-American owned businesses tend to be in ethnic communities.

Shinnar et al. (2011) examined minority entrepreneurs' reliance on co-ethnic markets in terms of the impact this has on the financial performance of their firms. They looked at three minority groups: African-Americans, Korean-Americans and Mexican-Americans. Their findings indicate that owner's age and marital status, but not business age, shape the extent to which a business owner relies on co-ethnic clients. Furthermore, they conclude that Korean-American owned firms are less likely to have high proportions of co-ethnic clients compared to Mexican- and African-American owned firms.

Wang (2012) used the 2000 U.S. Census and the 2002 CBO data to analyze detailed characteristics of Hispanic firms in Miami and Atlanta. For both study areas, she finds that Hispanic businesses are significantly attracted to the neighborhoods that have a higher percentage of Hispanic population. For example, she finds that a 10% increase in the Hispanic population in a census tract will increase the expected count of Latino businesses by 30%, holding all other variables constant. In Atlanta, for every 10% increase in the Latino population in a census tract, the expected count of Latino businesses increases by 25%, holding all other characteristics constant.

Liu and Abdullahi (2012) conclude that in terms of spatial distribution, ethnic enterprises have a stronger presence in the cities versus the suburbs but have experienced faster growth in the suburbs between 2002 and 2007. This is especially true for Asian-owned and Hispanic-owned firms, whose geographic shift seems to coincide with the residential suburbanization of their respective population. The rate and direction of this shift varies with region and metropolitan context. Metropolitan areas with low initial immigrant presence and high immigrant growth in the recent decade have the most centralized Asian- and Hispanic-owned businesses, possibly fueled by the newly arrived immigrants. Black-owned businesses, on the other hand, remain the least suburbanized of all groups and do not keep up the suburbanizing pace of the black population. It is possible that central cities provide favorable economic, social and policy environment for black businesses while there exist higher entry barriers in the suburban market.

5.4. Finding: Minority businesses that focus on co-ethnic retail markets do not perform as well as those that do not focus on co-ethnic retail markets.

Aguilera (2009) compared the economic returns for self-employed Cuban immigrants in Florida with those of Mexican immigrants in California and Texas. He found that self-employed Mexican immigrants who remain within Mexican enclaves earn substantially lower earnings than those in non-enclave environments. In contrast, the earnings of Cuban immigrants self-employed within Cuban enclaves are comparable to those earned by

Cubans employed within the general labor market. Overall, he concludes that his results are contrary to the ethnic enclave hypothesis, which suggests that there are there is a net economic advantage associated with owning a firm in ethnic enclaves.

The studies by Bates and Robb (2008, 2013) also include the performance of firms that focus on the central city customer base. They compare the traits and performance of firms serving predominantly minority clients to those selling their products largely to clients who are non-minority whites. Controlling statistically for applicable firm and owner characteristics, they conclude that the minority-neighborhood niche does not offer young firms an attractive set of opportunities. Relative to opportunities in the corresponding non-minority household niche and the broader regional marketplace, the neighborhood minority household market is associated with reduced business viability.

Shinnar et al. (2011) examine minority entrepreneurs' reliance on co-ethnic markets in terms of the impact this has on the financial performance of their firms. They include three minority groups in their analysis: African-Americans, Korean-Americans and Mexican-Americans. Shinnar et al. (2011) find that having a large co-ethnic clientele results in a financial penalty in terms of the revenue an owner draws from his or her business. This penalty occurs in businesses owned by all three groups of entrepreneurs. Their findings lend support to the resource based theory view of the firm in terms of the need to dynamically apply resources in order to achieve a competitive advantage. Furthermore, Korean-American owned firms are less likely to have high proportions of co-ethnic clients compared to Mexican- and African-American owned firms. Having a large co-ethnic clientele results in a financial penalty in terms of the revenue an owner draws from his or her business. This penalty occurs in businesses owned by all three groups of entrepreneurs.

5.5. Finding: Minority businesses that cater to government markets experience increased sales through affirmative action programs.

Bates (2001) found that a higher fraction of minority businesses sell to government than do nonminority businesses. His logistic regression analysis demonstrates that small businesses that sell to government clients are disproportionately the minority-owned construction, skilled services, and goods firms. Controlling for firm size, age, and owner gender, minority firms are more likely to sell to government than white-owned firms, and this difference in market penetration is highly statistically significant. In other words, among two firms of equal size and age that operate in the same industry, the minority firm is more likely to sell to government than the nonminority firm.

Using comprehensive Current Population Survey data from 1979-1989, Chatterji, Chay and Fairlie (2010) found that self-employment rates for black men rose substantially in the mid-1980s in cities in which set-aside programs were implemented concurrently. On the other hand, the self-employment rates of white men were stable in these same cities during this period. To reduce endogeneity, they use an "event study" methodology, based on the exact dates of program implementation, to examine trends in black self-employment rates before program implementation. Their results suggest large increases in black self-employed business ownership rates immediately after program initiation, with the black-white self-employment gap narrowing three percentage points in the first five years of the programs. They also find a reduction in the black-white gap in the employment-to-population ratio after program implementation. Their paper is the first to examine the aggregate impact of these set-aside programs on self-employment and employment.

The Federal Highway Administration (FHWA) mandates the use of affirmative action for minority- and women-owned firms by states in awarding federally funded road construction projects. Marion (2009, 2011) documents the variation of affirmative action across states over the history of the FHWA program, and also provides evidence regarding the effectiveness of affirmative action at increasing purchases from disadvantaged business enterprises (DBEs). He concludes that DBE goals are in general effective at increasing purchases from firms owned by minorities. The effect of DBE goals are stronger when they are more likely to be binding and in states with an apparently stricter enforcement regime. Affirmative action also varies across projects within a state. Using data from California state highway procurement, and an instrumental variables approach to obtain exogenous variation in a project's DBE goal, he finds that raising the affirmative action goal on a particular project by 10 percentage points increases the fraction of the contract subcontracted from DBEs by 5.4 percentage points.

5.6. Finding: There is not sufficient evidence that increased government revenues through affirmative action programs sustain the viability of individual minority businesses. On the question of whether such programs have been positive or negative for individual firms, there is mixed evidence.

Bates (2009) examines reasons for the lack of success of government diversity purchasing program in fairness, leveling the playing field and economic development. He contends that the particular disqualifying device that most effectively eliminates successful large MBEs from public contracts is the owner personal net worth ceiling. MBE owners with high personal net worth are often disqualified from state and local government preferential procurement programs. Bates (2009) notes that owners have claimed that that the low personal net worth ceiling responsible for their decertification has not allowed them to build sufficient bonding capacity to compete successfully as prime contractors.

Another disqualifying screen is the size test: MBEs surpassing a threshold value of annual sales revenues are often excluded for being too large. Another reason for excluding highly successful MBEs is the assumption that they have overcome the discriminatory barriers retarding MBE development and have arrived in the realm of the level playing field. This assumption has never been empirically tested (Bates, 2009). Owner net-worth and firm-size caps tend to cut out MBEs from procurement in industry groups where large scale operation is essential both for firms to operate efficiently and to undertake the large contracts that typify most available procurement opportunities. In heavy construction, for example, mean sales of non-minority-owned small firms listed in 2006 in the federal government's central contractor registry (CCR) were $4.0 million. Among MBEs in heavy construction (roads, bridges, sewer lines, etc.), in contrast, mean sales among CCR registrants were less than $2.4 million, which is less than 60% of the non-minority average (Euquant, 2007).

Whenever government assistance flows to higher-income, better-educated entrepreneurs, an objection invariably arises: Why help those who are already successful (Bates, 2009, p. 182)? Bates (2009) responds that it is the viable firms that are most apt to generate economic development and create jobs (Bates, 2006). Viable firms most often complete their procurement contracts successfully. The alternative of assisting weak firms often leads to mass business failure (Bates, 2003).

The theoretical basis for replacing race-based remedies with race-neutral remedies stems in part from contentions that observed racial disparities in labor markets can be explained by place or class rather than by race (Cherry, 2001). Examples of class-based remedies include scholarships for low-income students and preferential admissions for the top 10% of graduates of inner-city schools. These remedies avoid the focus on race by examining factors highly correlated with race. Davila, Ha and Myers (2012) estimate the impacts of a race-neutral Emerging Small Business Enterprise (ESBE) Programme in New Jersey in 2003–2004 on DBEs: women- and minority-owned contractors. They find that although women- and minority-owned firms conceptually benefit from ESBE set-asides (DBEs are included in ESBEs), they do not benefit as much as non-Disadvantaged Business Enterprises (DBEs), resulting in a reduced share of total contract dollars awarded to DBEs. This is an intuitive result: All DBEs are ESBEs, but not all ESBEs are DBEs. As the criteria for ESBEs expand the number of non-DBE eligible firms, the probability of contracts going to DBEs will necessarily decline –unless the state also raises the percentage goals for ESBEs in a commensurate fashion, which it does not.

Fairlie and Marion (2012) utilize the elimination of affirmative action in California and Washington States through voter initiatives to identify the effect of affirmative action on minority and female self-employment rates. There are two primary mechanisms through which affirmative action can affect the business ownership rate. First, affirmative action in procurement can lead to greater profits for incumbent and potential entrant DBEs if it increases public purchases of goods and services from minority- and women-owned firms (Fairlie and Marion, 2012). The greater profits increase the likelihood of entry by potential entrants and reduce the likelihood of exit on the part of incumbent DBEs. This can occur either from encouraging the utilization of DBEs that are as productive as their white male counterparts but are not getting opportunities due to discrimination or network limitations, or by creating opportunities for DBEs that are not yet as cost effective. Prime contractors are often required to allot a specified percentage of the total amount of government contracts to minority-owned subcontractors and suppliers (Myers and Ha, 2009). Second, if affirmative action programs affect both employment and procurement, then elimination of these programs can potentially have the counterintuitive effect of increasing the self-employment rate among minorities and women. This is because limited or reduced labor market opportunities are found to lead to entry into self-employment.

In their base specifications, Fairlie and Marion (2012) find evidence of modest increases in self-employment among minorities and women in both California and Washington after elimination of affirmative action. This result is consistent with the hypothesis that the opportunity cost of starting a business fell due to restricting opportunities in the traditional labor markets. The sign of the estimated effect, however, is not uniformly positive when considering specific race groups; and the statistical significance of the main results is somewhat sensitive to the choice of control states.

Fairlie and Marion's (2012) results beg the question of the benefit of the government programs. The change of the self-employed from the affirmative action-related government programs to other self-employment ventures can possibly lead to a more effective use of the talents of the self-employed who were supported under the affirmative action programs. That is, the transition to other activities could be beneficial to the (former) program beneficiaries and the public.

PART 6: FUTURE RESEARCH

During my survey, I came across ideas for future research that are interesting to undertake in our seeking to better understand minority businesses in U.S. I note that these are not necessarily my ideas, but often those that have come from suggestions or limitations mentioned in the studies. I categorize these research ideas into management, money and marketing, consistent with the framework of the research covered in this study.

6.1. Management: Human Capital

6.1.1. How to best develop entrepreneurial skills and knowledge within education programs.

It seems valuable to further investigate how one can best develop skills and knowledge within educational programs that enhance entrepreneurial performance. Many programs are run and supported financially by governments to teach entrepreneurship in schools. However, little is known about how to proceed. Now that we know that formal education contributes to the development of entrepreneurial (income) performance in general, the next question is: How can one build entrepreneurial competencies and relevant knowledge efficiently in entrepreneurship courses? A literature on the evaluation of entrepreneurship education has only recently emerged (see Oosterbeek et al. 2010; Martin et al. 2013).

6.1.2. The degree to which the positive effect of education on entrepreneurial choice holds for all modes of entry into entrepreneurship

It would be interesting to analyze whether the positive effect of education on entrepreneurial choice holds for all modes of entry into entrepreneurship—e.g. new venture start versus business takeover—and all ethnicities alike—e.g., Hispanic, black, Asian.

6.1.3. The relationship between education and financial capital in business entry and performance.

Lofstrom and Bates (2013) and Lofstrom et al. (2013) find that there exist human and financial capital constraints that restrict the line of business entry. Their finding supports a dual-track approach to promoting entrepreneurship. The dual-track approach involves attempting to soften capital constraints while simultaneously developing initiatives to deepen human capital. Their findings suggest that duality is especially important when human capital and financial capital are interrelated and endogenous. Thus the power of extra education to improve entrepreneurs' performance seems to be greater when capital constraints exist, because education helps relax these constraints and also has a direct effect on performance. But the interrelatedness of these phenomena prevented Lofstrom and Bates (2013) and Lofstrom et al. (2013) from recommending a correct balance between government programs that promote human capital as opposed to financial capital. The development of approaches to this design is an important area of future research.

6.1.4. The importance of owner's balanced skills ("jack of all trades") versus deep skills in business entry and performance.

Lazear (2005) has initiated a new strand of research based on his 'jack-of-all-trades' theory. The idea of the theory is that entrepreneurs, in their capacity as 'jacks-of-all-trades', may require a broad mix of skills, possibly obtained through formal education. Lazear (2005), Wagner (2006), Silva (2007), Hartog et al. (2010) and Stuetzer et al. (2013) perform empirical tests that support the idea that entrepreneurs are indeed 'jacks-of-all-trades'. The issues here are 1) the performance effects of a balanced skill set; and 2) potential sources of balanced skills. To what extent do the issues relating to balanced skill sets differ across ethnic groups, and what are the implications for the best educational preparation for entrepreneurship? The resolution to these questions is an interesting area of future research.

6.1.5. The importance of teams in minority business entry and performance.

The entrepreneurial team is defined as the management team of the new venture (Timmons and Spinelli, 2004). The entrepreneurial team is a core element of the entrepreneurship phenomenon. How important are teams for minority entrepreneurs compared to non-minority entrepreneurs? How do minority and non-minority firms differ in team members' human capital and financial capital, and what effect does this have on the performance of minority firms compared to non-minority firms?

6.2. Money: Financial Capital.

6.2.1. Changes over time in the unexplained gap in bank lending to minority businesses.

With regard to institutional lending to entrepreneurial firms, unfortunately, the latest quality data are the 2003 SSBF. None of the current available nationally representative data sets provide as much relevant information about lending decisions. In order to understand how different economic conditions change the relative ability of minorities to finance their firms, a data set and research agenda should be undertaken to estimate the changes in bank lending practices over time and under different local and regional circumstances. To what extent are the variables most important in creating unexplained differences in minority firms' access to financing changing over time, and why are these changes occurring?

6.2.2. The role of loan maturity in addressing the supply of capital to small and minority businesses.

Ortiz-Molina and Penas (2008) investigate the determinants of the maturity loans to small businesses. Their results indicate that shorter loan maturities serve to mitigate the problems associated with borrower risk and asymmetric information that are typical of small business lending. In supplying financing, to what extent is there a racial difference in adjusting loan maturity in response to firm and owner traits? How has this changed over time?

6.3. Markets: Line of Business and Location

6.3.1. Reasons for co-ethnic clientele focus

It would be of value to examine whether minority firms that have a high proportion of co-ethnic clientele chose to focus on this population or have limited access to a different clientele due to their physical location in urban areas where a predominantly co-ethnic population resides.

6.3.2. Degree of ethnic mix of clients among other ethnic minorities.

Furthermore, it would be interesting to differentiate co-ethnic clients from other minority (of a different ethnic/racial background) and white clients. The literature reports, for example, that in their role of middle-man minorities, many Korean businesses serve other minorities in inner cities (Portes & Rumbaut, 2006).

6.3.3. The effect of differences in the mix of other ethnicities among clientele on firm performance.

It would be valuable to examine the impact of that phenomenon on financial performance. It would also be beneficial to examine whether certain types of firms benefit from a focus on co-ethnic clients more so than others. For example, Hispanic-owned firms are concentrated in retail and wholesale trade (62%) and construction (24%) (Census, 2002a). It may in fact be more beneficial to a retailer selling ethnic goods (such as foods for example) or offering specific ‘in-language’ services, to focus on a co-ethnic clientele. Indeed, Tienda and Raijman (2004) found that Hispanic business owners prefer to use the services of co-ethnic accountants, possibly because ‘‘it is easier to communicate with [members of their co-ethnic group] and to establish a basis of trust’’ (p. 15). A similar preference was identified by Shinnar and Young (2008): 65% of their sample Hispanic immigrant entrepreneurs had a preference for using a co-ethnic accountant. Differentiating between different types of firms and the goods and services they offer could identify firms that may benefit to a greater extent from focusing on a co-ethnic client base.

6.3.4. The benefits and effects of programs that increase diversity in government and private contracting.

The evidence, both theoretical and empirical, is unsettled on the extent to which minority firms benefit from government preferential treatment in contracting (Marion, 2009a). In the private sector, many of the Fortune firms also operate programs that seek to increase their purchases of products and services from minority firms. Future research should analyze the impact of changes in competitive structure of the industries of the minority firms, and the benefit of the increased minority entrepreneurship and employment in addition to the direct impact of these programs.

6.3.5. Other: Interacting ethnicity with other owner traits in predicting firm outcomes will result in better understanding of how ethnic differences affect differences in firm outcomes.

In seeking ways to understand the best assistance efforts, it is helpful to understand how the impact of demographic and firm traits on business performance (or other dependent variables of interest) differs across ethnic groups. How do the various variables that represent the determinants of new venture performance differ between minorities and non-minorities? How, for example, does the impact of age on performance differ between non-Hispanic white entrepreneurs and minority entrepreneurs? How does this differ across groups? Suppose Y is some outcome variable (such as performance) and we want to understand the difference in performance between minority and non-minority firms, where we have *N* independent variables plus minority status. The standard study undertakes the following regression:

$$Y = a + b_1X_1 + b_2X_2 + \ldots + b_NX_N + b_MM$$

Where M is a dummy variable, M = 1 if minority, M = 0 if non-minority. Instead of (or in addition to) this approach, we can interact minority with one or more of the independent variables to see if the impact of say, education, on performance is different between minority and non-minority firms.

$$Y = a + b_1X_1 + b_2X_2 + \ldots + b_NX_N + b_MM + b_{1M}X_1M$$

Here, $\boldsymbol{b_{1M}}$ measures the difference between minority and non-minority entrepreneurs in how X_1 affects firm performance. In this way, the understanding of differences between minority and non-minority on the impact of age, education, experience, gender, etc. can be explored for better understanding of differences between minority and non-minority firms.

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