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Disparities in Capital Access between Minority and Non-Minority-Owned Businesses:

The Troubling Reality of Capital Limitations Faced by MBEs

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U.S. Department of Commerce, Minority Business Development Agency

by
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Preface

Capital access remains the most important factor limiting the establishment, expansion and growth of minority-owned businesses. Given this well established constraint, the current financial environment has placed a greater burden on minority entrepreneurs who are trying to keep their businesses thriving in today's economy.

In this study, Dr. Robert W. Fairlie and Dr. Alicia Robb provide an in-depth review and analysis of the barriers to capital access experienced by minority entrepreneurs, and the consequences that limited financial sources are placing on expanding minority-owned firms.

Minority-owned businesses have been growing in number of firms, gross receipts, and paid employment, at a faster pace than non-minority firms. If it were not for the employment growth created by minority firms, American firms, excluding publicly-held firms, would have experienced a greater job loss between 1997 and 2002. While paid employment grew by 4 percent among minority-owned firms, it declined by 7 percent among non-minority firms during this period.

Minority-owned businesses continue to be the engine of employment in emerging and minority communities. Their business growth depends on a variety of capital, from seed funding to establish new firms, to working capital and business loans to expand their businesses, to private equity for acquiring and merging with other firms.

Without adequate capital minority-owned firms will fail to realize their full potential. In 2002 there were 4 million minority-owned firms, grossing $661 billion in receipts and employing 4.7 million workers. If minority-owned firms would have reached parity with the representation of minorities in the U.S. population, these firms would have employed over 16.1 million workers, grossed over $2.5 trillion in receipts, and numbered 6.5 million firms. Increasing the flow of capital for minority-owned businesses must be a national priority to re-energize the U.S. economy and increase competitiveness in the global marketplace.

David A. Hinson
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Executive Summary

Minority business enterprises (MBEs) make a substantial contribution to the U.S. economy, generating $661 billion in total gross receipts in 2002. Minority-owned firms also employed 4.7 million people with an annual payroll totaling $115 billion. The growth rates in the total number of firms, employment and gross receipts of minority-owned businesses far outpaced non-minority-owned businesses between 1997 and 2002. Had minority-owned businesses reached economic parity, the U.S. economy would have recorded higher levels of key economic activity estimated at $2.5 trillion in gross receipts and 16.1 million employees. As defined by the Minority Business Development Agency, economic parity is achieved when the level of business activity of a business group is proportional to that group's representation in the U.S. adult population.[1]

Minority-owned firms are an engine of employment, with young firms creating jobs at similar rates as young non-minority firms. Greater capital access for minority-owned firms is essential to sustain their growth, reduce national unemployment levels, and in particular the high rate of unemployment in minority communities.

At the very time that broad economic productivity is critical to strengthening the economic foundation of the nation, the growth potential of minority-owned businesses is being severely hampered. Across the nation minority-owned businesses face the obstacles of access to capital, access to markets and access to social networks, all of which are essential for any business to increase in size and scale.

A review of national and regional studies over several decades indicates that limited financial, human, and social capital as well as racial discrimination are primarily responsible for the disparities in minority business performance. Inadequate access to financial capital continues to be a particularly important constraint limiting the growth of minority-owned businesses. The latest nationally representative data on the financing of minority firms indicates large disparities in access to financial capital. Minority-owned businesses are found to pay higher interest rates on loans. They are also more likely to be denied credit, and are less likely to apply for loans because they fear their applications will be denied. Further, minority-owned firms are found to have less than half the average amount of recent equity investments and loans than non-minority firms even among firms with $500,000 or more in annual gross receipts, and also invest substantially less capital at startup and in the first few years of existence than non-minority firms.

The current economic crisis is posing severe challenges for minority businesses to meet their potential of creating 16.1 million jobs and generating $2.5 trillion in annual gross receipts. Existing obstacles to greater minority business success challenge the realization of the American Dream of ownership and wealth creation. Unless immediate action is taken, minority communities will continue to lag behind their non-minority counterparts undermining the ability of the nation to quickly regain its economic footing.

[1] U.S. Department of Commerce, Minority Business Development Agency, *The State of Minority Business Enterprises, An Overview of the 2002 Survey of Business Owners, Number of Firms, Gross Receipts, and Paid Employees (2006).*

Key Findings

Job Creation

- **Young Minority-Owned Firms Create Jobs at Similar Rates as Young Non-Minority Firms** - Young minority firms created jobs at similar rates as young non-minority firms over the first four years of operations. Between 2004 and 2007, young minority firms created 3.1 jobs while young non-minority firms created 2.4 jobs during the same period according to an analysis of the Kauffman Foundation Survey.

- **Minority Businesses Create Jobs with Good Pay** - The average payroll per employee was not substantially higher among non-minority employer firms compared to that of minority-owned firms. In 2002, payroll per employee was $29,842 for non-minority employer firms compared to about $26,000 for minority-owned firms, according to data from the U.S. Census Bureau. Minority-owned firms are employing workers at similar wages as non-minority firms, and are the backbone of many minority communities across the nation.

- **2001 U.S. Recession Benefited from Minority Business Job Creation** - Between 1997 and 2002, total employment declined by 7 percent among non-minority firms, however total employment increased among minority firms during the same period. Total employment grew by 11 percent among Hispanic owned firms, by 5 percent among African American owned firms, and by 2 percent among Asian firms. For all minority firms employment increased by 4 percent during the same period. If not for employment growth among minority-owned firms over this period the loss in total employment would have been even larger: an additional 160,000 jobs would have been lost.

Faster Growth

- **Minority-Owned Firms Outpace Growth of Non-Minority Firms -** Between 1997 and 2002, minority-owned firms far outpaced non-minority firms in terms of growth in number of businesses total gross receipts, number of employees, and total annual payroll. Minority firms grew in number of firms by 30 percent and in gross receipts by 12 percent, compared with an increase of 6 percent in number of firms and 4 percent in gross receipts for non-minority firms. Total employment grew by 4 percent and annual payroll by 21 percent for minority-owned firms compared to a decline of 7 percent in total employment and an increase in annual payroll of 8 percent for non-minority firms during the same period.

- **Minority-Owned Firms Lag Behind in Size Compared with Non-Minority Firms** - Although minority-owned firms outpaced the growth of non-minority firms in several business measures, minority-owned firms are smaller on average than non-minority firms in size of gross receipts, employment, and payrolls. In 2002, average gross receipts of minority-owned firms were about $167,000 compared to $439,000 for non-minority firms. Average employment size of minority employer firms was 7.4 employees compared to 11.2 employees for non-minority employer firms in 2002. Average payroll of minority employer firms was about $200,000 compared to $333,000 for non-minority employer firms.

Capital Access Disparities

Loans

- **Minority-Owned Firms Are Less Likely To Receive Loans than Non-Minority Firms** - Among firms with gross receipts under $500,000, 23 percent of non-minority firms received loans compared to 17 percent of minority firms. Among high sales firms (firms with annual gross receipts of $500,000 or more), 52 percent of non-minority firms received loans compared with 41 percent of minority firms according to 2003 data from the Survey of Small Business Finances.

- **Minority-Owned Firms Receive Lower Loan Amounts than Non-Minority Firms** - The average loan amount for all high sales minority firms was $149,000. The non-minority average was more than twice this amount at $310,000. Conditioning on the percentage of firms receiving loans, the average loan received by high sales minority firms was $363,000 compared with $592,000 for non-minority firms.

- **Minority-Owned Firms Are More Likely To Be Denied Loans** - Among firms with gross receipts under $500,000, loan denial rates for minority firms were about three times higher, at 42 percent, compared to those of non-minority-owned firms, 16 percent. For high sales firms, the rate of loan denial was almost twice as high for minority firms as for non-minority firms.

- **Minority-Owned Firms Are More Likely To Not Apply for Loans Due to Rejection Fears** - Among firms with gross receipts under $500,000, 33 percent of minority firms did not apply for loans because of fear of rejection compared to 17 percent of non-minority firms. For high sales firms, 19 percent of minority firms did not apply for loans because of a fear of rejection compared to 12 percent of non-minority firms.

- **Minority-Owned Firms Pay Higher Interest Rates on Business Loans** - For all firms, minority firms paid 7.8 percent on average for loans compared with 6.4 percent for non-minority firms. The difference was smaller, but still existed between minority and non-minority high sales firms.

Equity

- **Minority-Owned Firms Receive Smaller Equity Investments than Non-Minority Firms** - The average amount of new equity investments was $3,379 for minority firms, which is 43 percent of the non-minority level. The average amount of new equity investments was $7,274 for minority firms with high sales, which was only 38 percent of the non-minority level according to 2003 data from the Survey of Small Business Finances.

- **Venture Capital Funds Focused on Minority-Owned Firm Investments Are Competitive** - Venture capital funds focused on investing in minority-owned firms provide returns that are comparable to mainstream venture capital firms. Funds investing in minority businesses may provide attractive returns because the market is underserved.

Financial Investment

- **Minority-Owned Firms Have Lower Loan and Equity Investments** - Investment disparities between minority and non-minority firms were larger for external debt (bank loans, credit cards) and especially external equity, compared to the disparity in personal or family loan investments. Minority firms averaged $29,879 in external debt compared with $36,777 for non-minority firms. Minority firms had the most trouble obtaining external equity with $2,984 on average compared with $7,607 on average for non-minority firms.

- **Disparities in Access to Financial Capital Grow after First Year of Operations** - Non-minority businesses invested an average of $45,000 annually into their firms, while minority-owned firms invested less than $30,000 on average after the first year of operation. The disparity in financial capital between minority and non-minority firms was much larger in percentage terms for the next three years in operation than their first year.

- **Lower Wealth Levels Are A Barrier to Entry for Minority Entrepreneurs** - Estimates from the U.S. Census Bureau indicate that half of all Hispanic families have less than $7,950 in wealth, and half of all African American families less than $5,446. Wealth levels among whites are 11 to 16 times higher. Low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner's wealth can be invested directly in the business, used as collateral to obtain business loans or used to acquire other businesses.

- **Experience, Geographic Location, Lower Sales and Industry Sectors Partially Limit Capital Access for Minority Firms** - Minority-owned businesses had less business experience, lower sales, and less favorable geographical and industry distributions, all of which partially limited their ability to raise financial capital.

Introduction

Minority businesses enterprises (MBEs) contribute substantially to the U.S. economy. Businesses owned by minorities produced $661 billion in gross receipts in 2002, and their growth rate in total gross receipts far outpaced the growth rate for non-minority-owned businesses between 1997 and 2002.[2] In 2002, minority firms employed a workforce of 4.7 million people with an annual payroll of $115 billion. These jobs are located across the nation, many in emerging communities and employing a large proportion of minorities.[3] Another contribution that is often overlooked, however, is that minority business owners create an additional four million jobs for themselves.

Although minority-owned businesses contribute greatly to the macro-economy and many are extremely successful, there remains a sizeable untapped potential among this group of firms. If minority-owned firms would have reached economic parity in 2002, these firms would have employed over 16.1 million workers and grossed over $2.5 trillion in receipts.[4] As defined by the Minority Business Development Agency, economic parity is achieved when the level of business activity of a business group is proportional to that group's representation in the U.S. adult population.[5]

Minority-owned firms are smaller on average than non-minority-owned firms with lower gross receipts, survival rates, employment, and payrolls.[6] The disparities are extremely large: for example, Hispanic-owned firms have an average annual gross receipts level that is one-third the non-minority level, and African American owned firms have an average annual gross receipts level that is one-sixth the non-minority level. A growing number of studies indicate that limited financial, human and social capital, as well as racial discrimination are responsible for these disparities in business performance.[7] Inadequate access to financial capital is found to be a particularly important constraint limiting the growth of minority-owned businesses.

Given the current financial crisis, the credit markets have tightened and access to capital has being further restricted for MBEs. Moreover, the rapid decline in the housing, stock and labor markets in the past several months has taken a toll on an entrepreneur's personal and family wealth. This wealth is important because is frequently the primary source of capital entrepreneurs have for investing in their businesses. Likewise, the potential to receive outside equity funding from venture capitalists and angel investors has also dropped considerably in recent months. For example, the total amount invested by venture capitalists plummeted from $5.7 billion for 866 deals in the fourth quarter of 2007 to only $3.0 billion for 549 deals in the fourth quarter of 2008.[8]

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[2] Robert Fairlie and Alicia Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States* (Cambridge: MIT Press, 2008). U.S. Department of Commerce, Minority Business Development Agency, The State of Minority Business (fact sheet), 2008 (accessed July 2009); available from http://www.mbda.gov/index.php?section_id=6&bucket_id=789#bucket_852.

[3] Thomas D. Boston, *The ING Gazelle Index, Third Quarter, 2003* (accessed July 2009); available from www.inggazelleindex.com. Thomas D. Boston, "The Role of Black-Owned Businesses in Black Community Development," in *Jobs and Economic Development in Minority Communities: Realities, Challenges, and Innovation,* eds. Paul Ong and Anastasia Loukaitou-Sideris (Philadelphia: Temple University Press, 2006). U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners* (Washington, D.C.: U.S. Government Printing Office, 1997).

[4] U.S. Department of Commerce, Minority Business Development Agency, *The State of Minority Business Enterprises, An Overview of the 2002 Survey of Business Owners, Number of Firms, Gross Receipts, and Paid Employees.*

[5] Ibid. Note: In 2002, minorities represented 29 percent of the U.S. adult population.

[6] U.S. Census Bureau, 1*992 Economic Census: Characteristics of Business Owners (1997). U.S. Census Bureau, 2002 Economic Census, Survey of Business Owners* (Washington, D.C.: US Government Printing Office, 2006).

[7] U.S. Department of Commerce, Economics and Statistics Administration and the Minority Business Development Agency, *Keys to Minority Entrepreneurial Success: Capital, Education and Technology,* Patricia Buckley (2002). David G. Blanchflower, P. Levine, and D. Zimmerman, "Discrimination in the Small Business Credit Market," *Review of Economics and Statistics* 85, no. 4 (2003): 930-943. Ken Cavalluzzo, Linda Cavalluzzo, and John Wolken, "Competition, Small Business Financing, and Discrimination: Evidence from a New Survey," *Journal of Business 75*, no. 4 (2002): 641-679. Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[8] PricewaterhouseCoopers and the National Venture Capital Association, *MoneyTree™ Report, 2009* (accessed October 2009); available from http://www.pwcmoneytree.com.

Banks and other lending institutions have also severely tightened lending standards and increased loan costs to small, medium and large businesses. In its annual survey of senior loan officers, the Federal Reserve found that 65 percent of domestic banks have "tightened lending standards on commercial and industrial loans to large and middle-market firms," and 70 percent of these banks tightened lending standards to small firms. In addition, "large fractions of banks reported having increased the costs of credit lines to firms of all size."[9] Banks are reluctant to lend to minority-owned firms and other businesses in the current economic recession because of concerns about the ability to repay loans. Additionally, the decline in the personal wealth of entrepreneurs has limited their ability to use this wealth as collateral or personal guarantees for loans. The secondary market for loans has dried up, and many banks, especially community banks, are struggling to have enough deposits to meet the demand for loans.

Diminishing credit access and higher borrowing costs will disproportionately impact the creation and growth of minority businesses across America. The recent unprecedented decline in the financial market combined with a severe drop in demand for goods and services resulting from the current economic recession may lead to many minority business failures. Anecdotally, business trade organizations and the Minority Business Enterprise Centers funded by the Minority Business Development Agency have reported that credit lines of viable minority-owned businesses have been closed down by their lending institutions. As a result of the existing financial constraints, the tremendous growth in number of firms, gross receipts and employment enjoyed by minority firms during the past decades could be halted with large negative consequences for the entire U.S. economy.

It is an important policy concern to ensure and ultimately improve the performance of MBEs in the United States. Business owners represent roughly 10 percent of the workforce, but hold nearly 40 percent of the total U.S. wealth.[10] Strong minority business growth directly impacts the reduction of inequality in earnings and wealth between minorities and non-minorities.[11]

Another concern is the loss in economic efficiency resulting from blocked opportunities for minorities to start, acquire and grow businesses. Among these barriers to business formation are liquidity constraints and unfair lending practices that result from structural inequalities or racial discrimination. Barriers to entry and expansion faced by MBEs are very costly to U.S. productivity, especially as minorities represent an increasing share of the total population. Additionally, by limiting the business success to only a few groups and not the broad range of diverse groups that comprise the United States we are constraining innovative ideas for new products and services, and access to global markets where many minority entrepreneurs have a competitive advantage based on cultural knowledge, social and familial ties, and language capabilities.[12]

In addition, barriers to business growth may be especially damaging for job creation in emerging communities.[13] Minority firms in the United States employed nearly 4.7 million paid workers in 2002,[14] a disproportionate share of them minorities and many of these jobs are located in minority and emerging communities. Without the continuing success and expansion of minority businesses the benefits of economic growth will be unevenly divided across the population.

[9] Board of Governors of the Federal Reserve System, *The January 2009 Senior Loan Officer Opinion Survey on Bank Lending Practices, 2009* (accessed July 2009); available from http://www.federalreserve.gov/boarddocs/SnLoanSurvey/200902/default.htm.

[10] Board of Governors of the Federal Reserve System, "Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances," *Federal Reserve Bulletin, Brian K. Bucks, Arthur B. Kennickell, and Kevin B. Moore*, 2006 (accessed October 2009); available from http://federalreserve.gov/pubs/oss/oss2/2004/bull0206.pdf.

[11] William D. Bradford, "The Wealth Dynamics of Entrepreneurship for Black and White Families in the U.S.," *Review of Income and Wealth 49 (2003): 89-116.*

[12] John Owens and Robert Pazornik, *Minority Business Enterprises in the Global Economy: The Business Case. Prepared in collaboration with the Minority Business Development Agency* (Washington D.C.: Minority Business Development Agency, 2003).

[13] Thomas D. Boston, "Generating Jobs through African American Business Development," *Readings in Black Political Economy,* eds. J. Whitehead and C. Harris (Dubuque: Kendall-Hunt, 1999). Boston, "The Role of Black-Owned Businesses in Black Community Development."

[14] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners. U.S. Census Bureau, 2002 Economic Census: Survey of Business Owners.*

The State of Minority Business

To gain some perspective on the state of minority business in the United States we briefly discuss current business ownership and performance patterns. We first discuss estimates of minority business ownership created from microdata from the 2008 Current Population Survey (CPS). This survey is conducted by the U.S. Bureau of Labor Statistics and Census Bureau and contains the latest available national data on business ownership in the United States. Table 1 reports the business ownership rate, which is the ratio of the number of business owners to the total workforce. The CPS captures individuals who own all types of businesses including incorporated, unincorporated, employer and non-employer businesses although owners of side- and low-hours businesses are excluded.[15]

Table 1
Business Ownership Rates by Race/Ethnicity
Current Population Survey (2008)

	Business Ownership Percent of Workforce	Sample Size
Total	10.1%	692,609
Non-Minority	11.3%	506,160
Native-American	7.6%	6,570
Asian/Pacific Islander	10.3%	33,700
Hispanic	7.9%	74,037
African-American	5.5%	61,957

Notes: (1) The sample consists of individuals ages 20-64 who work 15 or more hours per usual week. (2) Business ownership status is based on the worker's main job activity and includes owners of both unincorporated and incorporated businesses. (3) All estimates are calculated using sample weights provided by the Current Population Survey.

In the United States, 10.1 percent of the total workforce owns a business. Business ownership rates, however, differ substantially by race and ethnicity. Despite the growth in the number of minority firms between 1997 and 2002, minority business ownership rates as a percentage of the minority workforce lagged behind those of non-minorities. Business ownership rates are the highest for non-minorities (i.e. non-Hispanic whites) at 11.3 percent. Asians have the next highest rate at 10.3 percent, which is similar to findings in previous studies.[16] There are differences across Asian groups, however, with some groups such as immigrants from the Philippines having very low rates of business ownership.

[15] Owners of side- and small-scale businesses are excluded because business ownership status is defined for the main job activity and only workers with at least 15 hours worked in the survey week are included in the sample. Published estimates from the CPS only include unincorporated business owners and do not restrict the number of hours worked.

[16] Kwang Kim, Won Hurh, and Maryilyn Fernandez, "Intragroup Differences in Business Participation: Three Asian Immigrant Groups," *International Migration Review 23*, no. 1 (1989). Don Mar, "Individual Characteristics vs. City Structural Characteristics: Explaining Self-Employment Differences among Chinese, Japanese, and Filipinos in the United States," *Journal of Socio-Economics 34*, no.3 (2005). Robert W. Fairlie, *Estimating the Contribution of Immigrant Business Owners to the U.S. Economy, Final Report for U.S. Small Business Administration*, (2008).

Business ownership rates are lower among Native Americans, Hispanics and African Americans. The rate of business ownership among Native Americans is 7.6 percent, among Hispanics is 7.9 percent, and the African American business ownership rate is even lower at 5.5 percent.

Overall, minority business ownership is low relative to the size of the minority workforce. An analysis of trends over the past few decades does not reveal major changes in business ownership rates among minority groups.[17] The barriers to business formation responsible for these patterns are discussed in the next section. Existing barriers to business formation among minorities limit the nation's potential for economic growth and productivity.

Total Gross Receipts of Minority-Owned Businesses

Over the past two decades, growth in the total number of minority-owned firms and their annual gross receipts far outpaced the growth rate for non-minority-owned firms. Table 2 reports estimates of the number of businesses and total gross receipts by ethnic and racial group over the past two decades.[18] The statistics are from the most widely used and highly respected sources of data on minority-owned businesses -- the Survey of Minority-Owned Business Enterprises (SMOBE) and the Survey of Business Owners (SBO), which are surveys conducted by the U.S. Census Bureau. Estimates are derived for non-minority-owned firms as outlined below.

Table 2
Sales and Receipts by Ethnicity and Race
Survey of Minority-Owned Business Enterprises (1982-1997) and Survey of Business Owners (2002)

		Includes C-Corps	All Firms	Non-Minority Owned Firms	Black-Owned Firms	Hispanic-Owned Firms	Asian and P.I.-Owned Firms	Native Amer./ Nat. Alaskan
Total number of firms	1982	No	12,059,950	11,318,310	308,260	233,975	187,691	13,573
	1987	No	13,695,480	12,481,730	424,165	422,373	355,331	21,380
	1992	No	17,253,143	15,287,578	620,912	862,605	603,426	102,271
	1997	No	18,278,933	15,492,835	780,770	1,121,433	785,480	187,921
	1997	Yes	20,440,415	17,316,796	823,499	1,199,896	912,960	197,300
	2002	Yes	22,480,256	18,326,375	1,197,567	1,573,464	1,132,535	201,387
Total sales and receipts ($1,000)	1982	No	$967,450,721	$932,996,721	$9,619,055	$11,759,133	$12,653,315	$495,000
	1987	No	$1,994,808,000	$1,916,968,057	$19,762,876	$24,731,600	$33,124,326	$911,279
	1992	No	$3,324,200,000	$3,122,188,579	$32,197,361	$76,842,000	$95,713,613	$8,057,003
	1997	No	$4,239,708,305	$3,904,392,106	$42,670,785	$114,430,852	$161,141,634	$22,441,413
	1997	Yes	$8,392,001,261	$7,763,010,611	$71,214,662	$186,274,581	$306,932,982	$34,343,907
	2002	Yes	$8,783,541,146	$8,055,884,659	$88,641,608	$221,927,425	$330,943,036	$26,872,947
Mean sales and receipts	1982	No	$80,220	$82,433	$31,204	$50,258	$67,416	$36,469
	1987	No	$145,654	$153,582	$46,592	$58,554	$93,221	$42,623
	1992	No	$192,672	$204,230	$51,855	$89,081	$158,617	$78,781
	1997	No	$231,945	$252,013	$54,652	$102,040	$205,151	$119,419
	1997	Yes	$410,559	$448,294	$86,478	$155,242	$336,195	$174,069
	2002	Yes	$390,722	$439,579	$74,018	$141,044	$292,214	$133,439

Sources: U.S. Census Bureau, Economic Census, Survey of Minority-Owned Business Enterprises (1982, 1987, 1992, 1997), U.S. Census Bureau, Survey of Business Owners (2002), and special tabulations prepared by the U.S. Census Bureau. Notes: (1) All firms excludes publicly held, foreign-owned, not for profit and other firms, which are not included in the estimates by race. (2) Estimates are not directly comparable over time. (3) The non-minority category is equal to all firms minus all minority firms for 1982, 1987 and 1992, and all white firms minus Latino-owned firms in 2002. (4) The most recently revised estimates are reported when applicable. (5) Native American/Native Alaskan estimates for 2002 do not include American Indian tribal entities making them not directly comparable to 1997.

[17] See Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*, for more discussion on recent trends in business outcomes by race and ethnicity.

[18] The tables reported here represent a new compilation of data of recent trends in business outcomes by race. The data reported here are taken from government publications and special tabulations prepared for us by U.S. Census Bureau staff (see Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States* for more details). These data, however, experienced several changes in sample criteria and definitions making them not directly comparable over time. Estimates were also revised in many cases by the Census Bureau, and we attempted to find the most recently available data. The 2002 Survey of Business Owners (SBO) contains the most recent data. Preliminary data for the 2007 SBO will be published by the Census in 2010.

Data from the SMOBE and SBO indicate that the number of minority businesses grew rapidly over the past two decades. The growth rates and increases in the number of Asian- and Hispanic-owned businesses are large. Asian-owned businesses grew from 187,691 to more than 1.1 million in 2002, and Hispanic-owned businesses grew from 233,975 in 1982 to 1.6 million in 2002. Likewise, African American-owned businesses grew from 308,260 in 1982 to nearly 1.2 million in 2002. The total number of businesses and the number of non-minority-owned businesses also grew substantially over the period, but at much slower rates. For example, the total number of businesses in the United States grew by 86 percent from 1982 to 2002. On the other hand, growth rates for Asian and Hispanic business were the highest at 503 percent and 572 percent, respectively. The growth rate for African American-owned businesses was also high at 288 percent during the same period. One major factor spurring the rapid growth rates in the number of minority businesses is population growth, especially for Asians and Hispanics. In addition, growth rates are partly due to changes in the sample universe of businesses included in the SMOBE and SBO surveys. Because of sample changes, growth rates for total minority-owned firms may not be comparable over the past two decades.

If we focus on the most recent period available, 1997 to 2002, statistics for the total number of businesses including C corporations indicate rapid growth rates in the number of minority-owned businesses. Minority-owned firms grew in number of firms by 30 percent, from 3 million to 4 million firms during that period.[19] The number of Asian and Hispanic businesses grew by 24.1 percent and 31.1 percent, respectively. The number of African American-owned businesses grew faster, by 45.4 percent, from 1997 to 2002. In contrast, the number of non-minority businesses grew by 5.8 percent from 1997 to 2002. Although data from the CPS indicate slower rates of growth in the number of business owners, these data confirm the finding that the number of minority businesses increased much faster than the number of non-minority businesses over the past two decades.[20]

Total gross receipts for all minority-owned firms were nearly $700 billion in 2002. Native American owned firms grossed $27 billion in receipts. Asian-owned firms had the largest contribution among minority-owned firms at $331 billion. Hispanic-owned firms grossed $222 billion in receipts, and African American-owned firms had total gross receipts of nearly $90 billion.

Total gross receipts grew much faster for minority-owned firms than for non-minority-owned firms, by 12 percent from $591 billion to $661 billion.[21] The growth rate in total gross receipts for Asian-owned firms was 8 percent, and for Hispanic-owned firms 19 percent. African American-owned firms experienced the fastest growth rate in total sales at 24 percent from 1997 to 2002. In contrast to these high growth rates, total gross receipts grew by only 4 percent from 1997 to 2002 for non-minority firms. It is difficult to estimate growth rates for Native American firms because the 2002 data excluded Native American tribal entities more effectively than in 1997 and are therefore not comparable.

Total Employment and Payroll

Minority-owned firms also contribute substantially to greater employment in the U.S. economy. Minority-owned firms employed 4.7 million workers with a total annual payroll of $115 billion in 2002. Among specific groups, Native American firms employed nearly 200,000 paid workers, Asian firms 2.2 million paid workers, Hispanic firms more than 1.5 million paid workers, and African American firms over 750,000 paid workers. Table 3 includes the data.

[19] U.S Department of Commerce, Minority Business Development Agency, *The State of Minority Businesses.*

[20] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[21] U.S Department of Commerce, Minority Business Development Agency, *The State of Minority Businesses.*

Table 3
Employment Statistics by Ethnicity and Race
Survey of Minority-Owned Business Enterprises (1982-1997) and Survey of Business Owners (2002)

		Includes C-Corps	All Firms	Non-Minority Owned Firms	Black-Owned Firms	Hispanic-Owned Firms	Asian & P.I.-Owned Firms	Native Amer./ Nat. Alaskan
Total number of firms	1982	No	12,059,950	11,318,310	308,260	233,975	187,691	13,573
	1987	No	13,695,480	12,481,730	424,165	422,373	355,331	21,380
	1992	No	17,253,143	15,287,578	620,912	862,605	603,426	102,271
	1997	No	18,278,933	15,492,835	780,770	1,121,433	785,480	187,921
	1997	Yes	20,440,415	17,316,796	823,499	1,199,896	912,960	197,300
	2002	Yes	22,480,256	18,326,375	1,197,567	1,573,464	1,132,535	201,387
Total number of employees	1982	No	N/A	N/A	121,373	154,791	N/A	N/A
	1987	No	19,853,333	19,016,850	220,467	264,846	351,345	8,956
	1992	No	27,403,974	25,531,104	345,193	691,056	N/A	N/A
	1997	No	29,703,946	27,122,185	378,346	838,738	1,224,733	202,535
	1997	Yes	58,901,412	54,084,357	718,341	1,388,746	2,203,079	298,661
	2002	Yes	55,368,216	50,429,209	753,978	1,536,795	2,243,267	191,270
Mean number of paid employees	1982	No	N/A	N/A	0.4	0.7	N/A	N/A
	1987	No	1.4	1.5	0.5	0.6	1.0	0.4
	1992	No	1.6	1.7	0.6	0.8	N/A	N/A
	1997	No	1.6	1.8	0.5	0.7	1.6	1.1
	1997	Yes	2.9	3.1	0.9	1.2	2.4	1.5
	2002	Yes	2.5	2.8	0.6	1.0	2.0	0.9

Sources: U.S. Census Bureau, Economic Census, Survey of Minority-Owned Business Enterprises (1982, 1987, 1992, 1997), U.S. Census Bureau, Survey of Business Owners (2002), and special tabulations prepared by the U.S. Census Bureau. Notes: (1) All firms excludes publicly held, foreign-owned, not for profit and other firms, which are not included in the estimates by race. (2) Estimates are not directly comparable over time. (3) The non-minority category is equal to all firms minus all minority firms for 1982, 1987 and 1992, and all white firms minus Latino-owned firms in 2002. (4) The most recently revised estimates are reported when applicable. (5) Native American/Native Alaskan estimates for 2002 do not include American Indian tribal entities making them not directly comparable to 1997.

Even more striking from the results reported in Table 3, however, are the relative patterns of employment growth. Total employment grew by 11 percent among Hispanic owned firms from 1997 to 2002, and by 5 percent among African American owned firms. For all minority-owned firms, employment increased by 4 percent between 1997 and 2002.[22] In contrast, total employment actually declined by 7 percent among non-minority firms from 1997 to 2002. *If not for employment growth among minority-owned firms over this period the loss in total employment would have been even larger: an additional 160,000 jobs would have been lost.*[23]

Minority-owned firms make major contributions to the total payroll of firms in the United States (see Table 4). Native American firms paid their employees a total of $5 billion in wages and salaries in 2002, Asian-owned firms paid their employees a total of $57 billion. Hispanic-owned firms had a total annual payroll of $37 billion, and African American-owned firms paid their employees a total of $18 billion. Total payrolls have been growing much faster among minority-owned firms than among non-minority firms. Asian-, Hispanic- and African American-owned businesses combined experienced an increase in total payroll of 23 percent from 1997 to 2002. The rate of growth in the total payroll among non-minority businesses was 8 percent.

[22] U.S. Department of Commerce, Minority Business Development Agency, *Characteristics of Minority Businesses and Entrepreneurs* (2008).

[23] Ibid.

Table 4
Employment Statistics by Ethnicity and Race for Employer Firms Only
Survey of Minority-Owned Business Enterprises (1992-1997) and Survey of Business Owners (2002)

		Includes C-Corps	All Firms	Non-Minority Owned Firms	Black-Owned Firms	Hispanic-Owned Firms	Asian & P.I.-Owned Firms	Native Amer./ Nat. Alaskan
Total number of employer firms	1982	No	N/A	N/A	37,841	39,272	N/A	N/A
	1987	No	3,487,454	3,239,305	70,815	82,908	92,718	3,739
	1992	No	3,134,959	2,823,264	64,478	115,364	N/A	N/A
	1997	No	3,277,510	2,860,580	63,010	151,571	185,357	26,075
	1997	Yes	5,027,208	4,372,817	93,235	211,884	289,999	33,277
	2002	Yes	5,172,064	4,512,577	94,518	199,542	323,161	24,498
Total annual payroll for employer firms ($1,000,000)	1982	No	N/A	N/A	$948	$1,240	N/A	N/A
	1987	No	$299,176	$289,667	$2,761	$3,243	$3,502	$109
	1992	No	$523,574	$495,037	$4,807	$10,768	N/A	N/A
	1997	No	$675,452	$628,500	$6,532	$15,391	$21,620	$4,108
	1997	Yes	$1,499,298	$1,395,150	$14,322	$29,830	$46,180	$6,624
	2002	Yes	$1,626,785	$1,504,917	$17,550	$36,712	$56,871	$5,135
Mean annual payroll for employer firms	1982	No	N/A	N/A	$25,055	$31,573	N/A	N/A
	1987	No	$85,786	$89,423	$38,990	$39,120	$37,770	$29,225
	1992	No	$167,011	$175,342	$74,547	$93,340	N/A	N/A
	1997	No	$206,087	$219,711	$103,673	$101,540	$116,642	$157,543
	1997	Yes	$298,237	$319,051	$153,615	$140,785	$159,240	$199,063
	2002	Yes	$314,533	$333,494	$185,680	$183,980	$175,984	$209,620
Payroll per employee for employer firms	1982	No	N/A	N/A	$7,812	$8,010	N/A	N/A
	1987	No	$15,069	$15,232	$12,524	$12,246	$9,967	$12,201
	1992	No	$19,106	$19,390	$13,924	$15,582	N/A	N/A
	1997	No	$22,739	$23,173	$17,266	$18,350	$17,653	$20,283
	1997	Yes	$25,454	$25,796	$19,938	$21,480	$20,961	$22,180
	2002	Yes	$29,381	$29,842	$23,277	$23,888	$25,352	$26,848

Sources: U.S. Census Bureau, Economic Census, Survey of Minority-Owned Business Enterprises (1982, 1987, 1992, 1997), U.S. Census Bureau, Survey of Business Owners (2002), and special tabulations prepared by the U.S. Census Bureau. Notes: (1) All firms excludes publicly held, foreign-owned, not for profit and other firms, which are not included in the estimates by race. (2) Estimates are not directly comparable over time. (3) The non-minority category is equal to all firms minus all minority firms for 1982, 1987 and 1992, and all white firms minus Latino-owned firms in 2002. (4) The most recently revised estimates are reported when applicable. (5) Native American/Native Alaskan estimates for 2002 do not include American Indian tribal entities making them not directly comparable to 1997.

Minority-owned firms clearly make an important contribution to the U.S. economy as measured by total gross receipts, employment and total payroll. As discussed before, MBEs had total annual gross receipts of $661 billion, employed 4.7 million workers and paid them $115 billion in wages and salaries in 2002. *More importantly, however, minority-owned firms have far outpaced non-minority firms in terms of growth rates in the number of businesses, total gross receipts, number of employees, and total annual payroll.* In short, minority businesses continue to be a substantial part of the U.S. business force with the ability to do more.

Average Firm Performance

Minority-owned businesses contribute greatly to the U.S. economy, but there is sizeable untapped potential among these firms. *Although the growth in number of firms, gross receipts and employees of minority firms far outpaces that of non-minority firms, minority-owned firms are smaller on average than non-minority-owned firms in size of gross receipts, employment, and payrolls.* Tables 2-4 report estimates of average gross receipts, employment and payroll, respectively. We now briefly discuss these patterns.[24]

Minority-owned firms have lower average gross receipts per firm than non-minority-owned firms. In 2002, average gross receipts for minority-owned firms were about $167,000 per firm, compared to $439,000 for non-minority firms. Native American firms had average gross receipts of $133,439, about 30 percent of the average receipts of non-minority firms. Asian-owned firms also had lower average gross

[24] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*.

receipts than non-minority firms, but the difference is much smaller. Average annual gross receipts were $292,214 for Asian-owned businesses. But, for some groups included in the Asian category, average sales were much lower. Filipino-owned firms had average receipts of $113,110, Vietnamese-owned firms had average receipts of $105,501, and Native Hawaiian and Pacific Islander owned firms had average receipts of $147,837.[25]

Hispanic firms also had lower average gross receipts than non-minority firms. Average gross receipts of Hispanic firms were $141,044 in 2002.[26] Finally, African American-owned firms had the lowest average gross receipts among all reported groups at $74,018 per firm. These ethnic and racial disparities have also existed throughout the past two decades and trends in average gross receipts do not indicate recent improvements.

Data from the SBO and SMOBE also indicate that minority-owned firms employed fewer workers on average than non-minority firms. Levels of employment among Native American-, Hispanic-, and African American-owned firms are especially low. Native-American firms averaged 0.9 employees per firm. Asian, Native Hawaiian and Pacific Islander firms averaged 2 employees, Hispanic-owned firms averaged 1 employee, and African American-owned firms averaged 0.6 employees. In comparison, non-minority firms had a mean employment level of 2.8.

If we compare the average number of employees among employer firms the differences in employment between minority and non-minority firms are smaller. In 2002 minority-owned firms had on average 7.4 employees per employer firm, compared to 11.2 employees for non-minority firms.[27] Native American firms averaged 7.8 employees, Asian firms averaged 6.9 employees, Native Hawaiian and Pacific Islander averaged 7.9 employees, Hispanic-owned firms averaged 7.7 employees, and African American-owned firms averaged 8 employees.[28]

Conditioning on employment, racial patterns differ somewhat, and there is evidence that minority employer firms have gained some ground on non-minority employer firms. Table 4 reports estimates of mean annual payroll and payroll per employee by race for the subsample of employer firms. Minority employer firms have made gains relative to non-minority employer firms in recent years, although all four minority groups had lower average payrolls and payrolls per employee than non-minority employer firms. In 2002, all four minority groups had average payrolls that were roughly equal to or less than $200,000 compared with an average payroll of $333,494 among non-minority firms. Much of the difference is due to the number of paid employees. The average payroll per employee was not substantially higher among non-minority employer firms. Payroll per employee was $29,842 for non-minority employer firms compared with $26,848 for Native-American employer firms, $25,352 for Asian employer firms, $23,888 for Hispanic employer firms, and $23,277 for African American employer firms. *Minority-owned firms are employing workers at similar wages as non-minority firms, and are the backbone of many minority communities across the nation.*

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[25] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*.

[26] Black and Hispanic firms are also found to be overrepresented at the bottom of the sales distribution and underrepresented at the top of the sales distribution compared to non-minority firms (Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*). This finding indicates that higher average sales among non-minority-owned businesses are not being driven by a few businesses with very high revenues.

[27] U.S. Department of Commerce, Minority Business Development Agency, *Characteristics of Minority Businesses and Entrepreneurs*.

[28] Ibid.

The new compilation of Census Bureau data reported here and described more thoroughly in a recent publication[29] indicates that although minority firms make large contributions to the U.S. economy they have not achieved parity with non-minority firms. *Minority firms have made progress, but continue to have lower average gross receipts, employment, and total payroll than non-minority firms.* Under economic parity conditions, minority firms would have grossed about $2.5 trillion in receipts and employed 16.1 million workers.[30]

[29] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*.

[30] U.S. Department of Commerce, Minority Business Development Agency, *The State of Minority Business Enterprises, An Overview of the 2002 Survey of Business Owners, Number of Firms, Gross Receipts, and Paid Employees.*

Previous Research on Constraints Faced by Minority-Owned Businesses

What are the barriers faced by minority-owned businesses limiting business ownership and performance? This section reviews previous studies exploring these constraints. We emphasize the role of financial constraints because of their importance.

Financial Capital Constraints

Financial constraints are the most significant issue affecting minority business ownership and business performance. The importance of personal wealth as a determinant of entrepreneurship has been the focus of an extensive body of literature. Numerous studies using various methodologies, measures of wealth and country microdata explore the relationship between wealth and entrepreneurship. Most studies find that asset levels (e.g. net worth) measured in one year increase the probability of starting a business by the following year.[31] The finding has generally been interpreted as providing evidence that entrepreneurs face liquidity constraints.

Do inequalities in personal wealth then translate into disparities in business creation and ownership? To get an idea of the importance of access to financial capital in contributing to racial disparities in business ownership, one only has to look at the alarming levels of wealth inequality existing in the United States. Estimates from the U.S. Census Bureau[32] indicate that half of all Hispanic families have less than $7,950 in wealth, and half of all African American families less than $5,446. Wealth levels among whites are 11 to 16 times higher. *Low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner's wealth can be invested directly in the business, used as collateral to obtain business loans or used to acquire other businesses.* Investors frequently require a substantial level of owner's investment of his/her own capital as an incentive, commonly referred as "skin in the game."

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[31] David S. Evans and Boyan Jovanovic, "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints," *Journal of Political Economy 97*, no. 4 (1989): 808-827. David S. Evans and Linda S. Leighton, "Some Empirical Aspects of Entrepreneurship," *American Economic Review 79* (June 1989): 519-535. Bruce Meyer, "Why Are There So Few Black Entrepreneurs?" National Bureau of Economic Research, Working Paper No. 3537 (1990). Douglas Holtz-Eakin, David Joulfaian, and Harvey S. Rosen, "Entrepreneurial Decisions and Liquidity Constraints," *RAND Journal of Economics 25*, no. 2 (1994): 334-347. Thomas Lindh and Henry Ohlsson, "Self-Employment and Windfall Gains: Evidence from the Swedish Lottery," *Economic Journal* 106, no. 439 (1996): 1515-1526. Jane Black, David de Meza, and David Jeffreys, "House Prices, The Supply of Collateral and the Enterprise Economy," *The Economic Journal* 106, no. 434 (1996): 60-75. David G. Blanchflower and Andrew J. Oswald, "What Makes and Entrepreneur?" *Journal of Labor Economics* 16, no. 1 (1998): 26-60. Thomas A. Dunn and Douglas J. Holtz-Eakin, "Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence from Intergenerational Links," *Journal of Labor Economics* 18, no. 2 (2000): 282-305. Robert W. Fairlie, "The Absence of the African American Owned Business: An Analysis of the Dynamics of Self-Employment," *Journal of Labor Economics* 17, no. 1 (1999): 80-108. John S. Earle and Zuzana Sakova, "Business Start-Ups or Disguised Unemployment? Evidence on the Character of Self-Employment from Transition Economies," *Labour Economics* 7, no. 5 (2000): 575–601. Edvard Johansson, "Self-Employment and Liquidity Constraints: Evidence from Finland," *Scandinavian Journal of Economics* 102, no. 1 (2000): 123-134. Mark P. Taylor, "Self-Employment and Windfall Gains in Britain: Evidence from Panel Data," *Economica* 68, no. 272 (2001): 539-565. Douglas Holtz-Eakin and Harvey S. Rosen, "Cash Constraints and Business Start-Ups: Deutschmarks versus Dollars," *Contributions to Economic Analysis & Policy* 4, no. 1 (2005). Robert W. Fairlie and Harry A. Krashinsky, "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited," Working Paper (2008).

[32] U.S. Census Bureau, *Wealth and Asset Ownership*, 2008 (accessed July 2009); available from http://www.census.gov/hhes/www/wealth/2002/wlth02-1.html.

Table 5
Median Household Net Worth by
Ethnicity/Race, 2002

	Median Net Worth
Total	$58,905
Non-minority	$87,056
Asian or Pac. Islander	$59,292
Hispanic	$7,950
African-American	$5,446

Source: U.S. Census Bureau, Housing and Household Economic Statistics Division (2008).

Racial differences in home equity may be especially important in providing access to startup capital. Less than half of Hispanics and African Americans own their own home compared with three quarters of non-minorities. Asian Americans also have a low rate of home ownership at 57 percent.[33] The median equity of Hispanic and African American home owners is also substantially lower than for non-minorities ($49,000 for Hispanics, $40,000 for blacks, and $79,200 for whites). Homes provide collateral and home equity loans provide relatively low-cost financing. Without the ability to tap into this equity many minorities will not be able to start businesses.

Previous studies found that relatively low levels of wealth among Hispanics and African Americans contribute to their lower business creation rates relative to their representation in the U.S. population. Indeed, recent research using statistical decomposition techniques provides evidence supporting this hypothesis. Using matched CPS Annual Demographic Files (ADF) data from 1998 to 2003, Robert Fairlie found that *the largest single factor explaining racial disparities in business creation rates are differences in asset levels.*[34] Lower levels of assets among African Americans account for 15.5 percent of the difference between the rates of business creation among whites and blacks. This finding is consistent with the presence of liquidity constraints and low levels of assets limiting opportunities for African Americans to start businesses. The finding is very similar to estimates reported by Fairlie in a 1999 study[35] for men using the Panel Study of Income Dynamics (PSID). Estimates from the PSID indicate that 13.9 to 15.2 percent of the black/white gap in business start rates can be explained by differences in assets.

Fairlie also found that differences in asset levels represented a major hindrance for business creation among Hispanics.[36] Fairlie and Christopher Woodruff focused on the causes of low rates of business formation among Mexican Americans in particular.[37] One of the most important factors in explaining the gaps in rates of business creation between Mexican Americans and non-Hispanic whites is also assets. Relatively low levels of assets explain roughly one quarter of the business entry rate gap for Mexican Americans. Magnus Lofstrom and Chumbei Wang analyzed SIPP data and also found that low levels of wealth for Mexican Americans and other Latinos work to lower self-employment entry rates.[38] Apparently, low levels of personal wealth limit opportunities for Mexican Americans and other Latinos to start businesses.

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[33] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*, and U.S. Census Bureau, *Wealth and Asset Ownership*, 2008 (accessed July 2009); available from http://www.census.gov/hhes/www/wealth/2002/wlth02-2.html.

[34] Robert W. Fairlie, "Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education," in *The Life Cycle of Entrepreneurial Ventures, International Handbook Series on Entrepreneurship*, ed. Simon Parker (New York: Springer, 2006).

[35] Fairlie, "The Absence of the African American Owned Business: An Analysis of the Dynamics of Self-Employment."

[36] Robert W. Fairlie, "Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education."

[37] Robert W. Fairlie and Christopher Woodruff, "Mexican-American Entrepreneurship," University of California Working Paper (2009).

[38] Magnus Lofstrom and Chunbei Wang, "Hispanic Self-Employment: A Dynamic Analysis of Business Ownership," University of Texas at Dallas Working Paper (2006).

Although previous research indicates that low levels of personal wealth result in lower rates of business creation among minorities, less research has focused on the related question of whether low levels of personal wealth and liquidity constraints also limit the ability of minority entrepreneurs to raise adequate levels of startup capital. Undercapitalized businesses will likely have lower sales, profits and employment and will be more likely to fail than businesses receiving optimal levels of startup capital. Evidence on the link between startup capital and owner's wealth is provided by examining the relationship between business loans and personal commitments, such as using personal assets for collateral for business liabilities and guarantees that make owners personally liable for business debts. Robert B. Avery, Raphael W. Bostic and Katherine A. Samolyk[39] used data from the SSBF and Survey of Consumer Finances (SCF) and found that the majority of all small business loans have personal commitments. The common use of personal commitments to obtain business loans suggests that wealthier entrepreneurs may be able to negotiate better credit terms and obtain larger loans for their new businesses possibly leading to more successful firms.[40] Ken Cavalluzzo and John Wolken also found in their study[41] that personal wealth, primarily through home ownership, decreases the probability of loan denials among existing business owners. If personal wealth is important for existing business owners in acquiring business loans then it may be even more important for entrepreneurs in acquiring startup loans.

Estimates from the 1992 CBO microdata indicate that Hispanic- and African American-owned businesses have very low levels of startup capital relative to non-Hispanic white-owned businesses.[42] For example, less than 2 percent of African American firms start with $100,000 or more of capital and 6.5 percent have between $25,000 and $100,000 in startup capital. Hispanic firms also have low levels of startup capital although the disparities are not as large. African American-owned firms are also found to have lower levels of startup capital across all major industries.[43] What are the consequences of these racial disparities in startup capital? Previous research indicates that the level of startup capital is a strong predictor of business success.[44] In turn, low levels of startup capital are found to be a major cause of worse outcomes among African American-owned businesses. Using earlier CBO data in his 1997 study, Timothy Bates found evidence that racial differences in business outcomes are associated with disparities in startup capital.[45] *More recent estimates indicate that lower levels of startup capital among African American firms are the most important explanation for why African American-owned businesses have lower survivor rates, profits, employment and sales than non-minority-owned businesses.*[46] *In contrast to these patterns, Asian firms are found to have higher startup capital levels and resulting business outcomes.*[47]

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[39] Robert B. Avery, Raphael W. Bostic, and Katherine A. Samolyk, "The Role of Personal Wealth in Small Business Finance," *Journal of Banking and Finance* 22, no. 6 (1998): 1019-1061.

[40] Astebro and Berhardt (2003) found a positive relationship between business survival and having a bank loan at startup after controlling for owner and business characteristics.

[41] Ken Cavalluzzo and John Wolken, "Small Business Loan Turndowns, Personal Wealth and Discrimination," *Journal of Business* 78, no. 6 (2005): 2153-2177.

[42] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners.* Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[43] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners.*

[44] Timothy Bates, Race, *Self-Employment & Upward Mobility: An Illusive American Dream* (Washington, D.C.: Woodrow Wilson Center Press and Baltimore: John Hopkins University Press, 1997), and Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*, provide two recent examples.

[45] Bates, *Race, Self-Employment & Upward Mobility: An Illusive American Dream.*

[46] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*.

[47] Ibid.

Minority and non-minority entrepreneurs differ in the types of financing they use for their businesses. Previous research indicates, for example, that African American entrepreneurs rely less on banks than whites for startup capital.[48] African Americans are also less likely to use a home equity line for startup capital than are whites, which may be partly due to the lower rates of home ownership reported above. On the other hand, African American business owners are more likely to rely on credit cards for startup funds than are white business owners. In a few studies using the 1987 CBO, Bates[49] found large differences between African American and white-owned firms in their use of startup capital. African American firms were found to be more likely to start with no capital, less likely to borrow startup capital and more likely to rely solely on equity capital than white firms. Bates[50] also found that loans received by African American firms borrowing startup capital are significantly smaller than those received by white-owned firms even after controlling for equity capital and owner and business characteristics such as education and industry. Previous research also indicates that MBEs are more likely to use credit cards and less likely to use bank loans to start their businesses than non-minority-owned businesses.[51]

Additional evidence on racial differences in access to financial capital is provided by published estimates from the CBO.[52] The CBO questionnaire asks owners with unsuccessful businesses from 1992 to 1996 why their businesses were unsuccessful. African American business owners were two to three times more likely as all business owners to report "lack of access to business loans/credit" or "lack of access to personal loans/credit" as a reason for closure. Hispanic business owners were also more likely to report that lack of access to financial capital was a reason for closure.

Minority firms also have trouble securing funds from venture capitalists and angel investors. Private equity funds targeting minority markets are very small relative to the total, which is problematic because these funds appear to be important for success.[53] Minority angels comprise 3.6 percent of all angel investors, and MBEs comprise 3.7 percent of firms presenting their business ideas to potential angel investors.[54] The disparity in access to venture capital funds does not appear to be driven by performance differences. Bates and William D. Bradford[55] examined the performance of investments made by venture capital funds specializing in minority firms and found that these funds produce large returns. *Venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms.* Funds investing in minority businesses may provide attractive returns because the market is underserved.

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[48] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners*.

[49] Bates, Race, *Self-Employment & Upward Mobility: An Illusive American Dream*. Timothy Bates, "Financing Disadvantaged Firms." *Credit Markets for the Poor*, eds. Patrick Bolton and Howard Rosenthal. (New York: Russell Sage Foundation, 2005).

[50] Bates*, Race, Self-Employment & Upward Mobility: An Illusive American Dream.*

[51] U.S. Department of Commerce, Minority Business Development Agency, *Characteristics of Minority Businesses and Entrepreneurs.*

[52] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners.*

[53] Milken Institute and the Minority Business Development Agency, *The Minority Business Challenge: Democratizing Capital for Emerging Domestic Markets,* Glenn Yago and Aaron Pankrat (2000).

[54] Jeffrey Sohl, "The Angel Investor Market in 2008: A Down Year In Investment Dollars But Not In Deals," Center for Venture Research, 2008 (accessed July 17, 2009); available from http://wsbe.unh.edu/files/2008_Analysis_Report_Final.pdf.

[55] Timothy Bates and William D. Bradford, "Venture-Capital Investment in Minority Business," *Journal of Money Credit and Banking* 40, no. 2-3 (2008): 489-504.

Evidence of Lending Discrimination

A factor posing a barrier to obtaining financial capital for minority-owned businesses is racial discrimination in lending practices. Much of the recent research on the issue of discrimination in business lending uses data from various years of the Survey of Small Business Finances (SSBF). The main finding from this literature is that MBEs experience higher loan denial probabilities and pay higher interest rates than white-owned businesses even after controlling for differences in credit-worthiness, and other factors.[56]

Cavalluzzo and Wolken[57] found in their study using the 1998 SSBF that *while greater personal wealth is associated with a lower probability of denial, even after controlling for personal wealth, there remained a large difference in denial rates across demographic groups.* African Americans, Hispanics, and Asians were all more likely to be denied credit, compared with whites, even after controlling for a number of owner and firm characteristics, including credit history, credit score, and wealth. They also found that Hispanics and African Americans were more likely to pay higher interest rates on loans that were obtained. They also found that denial rates for African Americans increased with lender market concentration, a finding consistent with G. Becker's classic theories of discrimination.[58] Using the 2003 SSBF, Blanchflower (2007)[59] also found Asian Americans, Hispanics and African Americans were more likely than whites to be denied credit, even after controlling for creditworthiness and other factors.

Using the 1993 National Survey of Small Business Finances (NSSBF), Cavalluzzo, Linda Cavalluzzo, and Wolken[60] found that all minority groups were more likely than whites to have unmet credit needs. African Americans were more likely to have been denied credit, even after controlling for many factors related to creditworthiness. In fact, denial rates and unmet credit needs for African Americans widened with an increase in lender market concentration. The fear of denial often prevented some individuals from applying for a loan, even when they had credit needs. Hispanics and African Americans most notably had these fears. David G. Blanchflower, P. Levine, and D. Zimmerman conducted a similar analysis with similar results, but did not have access to some of the proprietary information available to researchers from the Federal Reserve. However, they did find that African American-owned businesses were more likely to have a loan application denied, even after controlling for differences in creditworthiness, and that African Americans paid a higher interest rate on loans obtained. They also found that concerns over whether a loan application would be denied prevented some prospective borrowers from applying for a loan in the first place. The disparities between the denial rates between whites and African Americans grew when taking these individuals into consideration along with those that actually applied for a loan. R. Bostic and K. P. Lampani[61] include additional geographic controls and continue to find a statistically significant difference in approval rates between African Americans and whites.

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[56] Lloyd Blanchard, John Yinger and Bo Zhao, "Do Credit Market Barriers Exist for Minority and Women Entrepreneurs?" Syracuse University Working Paper (2004). Blanchflower, Levine, and Zimmerman. Cavalluzzo, Cavalluzzo, and Wolken. Cavalluzzo and Wolken. Susan Coleman, "The Borrowing Experience of Black and Hispanic-Owned Small Firms: Evidence from the 1998 Survey of Small Business Finances," *The Academy of Entrepreneurship Journal 8*, no. 1 (2002): 1-20. Susan Coleman, "Borrowing Patterns for Small Firms: A Comparison by Race and Ethnicity." *The Journal of Entrepreneurial Finance & Business Ventures 7*, no. 3 (2003): 87-108. United States Small Business Administration, Office of Advocacy, *Availability of Financing to Small Firms using the Survey of Small Business Finances*, K. Mitchell and D.K. Pearce, (2005).

[57] Cavalluzzo and Wolken.

[58] G. Becker, *The Economics of Discrimination*, 2nd ed. (Chicago: University of Chicago Press, 1971).

[59] David G. Blanchflower, "Entrepreneurship in the United States," IZA Working Paper No. 3130 (2007).

[60] Cavalluzzo, Cavalluzzo, and Wolken.

[61] R. Bostic and K.P. Lampani, "Racial Differences in Patterns of Small Business Finance: The Importance of Local Geography," Working Paper (1999).

Other Types of Discrimination

Discrimination against minority businesses may occur before these businesses are even created. Previous research indicates that minorities have limited opportunities to penetrate networks, such as those in construction.[62] If minorities cannot acquire valuable work experience in these industries then it will limit their ability to start and operate successful businesses. There is also evidence in the literature indicating consumer discrimination against minority-owned firms. Minority firms may have difficulty selling certain products and services to non-minority customers limiting the size of their markets and resulting success. According to a study of microdata from the 1980 Census,[63] African Americans negatively select into self-employment, with the most able African Americans remaining in the wage/salary sector, whereas whites positively select into self-employment and negatively select into wage/salary work. These findings are consistent with discrimination by white consumers. Among African Americans low earners are the most likely to enter into business ownership, whereas both low and higher earning whites are the most likely to enter self-employment.[64] He notes that this finding is consistent with the theoretical predictions of consumer and credit market discrimination against African Americans.

More generally, minority-owned firms may face limited market access for the goods and services that they produce.[65] This may be partly due to consumer discrimination by customers, other firms, or redlining. But, it may also be due to the types, scale and locations of minority firms. Published estimates from the CBO[66] indicate that African American-, Hispanic-, and other minority-owned businesses are all more likely to serve a local market than the average for all U.S. firms. Minority firms are more likely than white firms to report that their neighborhood is the geographic area that best describes where the business's goods and services are sold. Furthermore, minority-owned businesses are much more likely to sell to a minority clientele than are white businesses, which may reflect more limited market access.

Human Capital Barriers

Education has also been found in the literature to be a major determinant of business ownership.[67] Lower levels of education obtained by Hispanics and African Americans partly limit their business ownership rates.[68] According to an analysis of CPS data by Fairlie,[69] 6.0 percent of the black/white gap in self-employment entry rates is explained by racial differences in education levels. Similar estimates from the PSID are reported in another study.[70] Mexican Americans have even lower levels of education than African Americans, which translate into a limiting factor for business creation. Estimates from the CPS indicate that education differences account for 32.8 to 37.9 percent of the entry rate gap for Mexican

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[62] Timothy Bates, *Banking on Black Enterprise* (Washington, D.C.: Joint Center for Political and Economic Studies, 1993). Joe R. Feagin and Nikitah Imani, "Racial Barriers to African American Entrepreneurship: An Exploratory Study," *Social Problems* 41, no. 4 (1994): 562-585. Timothy Bates and David Howell, "The Declining Status of African American Men in the New York City Construction Industry," *Race, Markets, and Social Outcomes*, eds. Patrick Mason and Rhonda Williams (Boston: Kluwer, 1997).

[63] George Borjas and Stephen Bronars, "Consumer Discrimination and Self-Employment," *Journal of Political Economy* 97, no. 3 (1989): 581-605.

[64] Daiji Kawaguchi, "Negative Self Selection into Self-Employment among African Americans," *Topics in Economic Analysis & Policy 5*, no. 1 (2005): 1-25.

[65] Bates, *Race, Self-Employment & Upward Mobility: An illusive American Dream.*

[66] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners.*

[67] J. van der Sluis, M. van Praag and W. Vijverberg, *Education and Entrepreneurship in Industrialized Countries: A Meta-Analysis,* Tinbergen Institute Working Paper no. TI 03–046/3 (Amsterdam: Tinbergen Institute, 2004). Simon C. Parker, *The Economics of Self-Employment and Entrepreneurship* (Cambridge: Cambridge University Press, 2004). U.S. Small Business Administration, Office of Advocacy, *Educational Attainment and Other Characteristics of the Self-Employed: An Examination Using the Panel Study of Income Dynamics Data*, C. Moutray, Working Paper (2007).

[68] Minority business owners are found to be less likely to use technology which may be related to lower levels of human capital, U.S. Department of Commerce, Economic Statistics Administration and the Minority Business Development Agency.

[69] Fairlie, *Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education.*

[70] Fairlie, "The Absence of the African American Owned Business: An Analysis of the Dynamics of Self-Employment."

Americans.[71] Education is important in explaining differences in business creation rates between Mexican Americans and whites, as well as the types of businesses entrepreneurs are likely to pursue. [72] The high rate of business ownership by Asians is in part due to their relatively high levels of education.[73] These results, however, are for all Asians and some groups are less educated. Fairlie, Zissimopoulos, and Krashinsky find, for example, that Vietnamese immigrants have lower levels of education than the national average.[74]

Previous research indicates an even stronger relationship between the education level of the owner and business performance. Businesses with highly educated owners have higher sales, profits, survival rates, and hire more employees than businesses with less-educated owners.[75] The general and specific knowledge and skills acquired through formal education may be useful for running a successful business and the owner's level of education may also serve as a proxy for his/her overall ability or as a positive signal to potential customers, lenders or other businesses. The estimated relationships between owner's education and small business outcomes are strong even after controlling for family business background measures, startup capital levels and industries.

Lower levels of education may be challenging the business performance of some minority entrepreneurs, such as Hispanics and African Americans.[76] Mexican American business owners have lower incomes than non-Hispanic white business owners, and most of the difference is due to low levels of education among Mexican American owners.[77] Mexican American business owners, especially immigrants, have substantially lower levels of education. The single largest factor in explaining why Mexican immigrants and U.S. born Mexican Americans have lower business income than whites is education. Lower levels of education account for more than half of the gaps in business income.

Another measure of human capital relevant for Hispanics is language ability. Limited English language ability may make it difficult to communicate with potential customers and suppliers, and learn about regulations. Previous studies provide some evidence that a better command of the English language is associated with higher business ownership rates.[78] But, the evidence linking language ability to business performance is even stronger. Fairlie and Woodruff found that one of the most important factors explaining low business incomes among Mexican American businesses is language ability. For Mexican immigrant men, limited ability to speak English explains roughly one third of the gap in business income.

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[71] Fairlie and Woodruff.

[72] Lofstrom and Wang.

[73] Fairlie, *Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education.*

[74] Robert W. Fairlie, Julie Zissimopoulos, and Harry Krashinsky, "The International Asian Business Success Story? A Comparison of Chinese, Indian and Other Asian Businesses in the United States, Canada and United Kingdom," in *International Differences in Entrepreneurship*, eds. Joshua Lerner and Antoinette Schoar (forthcoming), (accessed October 2009); available from http://www.nber.org/chapters/c8221.pdf.

[75] Bates, *Race, Self-Employment & Upward Mobility: An Illusive American Dream.* U.S. Department of Commerce, Economic Statistics Administration and the Minority Business Development Agency. Astebro Thomas and Irwin Bernhardt, "Start-Up Financing, Owner Characteristics and Survival," *Journal of Economics and Business 55*, no. 4 (2003): 303-320. Alicia Robb, *The Role of Race, Gender, and Discrimination in Business Survival*, Doctoral Dissertation, (Ann Arbor: University of Michigan Press, 2000). van der Sluis, van Praag, and Vijverberg.

[76] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[77] Fairlie and Woodruff. Magnus Lofstrom, and Timothy Bates, "Latina Entrepreneurs," *Small Business Economics* (2009) (forthcoming).

[78] Robert W. Fairlie and Bruce D. Meyer, "Ethnic and Racial Self-Employment Differences and Possible Explanations," J*ournal of Human Resources 31*, no. 4 (1996): 757-793. Fairlie and Woodruff.

Family Business Background and Social Capital

Research also indicates that the probability of self-employment is substantially higher among the children of the self-employed.[79] These studies generally find that an individual who had a self-employed parent is roughly two to three times as likely to be self-employed as someone who did not have a self-employed parent. There is evidence that this strong intergenerational link in business ownership is detrimental to disadvantaged minorities. In a study by Michael Hout and Harvey S. Rosen[80] they note a "triple disadvantage" faced by African American men in terms of business ownership. They are less likely than white men to have self-employed fathers, to become self-employed if their fathers were not self-employed, and to follow their father in self-employment. Another study[81] provides evidence from the PSID that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.

Recent research indicates that family business backgrounds are also extremely important for the success of businesses.[82] More than half of all business owners had a self-employed family member prior to starting their business with many of these business owners working in those family businesses. Working in a family business leads to more successful businesses. Business outcomes are 15 to 27 percent better if the owner worked in a family business prior to starting his or her own business even after controlling for other factors. African American business owners have a relatively disadvantaged family business background compared with white business owners. African American business owners are much less likely than white business owners to have had a self-employed family member prior to starting their businesses and are less likely to have worked in that family member's business. Only 12.6 percent of African American business owners had prior work experience in a family member's business compared with 23.3 percent of white business owners. Hispanic business owners are also less likely to have self-employed parents and work in family businesses than non-minority business owners.[83] This lack of prior work experience in family businesses among future minority business owners, perhaps by restricting their acquisition of general and specific business human capital, limits the success of their businesses relative to whites. This creates a cycle of low rates of business ownership and relatively worse business outcomes being passed from one generation of minorities to the next.[84]

Related to the family business background constraint, previous research also indicates that the size and composition of social networks are associated with self-employment.[85] If minority firms have limited access to business, social or family networks or have smaller networks then they may be less likely to enter business and create successful businesses. These networks may be especially important in providing financing, customers, technical assistance, role models, and contracts, but it is difficult to identify their contributions to racial differences in business performance.[86] Limited networks manifest themselves in

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[79] Bernard Lentz and David Laband, "Entrepreneurial Success and Occupational Inheritance among Proprietors," *Canadian Journal of Economics 23*, no. 3 (1999): 563-579. Fairlie, "The Absence of the African American Owned Business: An Analysis of the Dynamics of Self-Employment." Thomas A. Dunn and Douglas J. Holtz-Eakin, "Financial Capital, Human Capital, and the Transition to Self-Employment; Evidence from Intergenerational Links," *Journal of Labor Economics* 18, no. 2 (2000): 282-305. Michael Hout and Harvey S. Rosen, "Self-Employment, Family Background, and Race," *Journal of Human Resources 35*, no. 4 (2000): 670-692.

[80] Hout and Rosen.

[81] Fairlie, "The Absence of the African American Owned Business: An Analysis of the Dynamics of Self-Employment."

[82] Robert W. Fairlie and Alicia M. Robb, "Why are Black-Owned Businesses Less Successful than White-Owned Businesses: The Role of Families, Inheritances, and Business Human Capital," *Journal of Labor Economics 25* (2007): 289-323. Fairlie-Robb, *Race and Entrepreneurial Success: Black-,Asian-, and White-Owned Businesses in the United States.*

[83] U.S. Census Bureau, *1992 Economic Census: Characteristics of Business Owners.*

[84] Fairlie-Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[85] W. David Allen, "Social Networks and Self-Employment," *Journal of Socio-Economics 29,* no. 5 (2000): 487-501.

[86] These networks may also be important in forming strategic alliances with other firms as discussed in Leonard Greenhalgh, *Increasing MBE Competitiveness through Strategic Alliances* (Washington D.C.: Minority Business Development Agency, U.S. Department of Commerce, 2008).

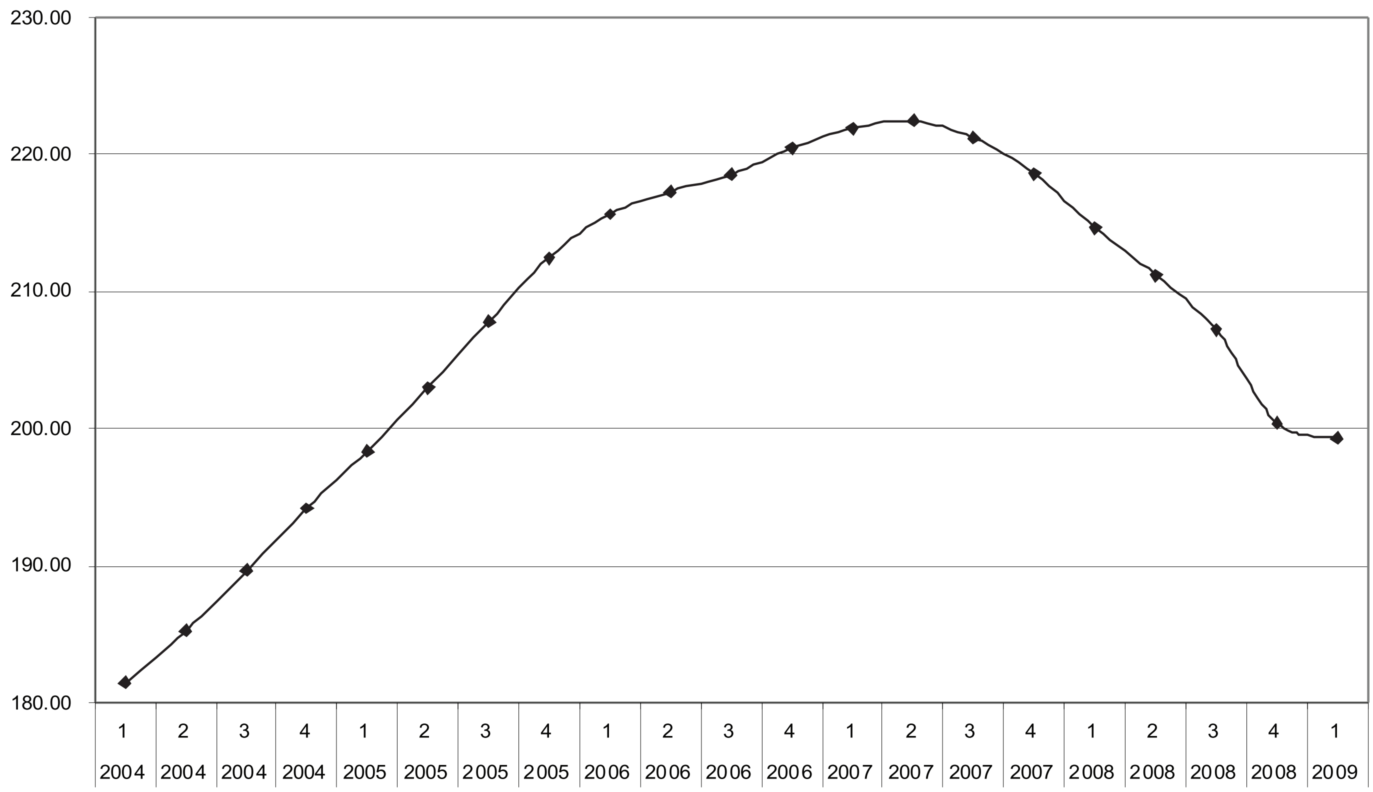
many of the factors listed below such as financial capital, discrimination, and human capital. For example, minority businesses are known to have limited networks in the investment community resulting in lower levels of capital use.[87] Given these interactions and the inherent difficulty of measuring networks, it is difficult to identify their effects on business performance.

[87] U.S. Department of Commerce, *Minority Business Development Agency, Accelerating Job Creation and Economic Productivity: Expanding Financing Opportunities for Minority Businesses* (2004).

The Current Financial Crisis

The current financial crisis creates special challenges to MBEs in securing financing. It is likely that the constraints mentioned in the previous section will probably get much worse. To get some insight into what is happening we investigate current trends in several measures. Although it is difficult to obtain recent data on the use of startup and expansion capital, we examine trends in related measures. We first focus on factors affecting the personal wealth of the entrepreneur.

Figure 1
Quarterly Housing Price Index, Federal Housing Finance Agency

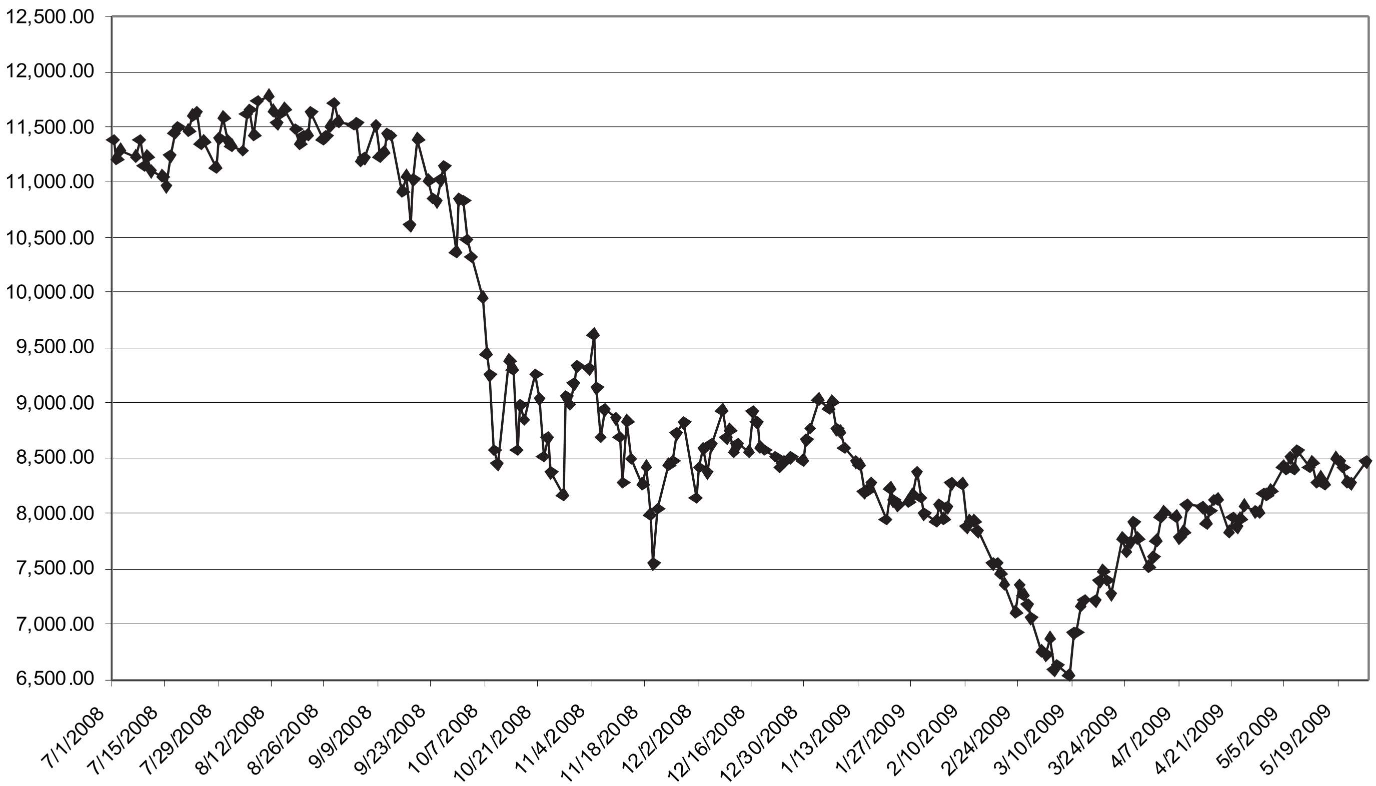


The largest single asset affecting personal wealth is home equity. Over the past two years housing values have dropped precipitously. Figure 1 displays the Monthly House Price Index from the Office of Federal Housing Enterprise Oversight from January 2004 to February 2009. The peak in the housing market was in the summer of 2007, but has steadily dropped since then with evidence of a slight rebound. The recent decline in housing equity does not bode well for access to financing. Home equity is found to be a major determinant of starting a business in the United States.[88] The decline in housing values is likely to further limit the amount of capital available to minority entrepreneurs.

[88] Fairlie and Krashinsky.

Stock market investments represent another component of personal wealth. The stock market has fallen considerably over the past few years. The Dow Jones Industrial Average dropped from over 11,000 in September 2008 to levels above 8,000 in May 2009 (Figure 2). The substantial drop in stock market wealth has undoubtedly resulted in less personal wealth to invest in businesses and use as collateral for loans for entrepreneurs.

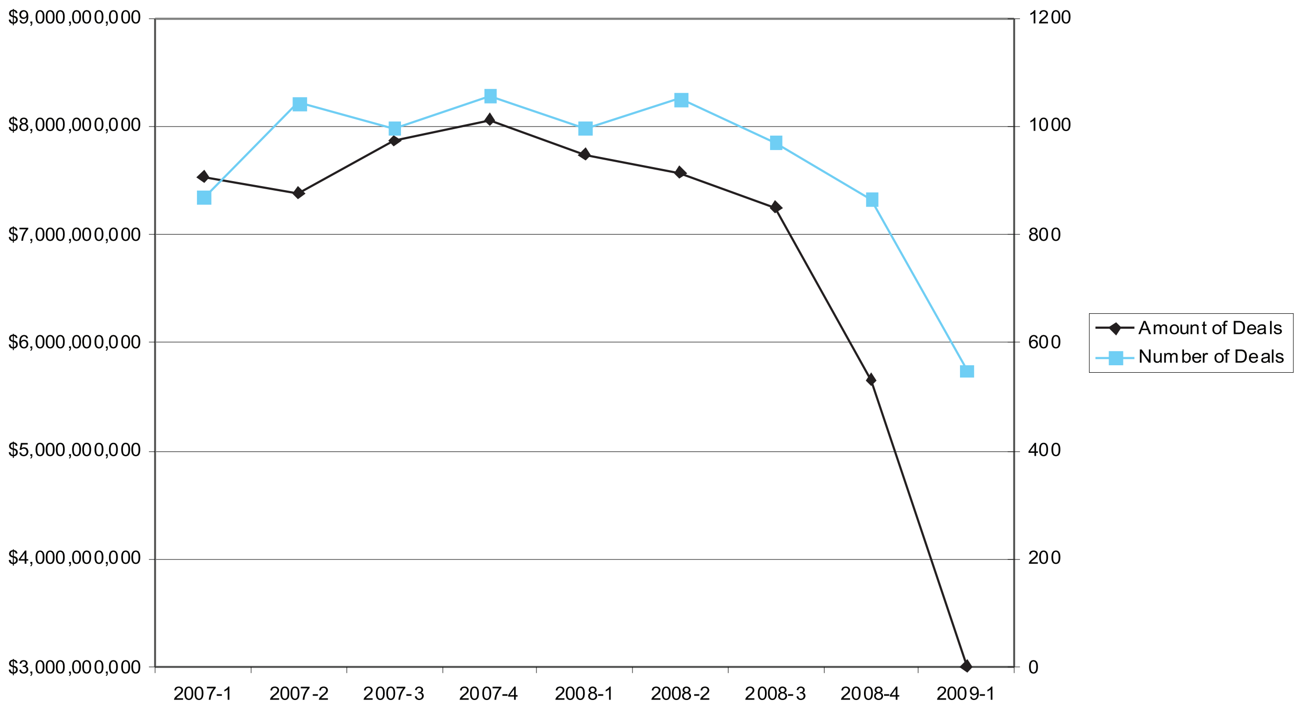
Figure 2
Dow Jones Industrial Average



More direct measures of access to capital are represented by the number of venture capital deals. Figure 3 displays the number of venture capital deals made in the United States over the past couple of years. The total number and amount of deals declined substantially since the second quarter of 2008. In the first quarter of 2009 there were only 549 venture capital deals in the United States worth $3 billion (Figure 3). These levels were half or less than half of what they were one year earlier. Additionally, estimates of the total amount of funding from angel investors dropped by 26.2 percent from 2007 to 2008 resulting in total investments of $19.2 billion.[89]

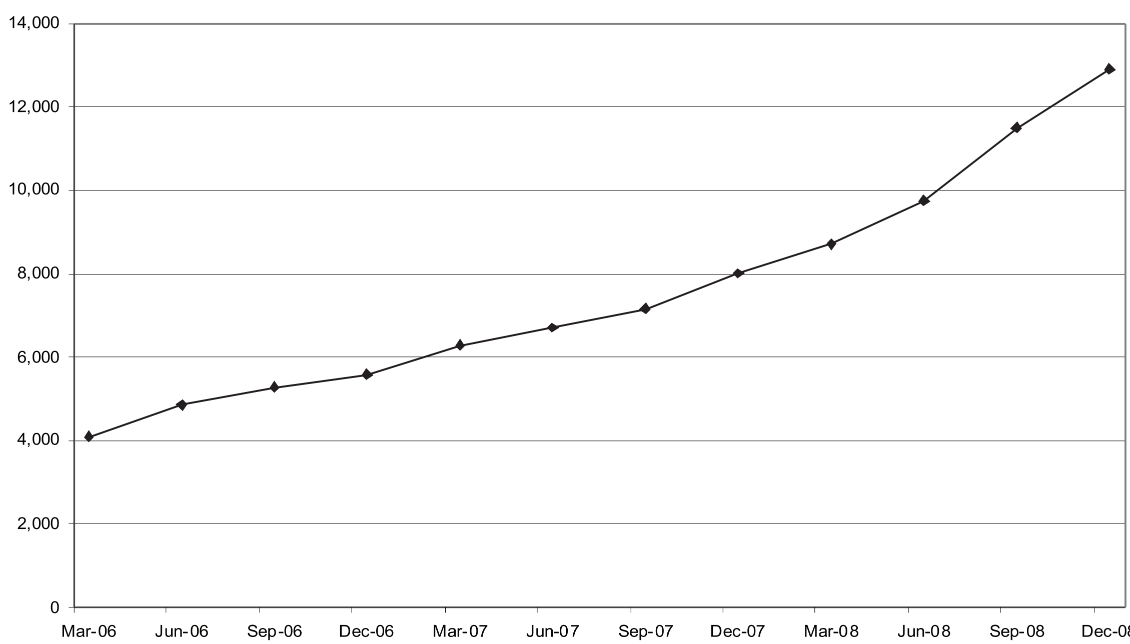
[89] Sohl.

Figure 3
Venture Capital Deals, PricewaterhouseCoopers/National Venture Capital Association MoneyTree Report



The decline in access to these potential sources of financial capital for businesses has resulted in a rapid rise in the number of business bankruptcy filings. Business bankruptcy filings have increased sharply in the last two quarters of 2008 (Figure 4). The number of bankruptcy filings increased to 12,901 in the fourth quarter of 2008 from 7,985 one year earlier.

Figure 4
Total Business Bankruptcy Filings
Administrative Office of the U.S. Courts



Surveys of financial institutions provide another well-cited barometer of current conditions in the financing market. A good summary of the overall climate for banking and finance is available in the Federal Reserve's "Beige Book." The report from April 2009 notes that credit availability remains "very tight." The report also notes deteriorating loan quality and rising delinquencies for all loan types and regions. Another widely read source of the state of financing in the United States is the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices. *The report from May 2009 also indicates that business lending policies remain very tight, although there is some evidence that the tightening is easing.* The report also notes a continuing weakening of demand for business loans. As of this publication, the CIT Group Inc., one of the nation's largest and publicly traded lending institutions to small and medium size enterprises, is facing a possible bankruptcy although it received funds from the Treasury last year as part of its rescue package. There have been many other banks declaring bankruptcy as a result of the current financial environment.

Surveys of small businesses indicate similar problems in the credit markets. A recent survey of small businesses from the National Federation of Independent Business indicates a sharp drop in reported loan availability over the past year. Small business owners were also more likely to report that they expected credit conditions to worsen over the next few months. Optimism among small business owners is also down considerably compared to a year ago. The American Express OPEN Small Business Monitor indicates a more optimistic outlook for small business owners, but also notes that capital investments are at their lowest level in the eight years surveys have been conducted. The Monitor's findings are based from a national semi-annual survey of 727 small business owners with fewer than 100 employees.

All of the recent trends presented here indicate worsening financial conditions. These trends and those in the overall economy do not bode well for minority-owned businesses. Because of the limited capital available to minority-owned firms, they are likely to be especially vulnerable in the current economic conditions. The gains experienced by minority firms in growth of number of firms, gross receipts and employment between 1997 and 2002 could be reversed if minority business owners do not have adequate access to capital.

New Empirical Analysis

In this section, we conduct a new empirical analysis of the barriers to financing faced by minority-owned firms. The findings provide a broader discussion of the barriers to financing faced by minority businesses and support some of the previous research discussed in Section 3.

Data Description

We use three sources of data for the analysis -- the Survey of Business Owners (SBO), Kauffman Firm Survey (KFS), and the Survey of Small Business Finances (SSBF). These are the most commonly used and respected sources of data on financing of minority-owned businesses. We briefly describe each of these data sources.

The SBO is conducted by the U.S. Census Bureau every five years to collect statistics that describe the composition of U.S. businesses by gender, race, and ethnicity. This survey was previously conducted as the Survey of Minority- and Women-Owned Business Enterprises (SMOBE/SWOBE). The universe for the most recent survey is all firms operating during 2002 with receipts of $1,000 or more that filed tax forms as individual proprietorships, partnerships, or any type of corporation. Businesses that are classified as agricultural production, domestically scheduled airlines, railroads, U.S. Postal Service, mutual funds (except real estate investment trusts), religious grant operations, private households and religious organizations, public administration, and government are excluded. The SMOBE and SBO data have undergone several major changes over time including the addition of C corporations and the removal of firms with annual receipts between $500 and $1,000 starting in 1997.[90]

The SBO and SMOBE/SWOBE surveys provide the most comprehensive data available on businesses by the race, ethnicity, and gender of the owners. Business ownership is defined as having 51 percent or more of the stock or equity in the business. Business ownership was categorized by: Gender (Male; Female; or Equally Male-/Female-Owned); Ethnicity (Hispanic, non-Hispanic); and Race (White; Black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander). The public use tables from the SBO/SMOBE are the most widely used source for tracking the number, performance, size, and industry composition of minority-owned businesses in the United States. In this section, we report detailed information on sources of startup and expansion capital by race from published sources. Unfortunately, microdata from the SBO are not publicly available and require an extensive application and disclosure process prohibiting additional analyses for this report.

To examine the use of capital among more established firms, we use microdata from the 2003 Survey of Small Business Finances (SSBF). The SSBF is one of the only business-level datasets that provides information on the owner, which is essential for identifying businesses owned by minorities. The SSBF is conducted by the Board of Governors of the Federal Reserve System every five years. The 2003 SSBF contains a large sample of 4,240 for-profit, non-governmental, non-agricultural businesses with fewer than 500 employees. The SSBF provides detailed information on many owner and firm characteristics, including credit histories, recent borrowing experiences, balance sheet data, and sources of financial products and services used.[91]

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[90] Fairlie and Robb, *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States.*

[91] Board of Governors of the Federal Reserve System, "Financial Services Used by Small Businesses: Evidence from the 2003 Survey of Small Business Finances," *Federal Reserve Bulletin,* Traci L. Mach and John D. Wolken (2006): 167-195 (accessed October 2009); available from http://www.federalreserve.gov/pubs/bulletin/2006/smallbusiness/smallbusiness.pdf.

To examine access to financial capital among businesses in their early, formative years of development we use confidential-access longitudinal microdata from the newly released Kauffman Firm Survey (KFS). The KFS tracks a panel of almost 5,000 firms from their inception in 2004 through 2007, providing information on sales, employment, and owner characteristics. Also, the survey offers unprecedented detail on the capital injections that these firms receive: not only when and how much capital they receive, but detailed information of each financial injection. It includes whether the capital comes from formal or informal channels, and whether it is equity or debt in the form of personal or business loans, credit cards, or from other sources. Information on up to ten owners includes age, gender, race, ethnicity, education, work experience, and previous startup experience with large subsamples of MBEs. The KFS is the only large, nationally representative, longitudinal dataset providing detailed information on new firms and their financing activities over time. Most previous datasets are cross-sectional and focus on older, more established firms.

Sources of Startup and Expansion Capital

We first examine sources of startup and expansion capital for minority-owned firms from the SBO. Estimates are taken from the U.S. Department of Commerce, Minority Business Development Agency.[92] We highlight some of the main findings here.

Table 6 reports sources of capital used to start or acquire the business by ethnic/racial group and sales level. We define high sales firms as firms with $500,000 or more in annual sales. This is consistent with MBDA's target market of MBE firms capable of generating significant employment and long-term economic growth. The most common source of funding for minority businesses is personal and family savings. More than half of all minority firms use this source of capital at startup. Among high sales firms a higher percentage of minority businesses report the use of personal and family savings (71.0 percent), which is higher than for high sales non-minority firms. In addition, related to this source of financing 14.0 percent of high sales MBEs used other personal and family assets as sources of startup capital. Overall, among firms with high-growth and employment potential, MBEs appear to be more reliant on personal equity for financing than non-minority firms. For all firms, they use these sources similarly.

[92] U.S. Department of Commerce, *Minority Business Development Agency, Characteristics of Minority Businesses and Entrepreneurs.*

Table 6

Sources of Capital Used to Start or Acquire the Business by Ethnicity/Race and Sales Level ($500,000 or more)

Survey of Business Owners (2002)

		Personal/ family savings	Other personal/ family assets	Personal/ business credit card	Business loan from government	Government guaranteed bank loan	Business loan from bank	Outside investor	None needed
American-Indian and	Total	51.9%	10.0%	12.2%	1.0%	0.8%	7.8%	2.0%	30.8%
Alaska Native	High Sales	66.8%	17.3%	12.0%	3.1%	3.9%	22.1%	5.7%	
	Low Sates	51.3%	9.6%	12.2%	0.9%	n/a	7.2%	1.9%	
Asian	Total	61.4%	8.9%	9.6%	1.0%	8.0%	10.2%	3.1%	22.6%
	High Sales	73.2%	13.7%	9.8%	2.2%	2.7%	25.7%	5.6%	
	Low Sales	60.2%	8.4%	9.5%	0.9%	0.6%	8.6%	2.8%	
Native Hawaiian and	Total	52.6%	10.3%	12.7%	2.3%	0.4%	5.2%	2.1%	29.9%
Other Pacific	High Sales	66.5%	15.8%	n/a	n/a	n/a	20.3%	4.0%	
Islander	Low Sales	51.9%	n/a	13.0%	n/a	n/a	n/a	n/a	
Hispanic	Total	51.2%	6.7%	9.4%	0.8%	0.4%	5.6%	1.8%	33.1%
	High Sales	69.0%	13.9%	11.6%	1.9%	2.3%	19.1%	4.4%	
	Low Sales	50.3%	6.3%	9.3%	0.7%	0.3%	4.9%	1.7%	
African-American	Total	50.2%	7.1%	10.1%	1.1%	0.5%	5.7%	2.1%	33.0%
	High Sales	68.2%	14.2%	13.2%	3.1%	4.1%	25.0%	4.9%	
	Low Sales	49.8%	6.9%	10.0%	1.0%	0.5%	5.2%	2.1%	
Minority	Total	54.1%	7.7%	9.8%	1.0%	0.6%	7.2%	2.3%	29.7%
	High Sales	71.0%	14.0%	n/a	n/a	n/a	23.3%	5.1%	
	Low Sales	53.1%	n/a	9.8%	n/a	n/a	n/a	n/a	
Non-minority	Total	55.6%	9.3%	8.8%	0.8%	0.7%	12.0%	2.5%	27.4%
	High Sales	64.9%	14.8%	n/a	n/a	n/a	29.2%	5.4%	
	Low Sales	53.5%	n/a	8.8%	n/a	n/a	n/a	n/a	
All Respondent	Total	54.6%	9.0%	8.8%	0.9%	0.7%	11.4%	2.7%	27.7%
Firms	High Sales	60.6%	13.7%	6.8%	1.9%	2.1%	27.6%	6.5%	
	Low Sales	53.9%	8.5%	9.0%	0.8%	0.5%	9.6%	2.3%	

Notes: (1) Source: 2002 Survey of Business Owners, as reported in U.S. Department of Commerce, Minority Business Development Agency (2008). (2) Businesses with $1,000 or more in receipts are included. (3) High sales firms are those with $500,000 or more in annual sales.

A source of financing that has attracted much discussion in the literature is bank financing. We discuss the use of bank financing by minority and non-minority firms in more detail below using the SSBF and KFS, but we first examine percentages of firms receiving this source of financing. Among all minority firms, 7.2 percent received a business loan from a bank compared with 12.0 percent of non-minority firms. High sales minority firms were more likely to receive bank loans with 23.3 percent receiving this source of startup capital. But, this level is lower than for high sales non-minority firms with 29.2 percent receiving bank loans. The disparities in amounts of bank loans and other features of the loan are larger as discussed below.

We also find that minority firms are more likely to rely on credit cards for startup capital, which is a high-costs source, but the difference is not large. Minority and non-minority firms are similarly likely to receive startup funding from outside investors.

Table 7 reports sources of capital used to finance expansion or capital improvement by race and receipts level. As expected the percentage of minority firms using personal and family saving and assets for expansion is lower than for startup. Among all minority firms 33.8 percent of firms reported these two sources of capital for expansion. Use of this source of capital was higher for minority firms than non-minority firms. High sales minority firms continue to rely more on credit cards than non-minority firms, although the difference is not overly large. Finally, both all and high sales minority firms are less likely to use bank loans to fund expansion than are their non-minority counterparts.

Table 7

Sources of Capital Used to Finance Expansion or Capital Improvement of the Business by Ethnicity/Race and Sales Level ($500,000 or more)

Survey of Business Owners (2002)

		Personal/ family savings	Other personal/ family assets	Personal/ business credit card	Business loan from government	Government guaranteed bank loan	Business loan from bank	Outside investor	None needed
American-Indian and Alaska Native	Total	30.8%	7.1%	15.5%	0.7%	0.3%	7.6%	1.3%	52.7%
	High Sales	28.1%	9.8%	13.0%	1.1%	n/a	29.7%	n/a	40.7%
	Low Sates	30.9%	7.0%	15.6%	0.7%	n/a	6.7%	1.3%	53.2%
Asian	Total	31.4%	5.3%	10.6%	0.6%	0.4%	7.3%	1.5%	53.6%
	High Sales	27.5%	6.7%	10.2%	1.2%	1.1%	22.6%	2.4%	47.2%
	Low Sales	31.8%	5.2%	10.7%	0.5%	n/a	5.7%	1.4%	54.3%
Native Hawaiian and Other Pacific Islander	Total	28.6%	5.6%	13.6%	1.2%	0.9%	5.6%	S	55.3%
	High Sales	27.4%	n/a	17.5%	n/a	n/a	23.4%	n/a	42.0%
	Low Sales	28.7%	n/a	13.4%	n/a	n/a	n/a	n/a	55.9%
Hispanic	Total	26.5%	4.4%	10.9%	0.5%	0.3%	5.2%	1.3%	58.4%
	High Sales	26.8%	6.7%	13.2%	1.6%	1.1%	27.4%	2.4%	41.8%
	Low Sales	26.4%	4.3%	10.8%	0.5%	0.2%	4.0%	1.3%	59.2%
African-American	Total	29.1%	4.8%	11.5%	0.7%	0.3%	4.1%	1.3%	56.3%
	High Sales	28.0%	6.5%	14.3%	1.8%	2.1%	24.7%	1.7%	43.2%
	Low Sales	29.2%	4.8%	11.5%	0.6%	0.2%	3.7%	1.3%	56.6%
Minority	Total	28.9%	4.9%	11.2%	0.6%	0.3%	5.7%	n/a	56.0%
	High Sales	27.4%	n/a	11.8%	n/a	n/a	24.7%	n/a	44.7%
	Low Sales	29.0%	n/a	11.2%	n/a	n/a	n/a	n/a	56.7%
Non-minority	Total	25.0%	5.1%	11.7%	0.5%	0.3%	9.7%	n/a	59.0%
	High Sales	21.2%	n/a	9.8%	n/a	n/a	30.2%	n/a	48.8%
	Low Sales	25.9%	n/a	11.9%	n/a	n/a	n/a	n/a	60.1%
All Respondent Firms	Total	25.5%	5.0%	11.4%	0.5%	0.3%	9.2%	1.2%	58.5%
	High Sales								
	Low Sales								

Notes: (1) Source: 2002 Survey of Business Owners, as reported in U.S. of Commerce, Minority Business Development Agency (2008). (2) Businesses with $1,000 or more in receipts are included. (3) High sales firms are those with $500,000 or more in annual sales.

The SBO data indicate some differences in the use of sources of startup and expansion capital between minority and non-minority firms even when we focused on firms with $500,000 or more in annual gross receipts. Minority firms generally rely more on personal and family equity and are less likely to obtain bank loans than non-minority businesses. There is also some evidence of slightly higher use of credit cards than non-minority firms.

Capital Use among More-Established Minority Firms

The SSBF provides information on older, more-established firms. Average sales and employment of firms in the SSBF are much higherthan the total for all firms as reported in the SBO. We examine recent equity investments and loans for these firms. Table 8 reports estimates for minority and non-minority firms and high and low-sales firms. We defined high sales similarly as having annual gross receipts of at least $500,000.

Table 8
Equity Investmensts and Loan Amounts
Survey of Small Business Finances (2003)

			Equity Investments		Loans		
Group	Sales	Employees	Percent	Mean	Percent	Mean	N
Total							
Non-minority	$1,043,216	7.3	5.7%	$7,822	31.9%	$108,912	3,685
Minority	$992,207	6.5	5.1%	$3,379	23.6%	$46,514	555
Sales > $500,000							
Non-minority	$3,103,310	19.2	6.1%	$19,377	52.4%	$310,232	1,868
Minority	$3,409,946	18.0	5.4%	$7,274	41.2%	$149,354	248
Sales < $500,000							
Non-minority	$138,329	2.1	5.5%	$2,747	22.8%	$20,482	1,817
Minority	$116,392	2.3	5.0%	$1,969	17.2%	$9,261	307

Notes: (1) All estimates use survey weights provided by the SSBF. (2) The samples used to estimate mean equity investments and loan amounts include firms not receiving those sources of funding.

We first examine equity investments in the firm. The question in the SSBF asks about new equity investments from existing owners, new or existing partners, or new or existing shareholders (excluding retained earnings) during the past year. For all firms, minority businesses are less likely to receive new equity investments than are non-minority businesses, but the difference is not overly large. MBEs are less likely to receive equity investments even when conditioning on high sales firms. In all cases, however, only 5 to 6 percent of firms receive new equity investments each year.

The main difference between minority and non-minority firms is the amount of new equity investments. *Although minority firms are almost as likely to receive new equity investments they receive much smaller amounts of new equity.* The average amount of new equity investments in minority high sales firms is $7,274, which is only 38 percent of the non-minority level. The average amount of new equity investments in minority firms receiving equity investments is $3,379, which is 43 percent of the non-minority level. The differences in average amount of equity investment are striking especially when noting that average sales and employment levels are not that different between minority and non-minority firms (reported in Columns 1 and 2). Equity investments are notably lower in low-sales firms. Although not reported we also find that a very small share of firms receiving new equity financing receive it from venture capital firms or public offerings. In fact, no minority firms in the SSBF sample report either of these sources of financing.

We also examine minority/non-minority differences in loan usage. The SSBF questionnaire asks about business loans received during the past 3 years. Table 8 reports estimates of the percent of firms receiving loans. Minority firms are less likely to receive loans than non-minority firms. Among high sales firms, 52 percent of non-minority firms received loans compared with 41 percent of minority firms. The average loan amount for all high sales minority firms was $149,000. The non-minority average was more than twice this amount at $310,000. If we condition for only high sales firms receiving loans, the minority/

non-minority difference in average loans is smaller, but a large gap in loan amounts remains. *The average loan received by high sales minority firms is $363,000 compared with $592,000 for high sales non-minority firms.*

Although sample sizes are too small to report separate estimates, we find that there are substantial differences within racial groups. Hispanic and African American owned firms have much lower levels of loans than non-minority firms, and Asian and African American firms have much lower levels of new equity investments than non-minority firms.

As noted above in Section 3, the SSBF has been used extensively to study the experience of minority businesses in credit markets. We update the results of these studies using data from the 2003 SSBF. Table 9 reports estimates of loan denial rates, fear of applying, and interest rates for minority and non-minority firms and by sales size. *As found in previous studies, loan denial rates are much higher for minority firms than for non-minority-owned firms. This holds true for high sales firms and low-sales firms. For high sales firms, the rate of loan denial is almost twice as high for minority firms as for non-minority firms.*

Table 9

Loan Denial Rates, Fear of Applying, and Interest Rates
Survey of Small Business Finances (2003)

Group	Denial Rate	N	Did not Apply: Fear of Rejection	N	Interest Rate	N
Total						
Non-minority	12.3%	1,679	15.8%	3,685	6.4%	1,586
Minority	31.5%	218	29.5%	555	7.8%	175
Sales > $500,000						
Non-minority	8.4%	1,212	12.2%	1,868	5.9%	1,168
Minority	14.9%	132	18.8%	248	6.2%	123
Sales < $500,000						
Non-minority	16.0%	467	17.4%	1,817	6.9%	418
Minority	41.9%	86	33.4%	307	9.1%	52

Note: All estimates use sample weights provided by the SSBF.

Although a large percentage of minority firms that applied for loans were rejected even more might have been rejected if they had applied. Of course, it is impossible to measure how these firms would have been treated in they applied for loans. Instead, the SSBF provides related information on whether the firm did not apply for credit when it needed it because the firm thought that the application would be turned down (i.e. fear of rejection). Estimates reported in Table 9 indicate that minority firms are more likely to not apply for loans because of a fear of being rejected than non-minority firms. *For high sales firms, minority firms are much more likely to not apply for loans because of a fear of rejection than non-minority firms.*

Previous studies have also found that minority firms tend to pay higher interest rates on business loans than do non-minority firms.[93] We find similar evidence for minority firms. *For all firms, minority firms pay 7.8 percent on average for loans compared with 6.4 percent for non-minority firms.* The difference is smaller, but still exists for high sales firms.

[93] Blanchflower, Levine and Zimmerman. Cavalluzzo, Cavalluzzo and Wolken.

Overall, minority firms are more likely to be denied when applying for loans and are less likely to apply for loans because of a fear of rejection. When these firms do receive loans they are for smaller amounts and for higher interest rates than non-minority firms. These alarming differences in treatment in the lending market, however, may be due to differences in the size, creditworthiness and other characteristics of the owners and firms. This does not appear to be the case, however, as previous studies control for numerous owner and firm characteristics including the creditworthiness of the firm. We conduct a similar analysis including an even more extensive set of controls and continue to find that minority firms are more likely to experience loan denials, not apply for loans because of fear of rejection, and pay higher interest rates on loans. Any remaining negative racial or gender differences in lending outcomes are consistent with the existence of lending discrimination.[94]

Regression Analysis of Equity Investment and Loan Amounts

In this section we conduct a regression analysis to further investigate differences in equity investment and loan amounts between minority and non-minority businesses. We estimate several regressions using log equity investments and log loan amounts as the dependent variables. The main owner controls include female, education, age and experience, the main geographic controls include region and urbanicity, and the main business controls include number of owners, whether the business was purchased or inherited, firm age, legal form and industry. We also include log sales which controls for current and recent business performance. To control for the owner's creditworthiness we include whether the owner owns a home, home equity, and personal credit scores. Finally, to control for firm creditworthiness we include whether the firm filed for bankruptcy in the past. These represent detailed measures of what lenders and investors look for in making decisions about providing financial capital to firms.

Table 10 reports regression estimates for log equity investments and loan amounts for all firms and high sales firms. Results for log equity investments are discussed first. After controlling for detailed owner and business characteristics we find lower levels of equity investments in minority firms compared to non-minority firms, but the difference is not statistically significant. The education level of the owner and experience is strongly associated with receiving equity capital. Having more business owners also increases the amount of new equity investments in the firm. The sales level does not predict equity investments in the firm. This may be due to the fact that successful firms do not need as much in new equity as less successful firms, but less successful firms have more difficulty attracting new equity investments. In the end, the potentially offsetting factors may result in a flat relationship between business performance and new equity investments. Higher credit scores are associated with lower levels of equity investments which might partly reflect less need. We also estimate a regression including only firms with $500,000 or more in annual sales. The results are fairly similar.

[94] Ibid., 36

Table 10
Linear Regressions for Log Equity Investments and Loan Amounts
Survey of Small Business Finances (2003)

	Specification			
	Log Equity Investments		Log Loan Amount	
	(1)	(2)	(3)	(4)
Sample	All Firms	Hi-Sales	All Firms	Hi-Sales
Minority	-0.0916	-0.1616	-0.3499	-0.8365
	(0.0564)	(0.1053)	(0.1273)	(0.2356)
Female	-0.0689	-0.0397	-0.0965	-0.0071
	(0.0423)	(0.0793)	(0.0955)	(0.1775)
High school graduate	0.0305	0.1101	-0.9618	-0.6670
	(0.1506)	(0.2743)	(0.3401)	(0.6136)
Some college	0.1061	0.1239	-0.8729	-0.5122
	(0.1484)	(0.2699)	(0.3351)	(0.6037)
College	0.2942	0.2436	-0.9013	-0.4303
	(0.1500)	(0.2733)	(0.3388)	(0.6113)
Graduate school	0.3066	0.3538	-0.8277	-0.3871
	(0.1522)	(0.2790)	(0.3437)	(0.6240)
Age	-0.0073	0.0010	-0.0138	-0.0231
	(0.0024)	(0.0048)	(0.0055)	(0.0108)
Experience	0.0079	0.0008	-0.0068	-0.0051
	(0.0028)	(0.0052)	(0.0062)	(0.0115)
Number of owners	0.0606	0.0533	0.1049	0.0334
	(0.0120)	(0.0122)	(0.0271)	(0.0273)
Firm age	-0.0021	-0.0010	0.0103	0.0073
	(0.0026)	(0.0042)	(0.0058)	(0.0095)
Log sales	-0.0092	0.0173	0.5409	1.3669
	(0.0119)	(0.0392)	(0.0268)	(0.0877)
Log home equity	-0.0044	-0.0560	0.0080	-0.0663
	(0.0109)	(0.0210)	(0.0247)	(0.0470)
D&B credit score: 11-25	-0.1988	-0.3226	0.1070	0.3967
	(0.0847)	(0.1508)	(0.1913)	(0.3374)
D&B credit score: 26-50	-0.2667	-0.1648	0.2649	0.5181
	(0.0799)	(0.1419)	(0.1805)	(0.3174)
D&B credit score: 51-75	-0.3684	-0.3061	0.1353	0.4900
	(0.0773)	(0.1245)	(0.1745)	(0.2785)
D&B credit score: 76-90	-0.3502	-0.3519	0.1293	0.2503
	(0.0820)	(0.1312)	(0.1851)	(0.2935)
D&B credit score: 91-100	-0.3848	-0.2673	0.1829	0.2373
	(0.0927)	(0.1403)	(0.2094)	(0.3138)
Legal form of organization	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Region and urban	Yes	Yes	Yes	Yes
Mean of dependent variable	4.9640	5.0545	7.5048	9.4940
Sample size	4,240	2,116	2,516	2,116

Notes (1) OLS coefficient estimates and their standard errors (in parentheses) are reported.
(2) All estimates use sample weights provided by the SSBF.

What are the determinants of loan amounts? Specifications 3 and 4 in Table 10 report estimates. Minority firms receive smaller loan amounts than non-minority firms even after controlling for detailed business and owner characteristics. The differences are large and statistically significant. Among all firms, minority businesses have loan amounts that are 35 percent lower than for non-minority firms. The difference is even larger when focusing on loans received by high sales firms.

In addition to race, the number of owners and sales increase loan amounts. Although having more sales may reduce the need for loans it may have a much larger effect on the ability to obtain business loans. Also, higher credit scores are generally linked to the ability to obtain larger loans.

Decomposition Estimates

The regression analysis identifies several potential barriers to financing among minority businesses. For example, high credit scores are found to be an important determinant of obtaining business loans. If minority firms have low credit scores on average then this could limit their ability to obtain business loans. Lower sales levels among minority businesses may also limit their potential to obtain loans. The impact of each factor, however, is difficult to estimate. In particular, we want to estimate the contribution of differences between minority and non-minority firms in credit scores, sales, and other owner and business characteristics to the racial gaps in obtaining financing.

To explore the questions stated above further, we decompose inter-group differences in a dependent variable into those due to different observable characteristics across groups (sometime referred to as the endowment effect) and those due to different "prices" of characteristics of groups.[95] The Blinder-Oaxaca decomposition of the non-minority/minority gap in the average value of the dependent variable, Y, can be expressed as:

$$(1)\ \overline{Y}^W - \overline{Y}^M = \left[(\overline{X}^W - \overline{X}^M)\hat{\beta}^W\right] + \left[\overline{X}^M(\hat{\beta}^W - \hat{\beta}^M)\right].$$

Similar to most recent studies applying the decomposition technique, we focus on estimating the first component of the decomposition that captures contributions from differences in observable characteristics or "endowments." We do not report estimates for the second or "unexplained" component of the decomposition because it partly captures contributions from group differences in unmeasurable characteristics and is sensitive to the choice of left-out categories making the results difficult to interpret. We also weight the first term of the decomposition expression using coefficient estimates from a pooled sample of all groups.[96] The regression estimates are taken from Table 10. The contribution from racial differences in the characteristics can thus be written as:

$$(2)\ (\overline{X}^W - \overline{X}^B)\hat{\beta}^*.$$

Where $\overline{X}^j$ are means of firm characteristics of race *j*, $\hat{\beta}^*$ is a vector of pooled coefficient estimates, and *j=W* or M for non-minority (non-Hispanic white) or minority, respectively. Equation (2) provides an estimate of the contribution of racial differences in the entire set of independent variables to the racial gap. Separate calculations are made to identify the contribution of group differences in specific variables to the gap.

[95] Alan S. Blinder, "Wage Discrimination: Reduced Form and Structural Variables," *Journal of Human Resources*, 8, no. 4 (1973): 436-455. Ronald Oaxaca, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review*, 14, no. 3 (1973): 693-709.
[96] Ronald Oaxaca and Michael Ransom, "On Discrimination and the Decomposition of Wage Differentials," Journal of Econometrics, 61, no. 1 (1994): 5-21.

Table 11 reports estimates from this procedure for decomposing the non-minority/minority gaps in levels of equity investments and loan amounts discussed above. The separate contributions from racial differences in each set of independent variables are reported. We focus on the main explanatory factors. Minority firms have a lower level of equity financing by 3.6 log points (or roughly 3.6 percent). The only factor contributing to the difference in log equity investments is experience. Minority business owners have less experience than non-minority business owners (16 years compared with 20 years of experience, respectively). The lower level of experience explains 3.0 percentage points of the 3.6 percentage point difference in log equity investments. This is a small contribution, however. Overall, the differences in log equity investments between minority and non-minority firms are not large and there are no factors that contribute strongly to the difference. Interestingly, differences in sales, home equity, credit scores, legal forms, and industries do not contribute to minority/non-minority differences in equity financing. When we focus on only high sales firms we find similar results (reported in Specification 2).

Table 11
Decompositions for Log Equity Investments and Loan Amounts
Survey of Small Business Finances (2003)

	Specification			
	Log Equity Investments		Log Loan Amount	
	(1)	(2)	(3)	(4)
Sample	All Firms	Hi-Sales	All Firms	Hi-Sales
Non-minority mean of dep var	4.9084	5.0064	6.6563	8.3738
Minority mean of dep. var	4.8722	4.9656	6.0736	7.5482
Non-min/min.difference	0.0362	0.0408	0.5827	0.8256
Female	0.0020	0.0013	0.0028	0.0002
Education	-0.0083	-0.0428	-0.0131	-0.0241
Age	-0.0241	0.0032	-0.0454	-0.0746
Experience	0.0297	0.0036	-0.0256	-0.0227
Number of owners	0.0000	0.0059	0.0000	0.0037
Firm age	-0.0075	-0.0050	0.0361	0.0347
Log sales	-0.0027	-0.0016	0.1600	-0.1226
Log home equity	-0.0031	-0.0154	0.0057	-0.0183
Credit scores	-0.0338	-0.0301	0.0084	0.0155
Legal form of organization	-0.0042	-0.0408	-0.0066	-0.0064
Industry	-0.0062	-0.0008	0.0228	0.1150
Region and urban	0.0000	-0.0186	0.0897	0.1156
Total explained	-0.0583	-0.1411	0.2349	0.0159

Notes: (1) See text for more details on decompositions.
(2) Coefficient estimates used in decomposition are reported in Table 10.

The minority/non-minority gap in financing is much larger for loan amounts. For all firms, we find a 58 log point difference between minority and non-minority loan amounts. A large part of the difference can be explained by minority/non-minority differences in log sales. Minority firms have sales levels that are 30 percent lower than non-minority firms, and this difference translates into a loan amount gap of 16 log points. Thus, roughly 16 percentage points of the gap in loan amounts is due to lower sales levels among minority firms, potentially limiting their ability to obtain bank loans.

Geographical differences also provide a large contribution to why minority firms obtain lower loan amounts (9.0 log points). Minority firms have a less favorable regional distribution in the country and are more likely to be located in urban areas, which have lower loan amounts all else equal. Surprisingly, credit scores are not a major factor only explaining a small amount of the differences in loan amounts.

If we focus on high sales firms, we find that industry and geographical differences are the two most important explanations for why high sales minority firms have roughly 80 percent lower levels of bank loans than high sales non-minority firms. Geographical differences explain 12 percentage points of the difference in loan amounts. Industry differences explain a similar amount of the difference. Minority firms are less concentrated in construction and manufacturing which tend to have higher loan amounts, and are more concentrated in retail trade, which tend to have lower loan amounts.

Overall, minority firms have lower equity investments and loan amounts than non-minority firms. Having less experience, lower sales, and less favorable geographical and industry distributions partially limit their ability to raise financial capital. On the other hand, business owner's education, home equity and credit scores do not appear to represent major barriers to raising either equity financing or loans for the larger, more established businesses represented in the SSBF. The findings for newly formed minority businesses may differ, however. We investigate this question next using data from the KFS.

Capital Use among Newly-Formed Minority Firms

The KFS provides information on businesses formed in 2004 and follows these new business ventures annually through 2007. The KFS, which only recently became available, provides the first evidence on the financing patterns of young minority firms. It is useful to examine disparities in financing at the early stages of firm growth to understand the life cycle of minority firms and how they compare to non-minority firms.[97] The KFS also provides the latest microdata on financing of minority businesses with estimates from 2007. Another major advantage of the KFS is that it provides a more accurate measure of sources and amounts of startup capital than commonly used data sources such as the CBO and SBO because the information is gathered in the first year of operations not retrospectively which for some firms could be 20 or more years ago.

Table 12 reports estimates for the percentage of minority and non-minority firms that use each source of financing, as well as the amounts of startup and subsequent capital by source. The sources of financing are aggregated into three broad categories: 1) internal financing (debt and equity financing by the owner(s) and insiders (friends and family), 2) external debt financing (bank loans, credit lines, credit cards, etc.), and 3) external equity financing (venture capital, angel financing, etc.). Estimates are for both start up capital (capital injections in 2004, the first year of operations) and for subsequent new financial injections (annual average based on 2005-2007). All dollar figures are reported in 2007 dollars.

[97] Andrew B. Bernard and Matthew J. Slaughter, *The Life Cycle of a Minority-Owned Business: Implications for the American Economy* (Washington: Minority Business Development Agency, 2004).

Table 12
Sources of Startup and Subsequent Capital for New Business Ventures
Kauffman Firm Survey (2004-07) (2007 Dollars)

Group	Internal Financing % of firms	Internal Financing Mean	External Debt % of firms	External Debt Mean	External Equity % of firms	External Equity Mean	Total Financial Capital Mean
Startup capital (2004)							
Non-minority	86.7%	$ 46,007	38.1%	$ 36,777	4.7%	$ 7,607	$ 90,391
Minority	87.8%	$ 41,154	33.6%	$ 29,879	3.5%	$ 2,984	$ 74,017
Subsequent capital (2005-2007)							
Non-minority	65.3%	$ 16,180	51.8%	$ 25,365	5.4%	$ 4,082	$ 45,627
Minority	68.4%	$ 13,604	48.2%	$ 13,783	6.7%	$ 2,059	$ 29,447

All estimates use survey weights provided by the KFS.

In the first year of operations, minority-owned firms invested nearly $75,000 into their businesses, while non-minorities invested more than $90,000. Internal financing was the most frequently used source of financing, with more than 85 percent of firms using internal financing for start up capital. It was also the largest source of capital for both groups, making up nearly 51 percent of non-minority start up financing and more than 55 percent of minority-owned business start up financing. Disparities between minority and non-minority firms were larger for external debt and especially external equity. Minority firms averaged $29,879 in external debt compared with $36,777 for non-minority firms. Minority firms had the most trouble obtaining external equity with $2,984 on average equity compared with $7,607 on average for non-minority firms. Very few firms used this type of financing though—just 4.7 percent of non-minority firms and 3.5 percent of minority-owned firms.

In terms of levels of subsequent financial injections, non-minority businesses continued to make larger capital investments. Non-minority businesses invested an average of $45,000 annually into their firms, while minority-owned firms invested less than $30,000 on average. This represents a key new finding provided by the KFS: *disparities in access to financial capital do not become smaller after startup, but instead grow in the years just after startup.* The minority/non-minority disparity in financial capital is much larger in percentage terms for the 2005-07 period than the 2004 year.

Subsequent financial injections displayed different patterns in terms of financing sources, most notably that internal financing dropped in importance. Although it was still the most common source used, only 65.3 percent of non-minority firms used internal financing and 68.4 percent of minority-owned firms. For non-minority firms, this source made up just over one third of their new financial injections, while for minorities it was closer to one half (46.2 percent). Young minority business owners are more reliant on using their own or family money to finance operations in the years just following startup than non-minority owners.

Minority and non-minority firms increased their use of external debt financing for subsequent capital injections. More than half of non-minority firms (51.8 percent) and nearly half of minority firms (48.2 percent) used external debt financing for subsequent financial injections. *As a percentage of the total invested, external debt financing became the most important source of financing, making up more than 55 percent of non-minority business financing and nearly 47 percent of minority business financing.* External equity continued to be the least important source, making up 9 percent of non-minority business financing and 7 percent of minority business financing. A slightly larger share of minority-owned firms used this source (6.7 percent), compared with non-minority firms (5.4 percent), but the average level of investment was half the amount used by non-minority firms.

Multivariate regressions on the log levels of start up capital are presented in Table 13. *Even after controlling for numerous owner and firm characteristics, including two-digit industry and credit score, minority-owned businesses were still more likely to have significantly lower levels of external debt financing and external equity financing.* These differences were statistically significant. The coefficient on the minority variable was also negative in the internal financing equation, but it was not statistically significant. The coefficient on female was negative and statistically significant in all three models. Owner age, education, start up experience, and hours worked were positively correlated with the levels of financing, while the owner's previous industry experience was negatively correlated. As far as firm characteristics, incorporation was positively associated with the levels of financing, while being home based was negatively associated with levels of financing. Levels of innovation, as measured by comparative advantage and intellectual property were mixed. Finally, having a high credit score was positively correlated with levels of financing and statistically significant in the external debt model, while having a low credit score was negatively associated with all three levels of financing and statistically significant in the internal and external debt financing models. The owner's credit rating is important for obtaining startup financing especially for external debt.

Table 13
Linear Regressions for Startup Capital
Kauffman Firm Survey (2004)

Coefficients	Log of 2004 Internal Financing	Log of 2004 External Debt Financing	Log of 2004 External Equity Financing
Minority	-0.0547	-0.276***	-0.0746*
	(0.0797)	(0.0965)	(0.0386)
Female	-0.161**	-0.168*	-0.133***
	(0.0755)	(0.0889)	(0.0337)
Age	0.0338*	0.0515**	0.0244**
	(0.0195)	(0.0231)	(0.00969)
Age Squared	-0.000207	-0.000427*	-0.000232**
	(0.000208)	(0.000248)	(0.000102)
HS Graduate	0.266	0.130	0.0210
	(0.262)	(0.292)	(0.101)
Some College	0.333	0.0928	0.0958
	(0.248)	(0.278)	(0.0985)
College Graduate	0.481*	0.0818	0.0907
	(0.252)	(0.282)	(0.101)
Graduate Degree	0.556**	0.231	0.143
	(0.259)	(0.292)	(0.106)
Hours Worked	0.0211***	0.00945***	0.00115
(weekly average)	(0.00150)	(0.00175)	(0.000784)
Industry Experience	-0.0128***	-0.0139***	-0.000499
(years)	(0.00350)	(0.00436)	(0.00218)
Start up Experience	0.0528	0.0539	0.0307
	(0.0677)	(0.0807)	(0.0380)
Team Ownership	0.320***	0.278**	0.0878
	(0.0885)	(0.110)	(0.0608)
Partnership	0.177	-0.155	0.159
	(0.171)	(0.197)	(0.116)
Limited Liability Corp.	0.500***	0.446***	0.197***
	(0.0925)	(0.108)	(0.0494)
Corporation	0.446***	0.369***	0.195***
	(0.0946)	(0.112)	(0.0502)
Home Based	-0.675***	-0.536***	-0.152***
	(0.0732)	(0.0846)	(0.0396)
Comparative Adv.	0.146**	0.0555	-0.0574
	(0.0701)	(0.0825)	(0.0401)
Intellectual Property	0.178**	-0.0122	0.117**
	(0.0851)	(0.101)	(0.0547)
High Credit Score	0.111	0.447***	0.0169
	(0.122)	(0.152)	(0.0741)
Low Credit Score	-0.257***	-0.303***	-0.0242
	(0.0724)	(0.0836)	(0.0403)
Constant	7.155***	6.286***	5.826***
	(0.608)	(0.720)	(0.344)
Observations	3806	3806	3806
R-squared	0.234	0.122	0.051

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
2-digit industry dummies included

The decomposition exercise was repeated for average financial injections over the 2005-2007 period, with the addition of sales as a control variable. Results are presented in Table 14. In these models the minority coefficient was positive in all three cases, but only statistically significant in the internal financing model. The finding indicates that the disparities presented in Table 12 disappear after controlling for other factors. The coefficient on female was again negative and statistically significant in all three models. The coefficients on the sales dummies were positive and usually statistically significant in all three models, indicating a positive correlation between size and level of financing. Owner age and education were generally no longer significant predictors, while hours worked continued to be positive and strongly significant in all three models. Credit scores continued to be an important determinant of the amount of financial capital obtained by the firm although the effects appear to be smaller than for startup capital. A strong determinant of subsequent capital investments for most types of financing are the sales level of the firm. Higher sales levels in the early stages of firm growth increased the amount of financing used in the firm.

Table 14

Linear Regressions for Subsequent Capital
Kauffman Firm Survey (2005-07)

Coefficients	Log of Internal Financing	Log of External Debt Financing	Log of External Equity Financing
Minority	0.278***	0.0125	0.0283
	(0.0760)	(0.0807)	(0.0377)
Female	-0.201***	-0.242***	-0.0997***
	(0.0721)	(0.0782)	(0.0318)
Age	-0.00465	0.0401**	-0.00729
	(0.0186)	(0.0192)	(0.00836)
Age Squared	0.000150	-0.000329	0.000129
	(0.000198)	(0.000204)	(0.0000918)
HS Graduate	0.0598	-0.0992	-0.114
	(0.242)	(0.237)	(0.0791)
Some College	0.113	0.0206	-0.00951
	(0.231)	(0.223)	(0.0791)
College Graduate	0.0701	-0.107	0.0462
	(0.234)	(0.226)	(0.0831)
Graduate Degree	0.198	-0.138	0.112
	(0.242)	(0.235)	(0.0904)
Hours Worked	0.00948***	0.00553***	0.00155**
(weekly average)	(0.00149)	(0.00158)	(0.000791)
Industry Experience	-0.00405	-0.0112***	0.000311
(years)	(0.00330)	(0.00362)	(0.00180)
Start up Experience	0.256***	0.0629	0.0390
	(0.0638)	(0.0691)	(0.0321)
Team Ownership	0.0670	0.120	0.153***
	(0.0869)	(0.0917)	(0.0489)
Partnership	0.0393	-0.391**	-0.0493
	(0.155)	(0.153)	(0.0716)
Limited Liability Corp.	0.0775	0.186*	0.0623
	(0.0862)	(0.0951)	(0.0397)
Corporation	0.0626	0.228**	0.0983***
	(0.0923)	(0.0996)	(0.0375)
Home Based	-0.217***	-0.0877	-0.0326
	(0.0705)	(0.0755)	(0.0366)
Comparative Adv.	-0.106	-0.0805	0.0309
	(0.0649)	(0.0710)	(0.0287)
Intellectual Property	0.402***	0.145*	0.214***
	(0.0828)	(0.0881)	(0.0511)
High Credit Score	0.168	0.348***	0.0462
	(0.117)	(0.123)	(0.0684)
Low Credit Score	-0.137**	-0.160**	0.0203
	(0.0683)	(0.0737)	(0.0305)
Sales ($50-$18,000)	0.859***	0.439***	0.0436
	(0.0835)	(0.0838)	(0.0346)
Sales ($18,001-$52,000)	1.203***	1.028***	0.0271
	(0.0911)	(0.0947)	(0.0376)
Sales ($52,001-$121,000)	1.509***	1.633***	0.0287
	(0.102)	(0.108)	(0.0422)
Sales ($121,000+)	1.544***	2.301***	0.207***
	(0.114)	(0.118)	(0.0606)
Constant	6.766***	6.302***	6.248***
	(0.569)	(0.576)	(0.307)
Observations	3806	3806	3806
R-squared	0.203	0.264	0.077

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
2-digit industry dummies included

We now turn to explaining differences in financing between minority and non-minority firms. The decomposition exercise described earlier was repeated with the KFS data. Results are presented in Table 15. Very little of the differences in start up capital are explained by racial differences in owner and firm characteristics, including credit scores. The owner's age provides the largest contributions to the gaps in internal financing and external debt at roughly 4 percentage points. This may partly capture the effects of owner's wealth on access to internal financing and use as collateral for obtaining loans. Minority owners tend to be younger and may have less personal wealth. Credit scores only explain a small amount of the gap in startup capital.

Table 15
Decompositions for Logs of Startup and Subsequent Capital
Kauffman Firm Survey (2004-07)

	Specification					
	Startup Capital			Subsequent Capital		
	Internal Financing (1)	External Debt (2)	External Equity (3)	Internal Financing (4)	External Debt (5)	External Equity (6)
Non-minority mean of dep var	9.2300	7.6700	6.4400	7.9900	7.8700	6.4000
Minority mean of dep. var	9.1600	7.3700	6.3400	8.0600	7.6100	6.4000
Non-min/min. difference	0.0700	0.3000	0.1000	-0.0700	0.2600	0.0000
Female	0.0016	0.0017	0.0013	0.0020	0.0024	0.0010
Owner Education	0.0089	0.0029	-0.0015	-0.0014	-0.0076	-0.0051
Owner Age	0.0455	0.0382	0.0098	0.0277	0.0307	0.0304
Industry and Start Up Experience	-0.0169	-0.0186	0.0013	0.0114	-0.0136	0.0032
Team Ownership	0.0032	0.0028	0.0009	0.0007	0.0012	0.0015
Legal form of organization	0.0105	0.0097	0.0040	0.0017	0.0033	0.0009
Comparative Adv & Intellectual Prop.	0.0088	0.0033	-0.0034	-0.0064	-0.0048	0.0019
Home Based	-0.0135	-0.0107	-0.0030	-0.0043	-0.0018	-0.0007
Credit scores	0.0176	0.0271	0.0018	0.0116	0.0166	-0.0003
Hours Worked (week)	-0.0639	-0.0286	-0.0035	-0.0287	-0.0168	-0.0047
Industry	-0.0079	-0.0180	0.0070	0.0073	0.0075	0.0090
Sales	n/a	n/a	n/a	0.1715	0.2256	0.0137
Total explained	-0.0061	0.0098	0.0146	0.1930	0.2427	0.0509

Notes (1) See text for more details on decompositions.

About a quarter of the differences in subsequent financial injections of external debt are explained by differences in sales. Surprisingly, only about two percent is explained by differences in credit scores. Just under 20 percent of the differences in internal financing injections after start up are explained. Again, the majority is explained by differences in sales. Only about five percent of the differences in external equity injections are explained. Sales only accounted for about one percentage point of the five percentage point difference.

The Employment Returns to Financing

A stated goal of the U.S. Small Business Administration (SBA) Certified Development Company/504 guaranteed lending program is to create or retain one job for each $50,000 provided by the SBA.[98] Small manufacturers have a $100,000 job creation or retention goal, and in the 2009 stimulus package the goal for the SBA program has been increased to $65,000 per job. A similar calculation can be made from the overall amount spent on the President's stimulus package. The total amount spent on the stimulus package is $789.5 billion with the goal of creating 3.5 million jobs. This translates into $225,000 of stimulus funds for each job created in the United States.

[98] U.S. Small Business Administration, CDC/504 Program (accessed July 2009); available from http://www.sba.gov/financialassistance/prospectivelenders/cdc504/index.html.

The SBA also provides information on the number of jobs created and retained from firms receiving funding from its 7(a) and 504 programs. As Table 16 indicates, the 7(a) program provides $18,000 in loans for every job created or retained by participant businesses. The 504 program provides $42,000 in funds for each job.

Table 16
Job Creation through Small Business Administration Loan Programs (2005-08)

	FY 2005	FY 2006	FY 2007	FY 2008
SBA 7(a) Program				
Total amount of loans ($000s)	$13,998,331	$13,447,225	$13,211,731	$11,675,399
Jobs created	155,821	206,608	265,095	200,081
Jobs retained	506,312	583,562	599,852	449,190
Investment per job created or retained	$21,141	$17,018	$15,275	$17,982
SBA 504 Program				
Total amount of loans ($000s)	$4,942,067	$5,610,828	$6,176,210	$5,117,079
Jobs created	85,540	89,601	97,280	79,274
Jobs retained	49,482	45,878	43,498	42,449
Investment per job created or retained	$36,602	$41,415	$43,872	$42,039

Source: U.S. Small Business Administration (2009)

Are these estimates in line with the amount of financing firms use and their resulting job creation? The data demands for such a calculation are great. A measure of each firm's investments through equity financing or loans over time is needed as well as a measure of the net number of jobs created over the same time period. Unfortunately, this level of detailed data is not readily available. There is one exception and that is for new firms that are measured in the KFS. Because the KFS captures firms from their initial startup to several years out, and records annual investment amounts from all sources, we can estimate the total amount invested in these young firms. We can also examine total net employment created by the firm in the last year of the survey. The main disadvantage of this approach is that it may understate the total employment returns to financing because it only measures employment four years after business inception. Firms starting in 2004 are followed through 2007 in the KFS. The return to financial investments at the earlier stages of firm growth may take longer to be realized.

Estimates from the KFS indicate that the average young firm invests $214,338 over the first four years of existence (see Table 17). The average firm by the end of this period has created 2.5 net new jobs. Thus, the average investment per created job for young firms is $85,055. Focusing on young minority firms, we find an investment of $52,374 per job. The non-minority average investment per job is $95,492.

Table 17
Financing per Job Created among Young Firms
Kauffman Firm Survey (2004-07)

	Total Financing 2004-2007	Employment Creation by 2007	Financing per Job
Minority	$162,358	3.1	$52,374
Non-Minority	$227,272	2.4	$95,492
Total	$214,338	2.5	$85,055

Source: Kauffman Firm Survey 2004-07.

Employment measures after only four years since business inception are likely to underestimate longer-term employment creation because of the short time frame. Longer-term job creation would result in a smaller level of financing per job than the estimates from the KFS sample of young firms. Although understated, the estimates from the KFS are in the same broad range as the new SBA goal of $65,000 per job created or retained.

It is important to note that this measure of the employment returns to financing does not represent the causal effects of financing on employment. Firms that receive substantial amounts of financing, for example, may have created a large number of jobs without these funds or with fewer funds. And, firms that have only obtained small amounts of financing may not have created a large number of jobs even if they had obtained substantially more financing. With these concerns in mind, the calculations here provide only an approximation to actual levels and some care is required in interpreting these results as the required amount of financing needed to create a job.

Table 17 also indicates that young minority-owned firms created jobs at similar rates than young non-minority firms. As discussed before, 2002 Census data showed that minority firms also paid similar wages compared to non-minority firms. According to the Bureau of Labor Statistics, the national unemployment rate reached 9.8 percent in September of 2009, and the unemployment rate of African Americans is even higher at 15.4 percent, followed by that of Hispanics at 12.7 percent. Greater capital access for minority-owned firms is essential to sustain their growth, reduce national unemployment levels, and in particular the high rate of unemployment in minority communities.

Conclusions

Minority business enterprises (MBEs) contribute substantially to the U.S. economy. The number of minority firms, their gross receipts, employment and payrolls are growing at a faster rate than for non-minority firms.

Moreover, young minority-owned firms created jobs at similar rates than young non-minority firms. Minority-owned firms are a critical component to reducing the national unemployment rate, especially the elevated unemployment in minority communities.

Inadequate access to financial capital is found to be a particularly important constraint limiting the growth of minority-owned businesses. Estimates generated for this report provide extensive evidence of the difficulties in obtaining financial capital among minority-owned businesses.

The current economic climate is only making the situation worse. All recent indicators of personal wealth and access to financial capital point to worsening conditions for entrepreneurs. Bankruptcy filings have increased dramatically over the past year and are likely to continue.

It is vital to the short-term survival and long-term success of MBEs that we aggressively address the liquidity constraints created by the current financial crisis. The resulting loss of MBEs will be very harmful for job creation, innovation, economic parity, and productivity in the country. There is a sizeable loss of efficiency in the overall U.S. economy imposed by the financing constraints faced by MBEs because of the large and growing share of all businesses owned by minorities. Barriers to ensuring access to capital and thus growth to any of the diverse sets of groups of businesses in the country limit total U.S. productivity in addition to contributing to economic inequality.

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