Patterns of Financing: A Comparison between White- and African-American Young Firms

Fourth in a series of reports using data from the Kauffman Firm Survey

February 2009

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The Kauffman Firm Survey

2004 2005 2006 2007 2008 2009 2010 2011 2012

Prepared By:

Alicia M. Robb,
University of California
Santa Cruz

Robert W. Fairlie,
University of California
Santa Cruz

David T. Robinson,
Duke University

The
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INTRODUCTION

This short report examines racial differences in access to financial capital. We focus on the role of capital injections—that is, injections of financial capital in the early, formative years after the business is started. Our results indicate that stark racial differences in capital injections after a business is formed are an important and under-studied component of the racial gap in new business formation. Although nearly three-quarters of all new firms inject capital in either their second or third year of existence, we know relatively little about racial differences in financial capital use in the early years of operation. The lack of empirical evidence on this issue largely reflects the lack of panel data with information on financial capital inputs in years after startup as well as the demographic background of the business owners. In this paper, we make use of detailed information on capital injections through the Kauffman Firm Survey (KFS), a longitudinal study of businesses that began operation in 2004. The KFS tracks a panel of almost 5,000 firms from their inception in 2004 through 2006, detailing capital injections, sales, employment, and owner characteristics. The richness of these data allows us to study capital injections in great detail.

Understanding how African-American firms access capital markets for injections of later-stage capital is important for a number of reasons. Previous research indicates that blacks have substantially lower levels of personal wealth, home ownership, bank loans, and startup capital (see Bates 1997; Fairlie and Robb 2008; U.S. Census Bureau 2005, Cavalluzzo, Cavalluzzo, and Wolken 2002; and Blanchflower, Levine, and Zimmerman 2003, for example), but there is no evidence on access to financial capital in subsequent years among young black firms. We also know little about whether black and white firms differ in the dynamics of financial capital use—in particular, substituting between external and internal capital over time.

The median level of net worth among blacks is $6,200, eleven times lower than the white level (U.S. Census Bureau 2005). Low levels of black personal wealth may be detrimental to securing capital because this wealth can be invested directly in the business or used as collateral to obtain business loans. In addition to relatively low levels of personal wealth, previous research provides evidence that is consistent with black entrepreneurs facing lending discrimination. Black-owned firms 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 (see Cavalluzzo, Cavalluzzo, and Wolken 2002; Blanchflower, Levine, and Zimmerman 2003; and Cavaluzzo and Wolken 2005, for example). Finally, black-owned businesses have very low levels of startup capital relative to white-owned businesses and these differences persist across all major industries (U.S. Census Bureau 1997, Fairlie and Robb 2008).

If new black firms are constrained in their access to capital not just at startup, but also in subsequent years, then this could have a detrimental effect on their long-term performance. Of course, it also could be an indication that external investors expect lower long-term performance, and direct their capital accordingly. The existing literature suggests that lack of black access to capital is a potential barrier to successful entrepreneurship. Indeed, there is some evidence that racial differences in startup capital affect the relative performance of black-owned firms (Bates 1997, Fairlie and Robb 2008).

DATA

Previous research on small business use of financial capital has relied on the Characteristics of Business Owners (CBO) Survey data. In addition to the amount of financing, the CBO provides sources for that financing. Unfortunately, the amounts by source are not available from those data, so we have no way of measuring the relative importance of one source over another. A detailed dataset providing information on recent firm financing is the Federal Reserve Board's Survey of Small Business Finances (SSBF). Unfortunately, only data on recent financing are available, not necessarily financing at startup or the early stages for firm growth. Both the CBO and the SSBF are cross-sectional surveys, which means they each cover a population of firms (of all ages) for a given point time. Neither source allows researchers to track financing at startup and then also in the firms' early years of operations. To examine the use of capital injections after startup, panel data on new firms are needed. To our knowledge, the only large, nationally representative, longitudinal dataset providing detailed information on new firms and their financing activities is the newly released Kauffman Firm Survey (KFS). Previously, there have not been data available that allowed researchers to examine financial investments in each year after startup. In addition, the detailed financing information in the KFS on both debt and equity investments allows us to examine the relative importance of each at startup and over time. For more information about the KFS survey design and methodology, see Ballou et al. (2008). For more details about how to access these data, see www.kauffman.org/kfs.

A subset of the confidential dataset is used in this research—those firms that have data for all three survey years and those that have been verified as going out of business in either 2005 or 2006. This reduces the sample size to 4,159 businesses.

We assigned owner demographics at the firm level by defining a primary owner. For firms with multiple owners (35 percent of the sample), the primary owner was designated by the largest equity share. In cases where two or more owners owned equal shares, hours worked and a series of other variables were used to create a rank ordering of owners to define a primary owner. (For more information on this methodology, see Ballou et al., 2008). For this research, multi-race/ethnic owners are classified into one race/ethnicity category based on the following hierarchy: black, Asian, other, Hispanic, and white. For example, an owner is defined as black even if he/she is also Hispanic. As a result of the ordering, the white category includes only non-Hispanic white.

PATTERNS OF CAPITAL USE

Our first goal is to explore the broad patterns of capital structure that we observe in newly formed businesses. Rather than square these patterns against existing theories of capital structure, as is done in Robb and Robinson (2008), our main purpose is to outline key patterns in startup and follow-on capital injections.

We first compare broad patterns of financial capital use at startup and in the early years of operations. As shown in Table 1, the vast majority of firms use owner equity capital in their startup year. Nearly 80 percent of white-owned firms and more than 83 percent of black-owned firms had equity injections in 2004. This is mostly owner equity. Less than 10 percent of white-owned firms and less than seven percent of black-owned firms had outside equity in the startup year, and those percentages fall somewhat in subsequent years. Owner equity also became less prevalent, with less than half of white-owned firms and slightly more than 60 percent of black-owned firms using owner equity in their second year of operation (2005). The percentages also dropped further for their third year of operation (2006).

Table 1
Firm Financing by Primary Owner Race
(Percent of active firms in each year using each type of financing)

	2004		2005		2006	
	White	Black	White	Black	White	Black
Equity Injections	79.9%	83.4%	46.8%	62.2%	40.1%	56.9%
Debt Injections	56.0%	47.3%	53.8%	54.1%	55.7%	53.2%
Owner Equity	79.1%	83.5%	44.9%	61.6%	37.6%	55.7%
Outside Equity	9.8%	6.8%	5.9%	6.1%	5.7%	5.7%
Owner Debt	47.6%	43.2%	46.1%	50.4%	46.5%	48.0%
Business Debt	24.7%	17.2%	28.3%	23.2%	29.0%	28.7%

Source: Kauffman Firm Survey Microdata. Sample Size: 4,163.
Note: See Table 2 for the components making up equity and debt.

There are also racial differences in the use of debt, both personal debt used for business purposes and business debt. About 55 percent of white-owned firms have debt financing in their startup year and in the follow-up years, as well. While a lower percentage of black-owned firms initially used debt financing in 2004 (47 percent), the percentages of new debt inflows that black-owned businesses receive approach rates for white-owned businesses in subsequent years. Owner debt is more common than business debt; however, the percentage of firms using business debt financing rises with subsequent capital injections. Table 1 primarily addresses access to types of capital; it does not speak to differences in the amount of capital accessed and, thus, it does not address the question of capital structure. Although there are some racial differences in the patterns of equity and debt use by source type, it would still have a total average financial capital investment that was half the size of the average white-owned business.

Table 2 presents the mean amounts of financing by source. White-owned business have more than $80,000 of initial capital on average, while black-owned businesses have less than $30,000 of startup capital. These patterns are consistent with CBO findings of large startup capital differences (Bates 1997, Fairlie and Robb 2008). And, although this difference is large both in economic and statistical terms, it is noteworthy to compare the roughly three-fold gap in startup capital to the roughly eleven-fold gap in net worth present in the Census data. Black-owned businesses rely much more on owner equity than do white-owned businesses. While 56 percent of initial startup capital in black-owned businesses comes from owner equity, in white-owned businesses this figure is only 34 percent.

External equity is a negligible source of financing for black-owned businesses and, among blacks, the equity is evenly split between insider equity (parents and spouse equity) and outsider equity (informal investors, venture capitalists, etc.). In contrast, white-owned business relies much more heavily on outsider equity (9 percent and 2 percent of overall financing, respectively). Debt is broken out into owner debt, insider debt (family, employee, and business debt held by owner), and outsider debt (bank loans, credit lines, business credit cards, etc.). Outsider debt is the most important of the three debt categories. However, large racial differences persist in this category, as well. Outsider debt accounts for more than 40 percent of the white-owned business financing, whereas it makes up just 27 percent for black-owned businesses. Insider debt makes up about 10 percent of financing for both

Table 2
Mean Amounts of Startup Financing by Source (2004)

	White	Black
Total Financial Capital	$81,773	$28,198
Owner Equity	$27,503	$15,828
Insider Equity	$1,758	$453
From Spouse	$499	$147
From Parent(s)	$1,259	$307
Outsider Equity	$7,294	$461
From Internal Investors	$2,721	$174
From Other Businesses	$1,775	*
From Government	$388	*
From Venture Capitalists	$1,924	*
Owner Debt	$3,661	$788
Personal Credit Card(s) and Other Owner Loans		
Insider Debt	$7,838	$3,018
Family Loan	$4,081	$2,506
Business Loan by Owner	$2,179	*
Other Loans from Employees/Owners	$1,577	$464
Outsider Debt	$33,720	$7,649
Personal Bank Loan by Owner(s)	$13,390	$5,034
Business Credit Card Balances	$2,575	$1,115
Business Bank Loan	$10,103	$718
Credit Line Balance	$3,458	$482
Other Business Debt	$4,193	$300

Note: * indicates there were too few observations for reliable estimates.
Source: Kauffman Firm Survey Microdata. Sample Size: 4,163.

groups and owner debt makes up less than five percent of financing for each.

The KFS is the first dataset to provide information on financing after startup for young firms. We find that, overall, young firms rely heavily on financial injections in the years following startup. This can be seen in Tables 3 and 4, which show breakdowns for financial injections in 2005 and 2006, respectively. Estimates from the KFS indicate that large racial differences in financing exist in the years following startup, as well. Specifically, black firms have lower financial injections in the two years following startup. Young black-owned businesses invested less than half the amount of financial capital than white-owned businesses in both years. Blacks continued to rely more heavily on owner equity to finance the operations (42 percent vs. 22 percent in 2005, and 33 percent and 20 percent in 2006, respectively). Blacks were able to better leverage their investments, with their outside debt financing increasing 27 percent of the total financial capital in 2004, to 36 percent in 2005 and 46 percent in 2006. White-owned businesses showed similar

patterns, increasing from 42 percent in 2004 to 49 percent in 2005 and 55 percent in 2006. However, even by 2006, black-owned businesses received more than 42 percent of their total financial capital injections through owner financing (debt and equity), compared with just one-quarter of white-owned firms. Most of the remainder came from other debt (53 percent of the total financing) and the remainder (4.7 percent) from other equity. On the other hand, for whites, 62 percent of the total came from other debt financing and more than 12 percent in other equity financing). Consistent with previous SSBF findings, black firms had lower amounts of bank loans. Because black-owned businesses start at a considerably lower base level of funding than white-owned businesses do, they grow at a faster rate. The average capital injection in 2005 is 100 percent of startup capital for black-owned businesses; for white-owned businesses the average injection is only 60 percent of initial capital. In 2006, the average capital injection for black-owned businesses represents a 50 percent growth rate over the accumulated stock of invested capital. For white-owned businesses, this figure is closer to 40 percent.

Table 3
Mean Amounts of New Financial Injections by Source (2005)

	White	Black
Total Financial Capital	$59,846	$29,001
Owner Equity	$13,327	$12,040
Insider Equity	$1,537	$968
From Spouse	$712	$232
From Parent(s)	$825	$736
Outsider Equity	$6,782	$965
From Internal Investors	$3,287	$406
From Other Businesses	$2,037	$354
From Government	$120	*
From Venture Capitalists	$1,335	*
Owner Debt	$3,619	$2,005
Personal Credit Card(s) and Other Owner Loans		
Insider Debt	$5,051	$2,726
Family Loan	$3,511	$2,526
Business Loan by Owner	$602	*
Other Loans from Employees/Owners	$997	$193
Outsider Debt	$29,529	$10,295
Personal Bank Loan by Owner(s)	$8,201	$4,423
Business Credit Card Balances	$3,987	$3,347
Business Bank Loan	$7,799	$320
Credit Line Balance	$6,000	$1,335
Other Business Debt	$3,542	$870

Note: * indicates there were too few observations for reliable estimates.
Source: Kauffman Firm Survey Microdata. Sample Size: 3,974.

Table 4
Mean Amounts of New Financial Injections by Source (2006)

	White	Black
Total Financial Capital	$59,998	$26,318
Owner Equity	$12,007	$8,611
Insider Equity	$881	$328
From Spouse	$345	$283
From Parent(s)	$536	*
Outsider Equity	$6,492	$912
From Internal Investors	$1,542	$56
From Other Businesses	$2,950	$760
From Government	$151	*
From Venture Capitalists	$1,227	*
Owner Debt	$3,486	$2,505
Personal Credit Card(s) and Other Owner Loans		
Insider Debt	$4,169	$1,852
Family Loan	$2,884	$1,213
Business Loan by Owner	$711	*
Other Loans from Employees/Owners	$581	$640
Outsider Debt	$32,964	$12,111
Personal Bank Loan by Owner(s)	$9,362	$3,828
Business Credit Card Balances	$6,163	$4,898
Business Bank Loan	$7,776	$1,596
Credit Line Balance	$5,628	$1,341
Other Business Debt	$4,035	$447

Note: * indicates there were too few observations for reliable estimates.
Source: Kauffman Firm Survey Microdata. Sample Size: 3,796.

CONCLUSIONS

We find large racial differences in the amounts and types of financing used by new firms at startup and in their early years of operation. Black-owned businesses face persistent constraints in external capital markets. These manifest in markedly lower levels of initial capital and, in addition, faster growth rates in later-stage capital injections. It is important to note, however, that these later-stage capital injections primarily take the form of additional equity injections from the business owner, rather than capital injections from external funding sources. These findings are especially important when we consider them in the broader context of how startup firms access financial markets. Recent work using the Kauffman Firm Survey (see Robb and Robinson, 2008) indicates that startup businesses rely extensively on credit markets to finance their early growth. The fact that black-owned businesses access these markets to a much-lesser degree than white-owned businesses do is one reason behind the lower success rates of minority-owned businesses that have been documented elsewhere.

The lack of success among black-owned businesses resulting from financing constraints may have negative implications for wealth accumulation, economic advancement, and job creation among African-Americans (Boston 1999, 2006 and Bradford 2003). The next step is to investigate the reasons behind these differences. How are these differences related to the owner's human capital, firm credit scores, and differential demand for capital? The first step to answering this question is to explore the broader determinants of capital injections. Are they related to the owner's human capital, as found in previous studies focusing on startup capital (Bates 1997)? There are many reasons to assume that capital injections would vary systematically with the enterprise owner's human capital. Most financial contracting models assume that the entrepreneurial idea is a function of the owner's human capital, or is somehow inalienable to the enterprise owner. Indeed, if this is not true, then it suggests that there is no barrier to entry to mimicking the business idea, which, in turn, suggests that long-run profits should be negligible and capital should not be invested. In addition, if there are limited assets within the firm that can be pledged as collateral, then the owner's human capital should be positively correlated to the amount of capital injections. A key fundamental question that we do not know the answer to is whether it is the most (early) successful firms that have large capital injections (they can attract more from investors and/or can plow back sales into investment) or the least successful (they need to find capital to keep going). We also do not know how financial injections are related to startup capital levels for similar theoretical reasons. We intend to pursue these in the next stage of our research.

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4801 ROCKHILL ROAD
KANSAS CITY, MISSOURI 64110
816-932-1000
www.kauffman.org

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