

Keys to Minority Entrepreneurial Success

*Capital,
Education, and
Technology*



U.S. DEPARTMENT OF COMMERCE



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Keys to Minority Entrepreneurial Success: *Capital, Education, and Technology*

By

Patricia Buckley, Ph.D.
Patricia.Buckley@esa.doc.gov

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Keys to Minority Entrepreneurial Success: *Capital, Education, and Technology*

Executive Summary

The strength of the U.S. economy owes much to its entrepreneurs, those who take risks and develop businesses capable of driving growth into the future. Entrepreneurial energy, the drive to start businesses, is evident in all segments of the U.S. population, and increasingly so in the minority business community. The number of minority-owned businesses¹ increased ten times faster than other businesses between 1992 and 1997.

Despite this high level of entrepreneurial energy in the minority business community, the entrepreneurial success rate may be lagging—minority-owned firms are failing to develop into larger businesses. Minority-owned firms continue to be smaller than majority-owned firms, both in terms of numbers of employees and revenues. In fact, the relative size differential between minority businesses and majority-owned firms widened between 1992 and 1997.

This report describes the size and industry distribution of these businesses, as well as characteristics of the business-owners themselves, looking for factors that may be contributing to this outcome and finds evidence that minority owners have lower rates of access to financial capital and utilization of information technology. Specifically, we find:

- Minority firms are concentrated in industries with low rates of capital investment. Even within those industries, however, minority ownership drops precipitously as firm size rises. Since capital expenditures, particularly expenditures for computers, rise sharply as firm size increases, these findings, taken together, suggest that minority-owned firms confront difficulties in accessing capital.
- Two factors positively associated with the ability to access capital are family income and educational attainment. In general, minority business owners have lower family incomes and less formal education than their non-minority counterparts. However, for minority and non-minority business-owners of comparable income and education, indicators of entrepreneurial success (as measured by firm size) are closer to parity.
- In addition to ability to access financial markets, an important factor associated with differential rates of investment in productivity-enhancing IT is familiarity with computers and the Internet. Survey data show that minority-owners are less likely to use computers or access the Internet than non-minority business-owners.

¹ An MBE or minority-owned business is a business in which members of minority groups (African-Americans, Hispanics, Asian Americans, American Indians, and Alaska Natives) own over 50 percent of the business. Similarly majority-owned businesses refers to businesses where members of minority groups do not own over 50 percent of the business.

Keys to Minority Entrepreneurial Success: *Capital, Education, and Technology*²

Introduction

The willingness of Americans to take risks and start new businesses is an underlying strength of the U.S. economy. Peter Drucker's observation over 20 years ago, in the midst of one of the most painful periods of economic restructuring in U.S. history, remains meaningful today:³

The surest indication of such an atypical cycle—and precisely what we see about us today in the United States—is the emergence of entrepreneurs across a spectrum of activities that extends far beyond what at the time is considered high tech. It is, to be sure, a period of high risk, rapid change, considerable turbulence, and severe anxiety. Real dangers abound that have nothing to do with business cycles—the threat of war, for example, or of the collapse of raw material producers. Nevertheless, it is a period of great opportunity, of fast-growing employment in certain areas, and of rapid overall growth. And as Schumpeter understood, what distinguishes such an atypical cycle from a more conventional trough is not the play of abstract economic forces. It is entrepreneurial energy.⁴

Entrepreneurial energy is evident in all segments of the U.S. economy, but especially the minority business community. Nonetheless, minority-owned firms continue to be smaller than majority-owned firms, both in terms of numbers of employees and revenues.⁵ This report identifies the size and industry distribution of these businesses, as well as characteristics of the business-owners themselves, looking for factors that may be contributing to this outcome. We find that the keys to entrepreneurial success, as measured by the ability to grow the business, are capital, education, and technology.

² The author would like to thank David Beede, an economist with the Economics and Statistics Administration, U.S. Department of Commerce for valuable comments and suggestions.

³ The high rates of productivity growth that the United States experienced beginning in 1995 and that have continued through the current economic slowdown are viewed by many as a signal that we are in a “new economy” or at least an “atypical” cycle.

⁴ Peter F. Drucker, “Our Entrepreneurial Economy,” *Harvard Business Review*, January/February 1981, p. 64.

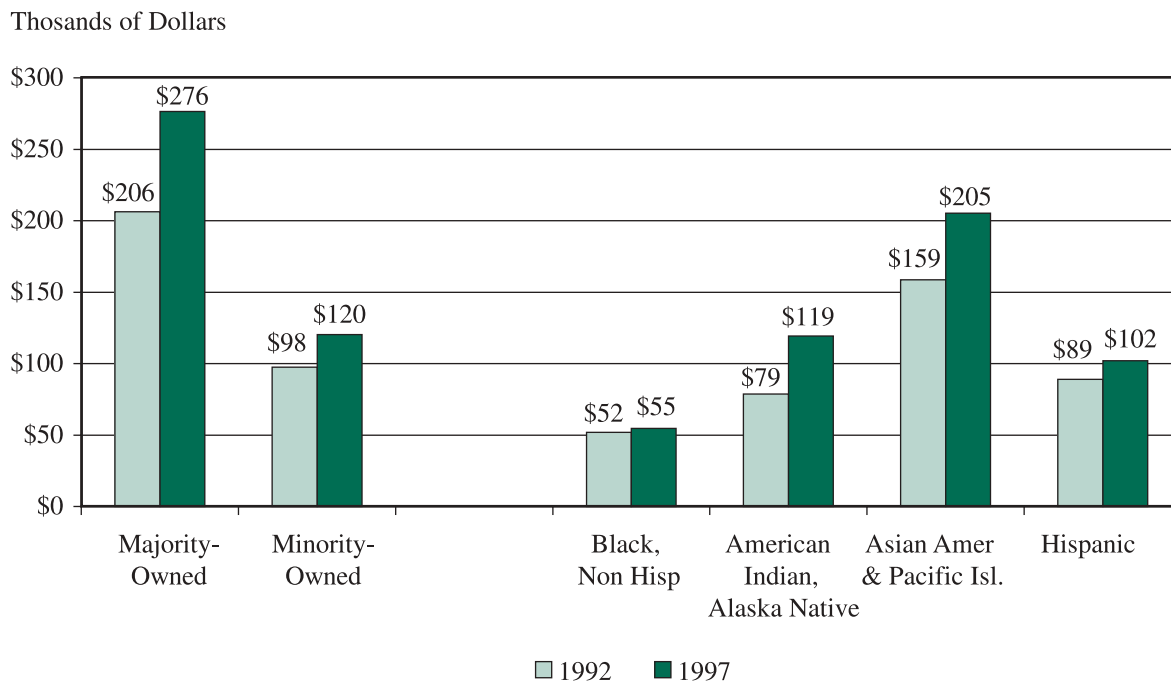
⁵ An MBE or minority-owned business is a business in which members of minority groups (African-Americans, Hispanics, Asian Americans, American Indians, and Alaska Natives) own over 50 percent of the business. Similarly majority-owned businesses refers to businesses where members of minority groups do not own over 50 percent of the business.

Entrepreneurship in the Minority Community

The National Commission on Entrepreneurship defines entrepreneurs as people who start small businesses that they intend to grow into larger businesses.⁶ Although official statistics do not directly measure intent, they do show that although the rate of increase in the number of minority-owned firms has been substantial, these firms remain comparatively small in terms of average revenues and average numbers of employees.

Between 1992 and 1997, the number of minority-owned firms increased by 29.6 percent as compared to 3.6 percent for majority-owned firms. Even after accounting for higher minority population growth over this period (Figure 1), growth in the number of minority-owned firms is still substantially higher (16.1 percent) than growth in the majority-owned firms (1.5 percent). As a result of these growth differentials, the proportion of minority-owned firms increased from 12 percent in 1992 to 15 percent in 1997.⁷

Figure 2
Average Revenue per Firm, 1992 and 1997*
by Race/Ethnicity of the Business-Owner



* Excludes C corporations, see footnote 7

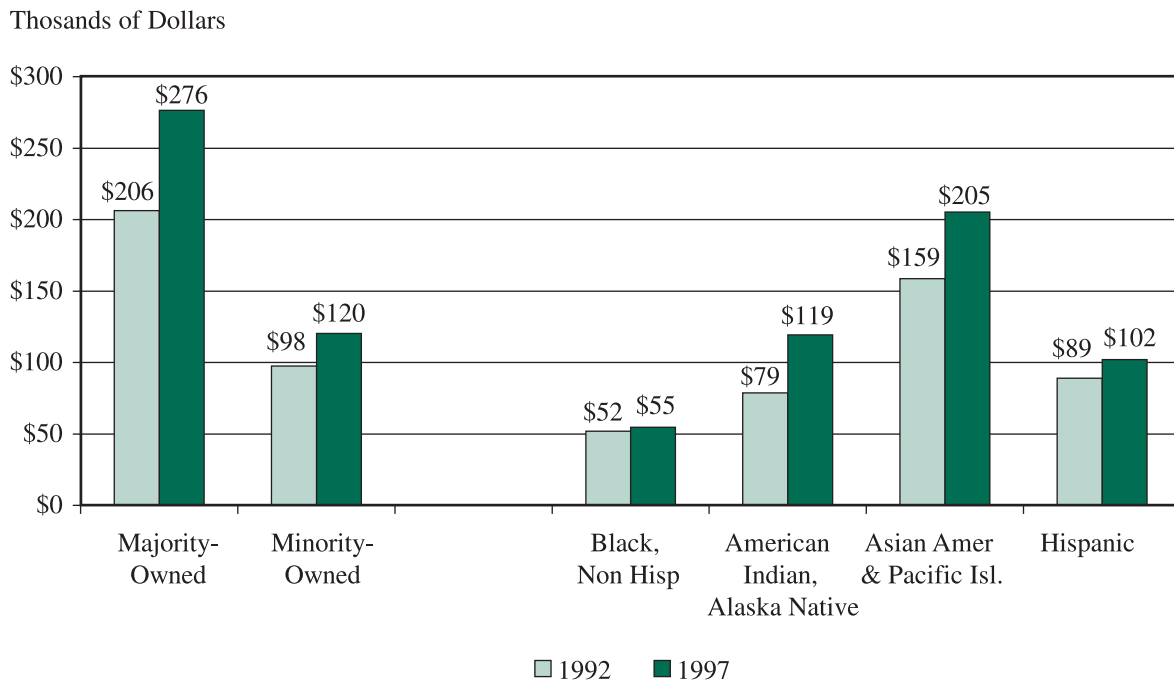
Source: Bureau of the Census, U.S. Department of Commerce, *1997 Economic Census, Survey of Minority-Owned Business Enterprises*, July 2001.

⁶ See <http://www.ncoe.org>

⁷ Comparisons of 1992 to 1997 are not exact because of major differences in the questionnaires in the two survey years. However, the Census Bureau did publish estimates of change for both the number and receipts for minority-owned firms with caveat that "...exact estimates of change are not available. However, the trends shown at the aggregate level are believed to be reliable." One of the adjustments made was to exclude C corporations from the comparison numbers because C corporations were not included in the sample used in the 1992 survey. For a discussion of the methodology differences between the two surveys see pages 13 and 14 of the *Survey of Minority-Owned Business Enterprises*, July 2001.

Over the same period, minority-owned firms lost ground relative to their majority-owned counterparts in terms of size. As shown in Figure 2, even though average revenue per firm of minority-owned businesses rose by \$22,000 or 22 percent between 1992 and 1997 this was much lower than the \$70,000 or 34 percent growth experienced by majority-owned businesses. As a result, in 1997, the average revenue of majority-owned firms was 2.3 times as large as minority-owned firms, up from 2.1 percent in 1992.

Figure 2
Average Revenue per Firm, 1992 and 1997*
by Race/Ethnicity of the Business-Owner



* Excludes C corporations, see footnote 7

Source: Bureau of the Census, U.S. Department of Commerce, *1997 Economic Census, Survey of Minority-Owned Business Enterprises*, July 2001.

The vast majority of firms in the United States are small and in 1997 only one quarter of firms in the United States had any paid employees. For minority-owned firms that proportion is even lower—20 percent. Among this very large number of firms without employees are most likely large numbers of marginal businesses that are part-time or hobby-like enterprises. These are not the type of firms that are entrepreneurial in nature using the definition above. Therefore, the remainder of this section will consider only those firms with paid employees—firms that have passed a major entrepreneurial milestone. Even when consideration is limited to firms with paid employees, however, minority-owned firms are substantially smaller in terms of average revenues and number of employees than the majority-owned firms (see Table 1).⁸

⁸ C corporations are excluded to provide comparability between minority and majority-owned firms. Although the universe for the 1997 survey includes all corporations, “businesses that were foreign-owned, publicly held, nonprofit, or whose ownership was shared by its membership, such as mutual companies, were tabulated separately and not distributed to the race/ethnicity of ownership categories.” The majority-owned businesses, however, included all C corporations, including publicly held companies. Since it was not possible to subtract the publicly held C corporations from the majority-owned firms, all C corporations were excluded.

Table 1
Revenue and Employees Per Firm
Excluding C Corporations, 1997
(Firms with Paid Employees)

| | Average Revenue per Firm | Average Number of Employees per Firm |
|------------------------------------|-----------------------------|---|
| Majority-Owned | \$1,276,367 | 9.9 |
| Minority-Owned* | \$641,629 | 6.2 |
| Black | \$458,836 | 6.0 |
| Hispanic | \$589,134 | 5.5 |
| Asian American And Pacific Isl. | \$730,128 | 6.6 |

Source: Bureau of the Census, U.S. Department of Commerce, *1997 Economic Census, Survey of Minority-Owned Business Enterprises*, July 2001.

* Data for American Indian and Alaska Natives not presented separately because of high standard errors of the estimates, but are included in the Minority Total.

What factors could account for this size differential? Part of the explanation, no doubt, is that faster rates of increase in the total number of minority-owned firms has led to these firms being, on average, younger and therefore they would be expected to be smaller. Unfortunately, the data are not sufficient to explore this issue.

Another possible explanation is that minority-owned firms are more prevalent in industry groups where small firm size, measured either by revenues or employees, is the norm (perhaps because economies of scale are unlikely in such industry divisions). However, as shown in Table 2, there does not appear to be a strong relationship between the distribution of minority-owned firms and average revenues or average number of employees of individual industry groups.⁹ In fact, Table 2 shows that minority-owned firms are substantially smaller than majority-owned firms in *all* industry groups.

Another variable that might be contributing to smaller size is lower rates of capital investment. As shown in Figure 3, minority-ownership is concentrated in industries, such as services and retail trade, where U.S. average annual capital expenditures for equipment are very low. Low capital requirements would be an attractive feature to someone who wanted to start a business, but had limited access to capital. While that may explain the concentration of minority-ownership in certain industries, it does not address the issue of differential size within industries. Even in low-investment industries, minority-owned firms are concentrated in small size categories.

However, limited access to capital might also be an explanation of the relatively small firm size within industry divisions since one factor associated with superior firm performance is capital investment.¹⁰

⁹ This assertion is given further support by data that show less than 25 percent of people employed in retail and services industries work for firms of less than 25 employees. See Economics and Statistics Administration, U.S. Department of Commerce, *Main Street and the Digital Age: How Small and Medium-Sized Businesses Are Using the Tools of the New Economy*, February 2002.

¹⁰ For example research examining characteristics of a selection of individual manufacturing plants that were fast growing in 1977-1982 and 1982-1987 found that these plants were more capital intensive and had high productivity rates than their peers. Nathan Musick, "Heroic Plants: Persistently-Rapid Job Creators in the Longitudinal Research Database—Their Distinguishing Characteristics and Contribution to Employment Growth," posted on IDEAS on November 8, 1998.

Therefore, one hypothesis suggested by this evidence is that minority-owned businesses grow more slowly because they have less to invest than their non-minority counterparts. This hypothesis is also supported by other research that suggests that lack of financial capital is one impediment to the survival and growth of minority-owned businesses.¹¹

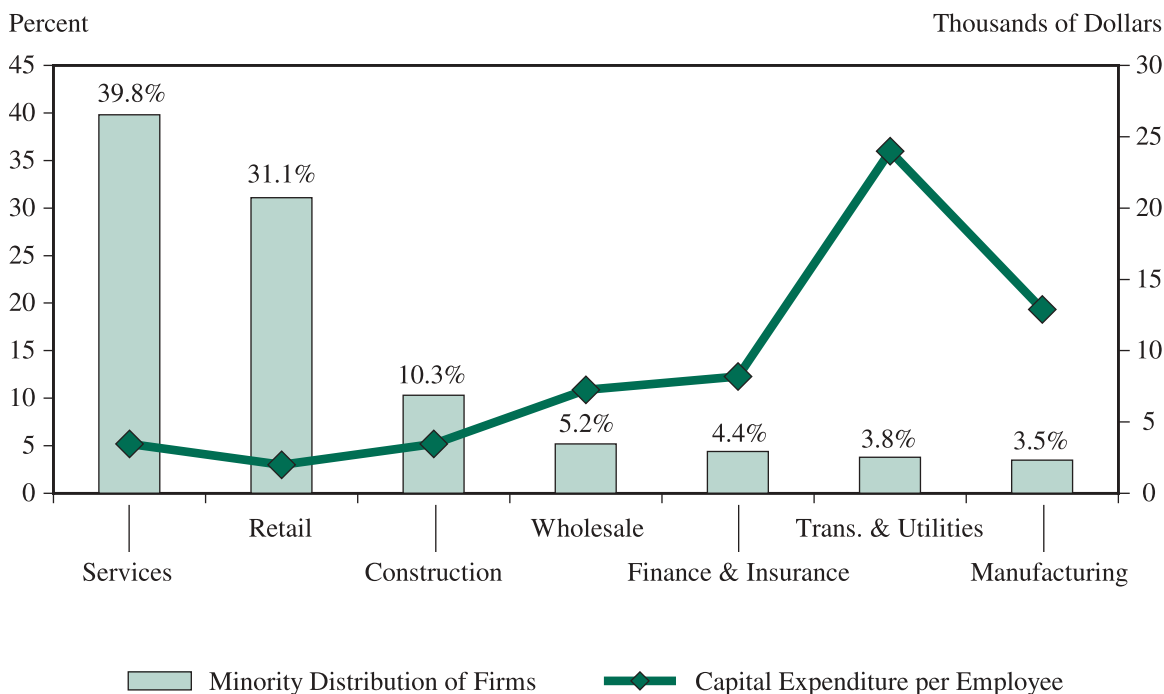
Table 2
Distribution of Minority-Owned Firms with Revenue and Employees
Per Firm by Industry, Excluding C Corporations, 1997
(Firms with Paid Employees)

| | | | Minority-Owned Firms | | Majority-Owned Firms | |
|---|--|--|--------------------------|--------------------------------------|--------------------------|--------------------------------------|
| | Percent Distribution of Minority Firms | | Average Revenue per Firm | Average Number of Employees per Firm | Average Revenue per Firm | Average Number of Employees per Firm |
| Services | 39.8% | | \$383,010 | 6.5 | \$614,621 | 9.5 |
| Retail Trade | 31.1% | | \$604,535 | 6.1 | \$1,338,759 | 11.4 |
| Construction | 10.3% | | \$471,283 | 4.3 | \$965,513 | 6.3 |
| Wholesale Trade | 5.2% | | \$3,183,630 | 7.2 | \$4,804,937 | 10.7 |
| Finance, Insurance, and Real Estate | 4.4% | | \$420,525 | 2.9 | \$868,370 | 5.2 |
| Transportation, Communication and Utilities | 3.8% | | \$465,502 | 5.8 | \$1,279,313 | 10.5 |
| Manufacturing | 3.5% | | \$1,739,748 | 14.2 | \$3,381,969 | 24.2 |
| Agriculture, Forestry, Fishing, Mining | 2.1% | | \$194,490 | 3.9 | \$529,399 | 5.4 |
| | 100.0 | | | | | |

Source: Bureau of the Census, U.S. Department of Commerce, *1997 Economic Census, Survey of Minority-Owned Business Enterprises*, July 2001.

¹¹ See for example, U.S. Small Business Administration, Office of Advocacy, “*Minorities in Business, 2001*,” November 2001 (<http://www.sba.gov/advo/stats>). and Cavalluzzo, Ken S. and Linda C. Cavalluzzo. “Market Structure and Discrimination: The Case of Small Businesses.” *Journal of Money, Credit, and Banking*, vol. 30, No. 4, November 1998, pp. 771-792.

Figure 3
Distribution of Minority-Owned Firms (excluding C corporations),
1997 and U.S. Average Capital Expenditures per Employee
(including C corporations), 1998 by Industry



Source: Bureau of the Census, U.S. Department of Commerce, 1997 *Economic Census, Survey of Minority-Owned Business Enterprises*, July 2001 and Annual Capital Expenditure Survey: 1998, Unpublished data.

As shown in Table 3,¹² investment intensity, as measured by expenditure per employee, varies substantially, not only among industry divisions, but also by firm size (with the exception of construction). These data support the notion that, on average, smaller firms tend to invest less heavily in capital equipment, in general, and in computer equipment, specifically. These data also show that the percent of firms with minority-ownership drops precipitously as firm size increases in all industry classes shown. The negative relationship between the percent of firms with minority-ownership and capital expenditures, particularly expenditures for computers and peripheral equipment, is quite strong.¹³

The next section examines two characteristics of minority business owners that may be related to ability to access capital—education and income. The third section of the report considers a specific type of investment—investment in information technology—and discusses why it is of special importance to entrepreneurs and why investment in this key technology may be lagging in minority-owned firms.

¹² The proportion of minority-owned firms in each size and industry category includes C corporations because it is not possible to subtract them out. This factor is most likely creating substantial downward bias in the proportion of minority-owned firms in the 500 employee and above category.

¹³ The negative correlation between minority-ownership by industry and firm size is 46 percent with per employee total equipment capital expenditures and 60 percent with per employee computer expenditures.

Table 3
Percent Minority Ownership and Capital Expenditures Per Employee
by Industry Sector and Size of Company: Firms with Employees 1997/1998

| Industry Sector And Firm Size* | Percent of Firms with Minority Ownership | US Averages | |
|--|--|--|--------------------------------|
| | | Computers & Peripherals (per employee) | Total Equipment (per employee) |
| Construction | 8.0 | \$151 | \$3,300 |
| Less than 25 (20) | 8.1 | 83 | 3,124 |
| (20) 25 to 99 | 7.7 | 113 | 3,329 |
| 100 to 499 | 4.1 | 204 | 3,512 |
| 500 and above | 1.5 | 493 | 3,731 |
| Manufacturing | 7.1 | \$904 | \$11,723 |
| Less than 25 (20) | 7.7 | 412 | 3,577 |
| (20) 25 to 99 | 6.2 | 435 | 4,035 |
| 100 to 499 | 4.1 | 481 | 5,486 |
| 500 and above | 1.0 | 1,166 | 15,843 |
| Finance, Insurance, and Real Estate | 5.5 | \$2,639 | \$5,297 |
| Less than 25 (20) | 5.8 | 1,384 | 2,716 |
| (20) 25 to 99 | 2.0 | 2,069 | 3,769 |
| 100 to 499 | 1.4 | 2,412 | 4,581 |
| 500 and above | 0.9 | 3,213 | 6,592 |
| Retail Trade | 15.0 | \$349 | \$1,609 |
| Less than 25 (20) | 16.1 | 180 | 896 |
| (20) 25 to 99 | 8.8 | 106 | 779 |
| 100 to 499 | 7.2 | 221 | 1,371 |
| 500 and above | 2.1 | 537 | 2,263 |

*Note: The categories for percent minority-owned businesses are Less than 20 employees and 20 to 99 employees, while the Capital expenditure data are calculated for Less than 25 employees and 25 to 99 employees.

Source: Bureau of the Census, U.S. Department of Commerce, *Survey of Minority-Owned Businesses: 1997*, July 2001 and *Annual Capital Expenditures Survey: 1998*, April 2000.

Table 3
Percent Minority Ownership and Capital Expenditures Per Employee
by Industry Sector and Size of Company: Firms with Employees 1997/1998 (Con't)

| Industry Sector And Firm Size* | Percent of Firms with Minority Ownership | US Averages | |
|---|--|--|--------------------------------|
| | | Computers & Peripherals (per employee) | Total Equipment (per employee) |
| Services | 11.0 | \$602 | \$2,732 |
| Less than 25 (20) | 11.4 | 395 | 1,691 |
| (20) 25 to 99 | 8.8 | 408 | 1,553 |
| 100 to 499 | 5.1 | 718 | 2,022 |
| 500 and above | 2.4 | 743 | 4,024 |
| Transportation, Communications, Electric, Gas, and Sanitary Services | 10.5 | \$919 | \$16,394 |
| Less than 25 (20) | 11.0 | 149 | 5,020 |
| (20) 25 to 99 | 8.2 | 854 | 7,127 |
| 100 to 499 | 6.8 | 1,059 | 14,148 |
| 500 and above | 1.1 | 1,046 | 19,820 |
| Wholesale Trade | 10.9 | \$1522 | \$5,629 |
| Less than 25 (20) | 12.0 | 434 | 2,589 |
| (20) 25 to 99 | 5.8 | 529 | 2,399 |
| 100 to 499 | 3.1 | 917 | 4,222 |
| 500 and above | 0.6 | 3,862 | 12,360 |

*Note: The categories for percent minority-owned businesses are Less than 20 employees and 20 to 99 employees, while the Capital expenditure data are calculated for Less than 25 employees and 25 to 99 employees.

Source: Bureau of the Census, U.S. Department of Commerce, *Survey of Minority-Owned Businesses: 1997*, July 2001 and *Annual Capital Expenditures Survey: 1998*, April 2000.

Characteristics of Minority Business Owners: Income and Education

Owners of larger businesses (represented in our data by those who are self-employed with incorporated businesses) seem to have better access to social and financial capital networks than owners of smaller businesses (represented by those who are self-employed in unincorporated businesses).¹⁴

Figure 4 indicates significant differences in the proportion and type of self-employment among racial and ethnic groups among the employed population. The proportions of self-employment for Native Americans (American Indians, Eskimos, and Aleuts) and Asian Americans are similar to those of Whites; while Blacks and Hispanics are not only less likely to be self-employed, they are also far less likely to own incorporated businesses.¹⁵

There does appear to be a relationship between the probability of owning a larger business and higher incomes and educational attainment. Of the three employment categories considered here,¹⁶ people who are self-employed in incorporated businesses are more likely than the other two groups to have family incomes over \$75,000. As shown in Table 4, over one-half of the Whites and Asians and over 40 percent of Blacks and 46 percent of Hispanics who are self-employed in incorporated businesses have incomes over \$75,000.

The incorporated self-employed are also more likely to have attained at least a bachelor's degree. In general, the percent of employed individuals in the United States (all races and ethnicities) with at least a bachelor's degree is 28 percent. As shown in Table 5, 43.6 percent of the White, non-Hispanics who are incorporated self-employed have a bachelor's degree, with the percentages for other racial/ethnic groups ranging from 32.2 percent for Hispanics to 58.2 percent for Asians.

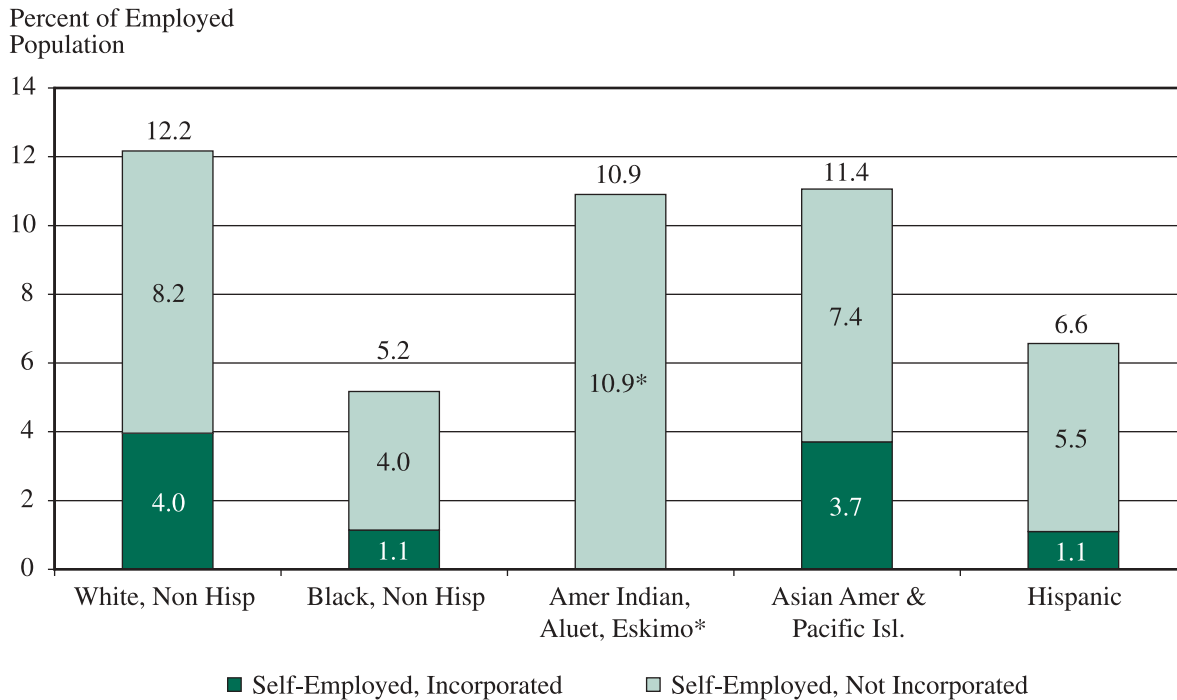
High family income could be generated from other jobs held by family members or from savings or bequests and serve as a source of capital (either directly or as collateral) for starting and growing a business—raising the probability of future entrepreneurial success. Alternatively, high family income

¹⁴ Lacking a direct comparative measure for “size of firm” to match with the data on characteristics of business owners, “self-employment in incorporated businesses” is used as a proxy for self-employed in larger businesses. These data, which are derived from the September 2001 Current Population Survey (CPS), do not distinguish between C corporations and Subchapter S corporations. The larger the firm, the higher the likelihood that the business is incorporated. For example, minority-owned C Corporations are twice as large in terms of revenues as partnerships and five times as large as individual proprietorships. Minority-owned subchapter S Corporations, the other category of incorporated business, are 1.6 and 4.3 times as large as partnerships and sole proprietorships, respectively. In addition, owners of incorporated businesses may be more likely to be willing to take the risks necessary to grow their businesses and may therefore have a greater need for limited liability protection than do owners of unincorporated businesses. Including C corporations in this section does not present comparability issues as in the earlier section because individuals all treated the same in the survey because the focus on self-employment status largely eliminates the inclusion of large, publicly traded companies for both minority- and majority-owned firms. The CPS does not report the ownership shares for self-employed persons in partnerships and corporations, however, so the minority ownership status of some firms may not be exactly comparable in the CPS and SMOBE.

¹⁵ Because of differences in unemployment rates and labor force participation, percentages in Figure 5 are not the same as the rates of self-employed as a percent of the population. For example, as a percent of the population aged 18 to 65 (whether employed, unemployed, or not in the labor force), self-employment rates were 9.2 percent for Whites, 3.7 percent for Blacks, 7.4 percent for Native Americans, 7.7 percent for Asian Americans, and 4.7 for Hispanics in September 2001. For purposes of this discussion, comparisons based on employed persons are most relevant.]

¹⁶ Employed by government, private industry, and nonprofits.

Figure 4
Self-Employment by Race/Hispanic Origin
September 2001



* Incorporated versus Not Incorporated can not be broken out separately because of insufficient sample size for this group

Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

could reflect success in the self-employment job itself and thus reflect current entrepreneurial success. Higher levels of education could imply greater access to increased information about financing and management, as well as personal connections that could increase access to various types of capital including venture capital.

Even though self-employed members of minority groups who have incorporated businesses have higher levels of income and education than minorities with other types of employment, they still trail the income and educational levels of Whites similarly self-employed. This accounts for much of the disparity in self-employment rates. Figure 5 shows a subset of the employed universe considered in Figure 4—those with incomes over \$75,000 and holding at least a bachelor's degree. The Figure shows that the percentages of incorporated business owners in the high income and education category are also relatively similar across racial and ethnic groups. This finding suggests that, despite continuing differences, entrepreneurial success rates for minority and non-minority business-owners of comparable income and education are substantially similar.

Table 4
Percent of Employed with Family Incomes Above \$75,000
By Race and Employment Type
September 2001

| | White, Non Hisp | Black, Non Hisp | Asian Amer & Pacific Isl. | Hispanic |
|---------------------------------|-----------------|-----------------|---------------------------|----------|
| Self-Employed, Incorporated | 58.9 | 41.0 | 52.2 | 46.0 |
| Self-Employed, Not Incorporated | 30.7 | 27.4 | 40.7 | 16.8 |
| Employed by Someone Else | 34.2 | 15.8 | 36.9 | 13.4 |

Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

Table 5
Percent of Employed with a Bachelor's Degree
By Race and Employment Type
September 2001

| | White, Non Hisp | Black, Non Hisp | Asian Amer & Pacific Isl. | Hispanic |
|---------------------------------|-----------------|-----------------|---------------------------|----------|
| Self-Employed, Incorporated | 43.6 | 44.7 | 58.5 | 32.2 |
| Self-Employed, Not Incorporated | 29.9 | 27.6 | 52.2 | 9.9 |
| Employed by Someone Else | 30.6 | 19.9 | 48.1 | 11.7 |

Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

Figure 5
Self-Employment by Race/Hispanic Origin for Employed
Persons with Family Incomes over \$75,000 and at Least a
Bachelor's Degree

Percent of Employed
Population



* Sample size too small to produce reliable estimates for Native Americans

Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

The Role of Information Technology in Entrepreneurial Firms

Information technology (computers, communications equipment, and software) has been described as a general-purpose technology, i.e., a technology capable of generating dramatic productivity improvements, including organizational improvements.¹⁷ IT facilitates productivity improvements in many ways. Voicemail, for example, allows the sole proprietor message keeping abilities formerly only available to someone who could afford to hire support staff. Off-the-shelf computer software allows the small entrepreneur to manage inventories with a degree of efficiency formerly available only to large firms, freeing up scarce capital. One of the most important IT tools, however, especially for smaller firms, is access to the Internet. The Internet expands the growth potential of entrepreneurial firms in three important ways: access to information, access to suppliers, and access to customers (See Box 1).

Because most of the various components of IT, including software, communications equipment, and computers, continue to decline in cost and complexity, this type of technology is increasingly within financial reach of the small business owner. However, before any business owner would invest in IT or any other type of business equipment, they need familiarity with the technology and an understanding of its potential benefits.

One measure of familiarity with IT is computer and Internet use. People who actually have hands-on experience with these tools could be expected to have an increased understanding of their capabilities over people who do not use computers or the Internet.

The data confirm that the incorporated self-employed are more likely to use computers and the Internet than either those who are self-employed but not incorporated and those who work for others. Figures 6 and 7 confirm that these trends generally hold for individual race and ethnic groups. However, these figures also point out that significant differences exist between the various groups in rates of both computer and Internet use. The education and income differentials discussed in the previous sections are significant in this context since both of these factors are associated with higher rates of computer and Internet use.¹⁸

¹⁷ Timothy Bresnahan, Erik Brynjolfsson, and Lorin Hitt, "Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-level Evidence," *Quarterly Journal of Economics*, vol.117, pp 339-376, February 2002.

¹⁸ Previous research using these data has shown that education and income have independent impact on computer and Internet use rates. Unfortunately it is not possible to test for the independent impacts of race versus income and education for the self-employed categories because of insufficient sample size.

Box 1

BUSINESS USES OF THE INTERNET

Accessing Information. Information is a critical input to any business, but for someone just starting a business or looking to grow their business, the information needs are immense. A host of decisions, beginning with deciding what type of business to start and where to locate, are followed by determining operational issues, such as what laws and regulations apply. Information found over the Internet can help inform and speed these decisions and help resolve operational issues. For example, a group considering launching a computer repair business can conduct competitive research on area firms already providing this service (their prices, some indication of their gross receipts, response time, complaints filed against them, etc) and can peruse real estate listing sites to identify potential business locations and match this information against demographic and zoning information. A person considering expanding an auto body refinishing operation can check on permitting requirements for an increase on the volatile organic compounds (VOCs) emissions. While all of the information gathering activities contained in the above examples can be conducted offline, the speed at which the online information can be gathered, the breadth of the information, and the fact that these searches can be done at the convenience of the searcher irrespective of time or day of the week, cannot be matched in the offline world.

Key general business information can also be gathered over the Internet, with some sites providing information especially tailored for specific communities or specific activities. For example, the Minority Business Development Agency of the U.S. Department of Commerce's supports a web site, www.mbda.gov, which provides business development information, including information on alternative financing, capital trends, and some cash management tools, all developed especially for minority business-owners. Another government portal, www.export.gov, provides one stop information on a wide variety of topics, covering a wide variety of services offered by all the different agencies of the Federal Government that impact the export process.

Accessing Suppliers. Smaller businesses are often at a disadvantage vis a vis large firms because face higher supply cost. They generally have access only to local suppliers and they lack the market clout to negotiate for volume discounts. The Internet increases the range of choice available to smaller businesses. No longer does the warehouse operator have to buy pallets from the local hardware store at retail prices. Nor is the dry cleaner owner unable to offer her employees life insurance because her local agent only provides one high cost option—she can shop for an affordable plan over the Internet. The advantage of using the Internet to improve access to suppliers may be even larger for minority-owned firms operating in minority communities if these communities have fewer supplier options.

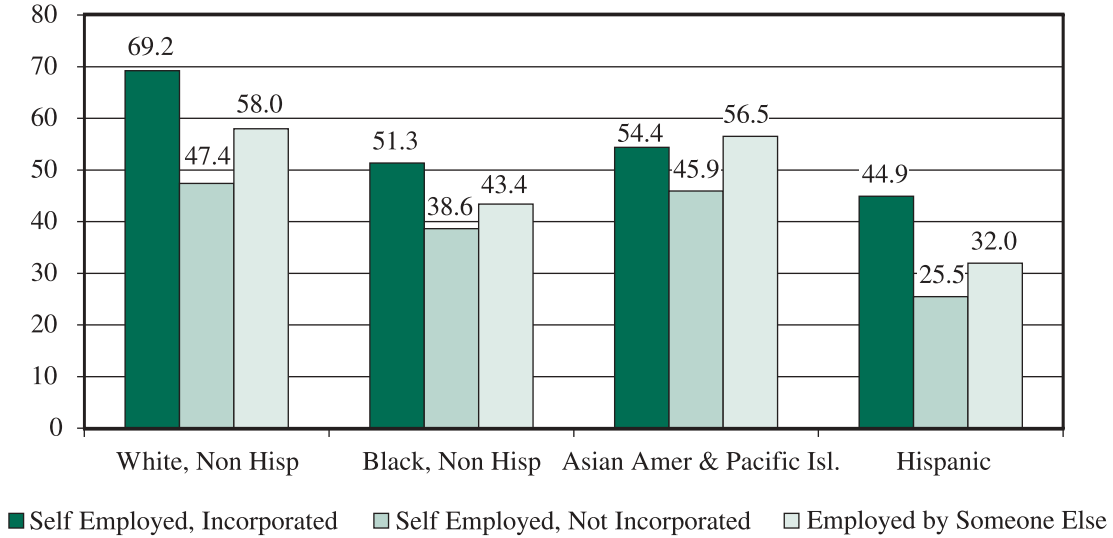
Accessing Customers. As of September 2001, even though only 26.7 percent of people over the age of 18 reported using the Internet to make purchases, over 40 percent reported using the Internet to search for product and service information making the Internet an important channel for businesses to reach potential customers. However, for many firms, other businesses or the government are their primary customers, not individuals. A recent survey of larger minority-owned firms confirmed that a majority of the respondents stated that their customers were primarily other businesses and government, not individual consumers.^A For firms seeking sell to larger firms or the government, access to the Internet is critical as these groups increasingly are requiring all their suppliers to bid, contract, and coordinate logistics online. Last year, the Minority Business Development Agency contracted for three studies of industries where large firms dominate (Telecommunications, Automotive, and Energy and Utilities).^B As these studies point out, there is room for substantial increases in minority sourcing for these industries, however, it should also be recognized that these are industries where most of the firms are electronically connected to all key suppliers, either through the Internet or other networks.

^A Waldo Lopez-Aqueres, *Minority Businesses' Use of Internet Technology: A Preliminary Case Study of Large Firms, 2001*, <http://www.mbda.gov>.

^B These studies conducted by The Asaba Group in 2001 are all available at www.mbda.gov.

Figure 6
Computer Use At Work
September 2001

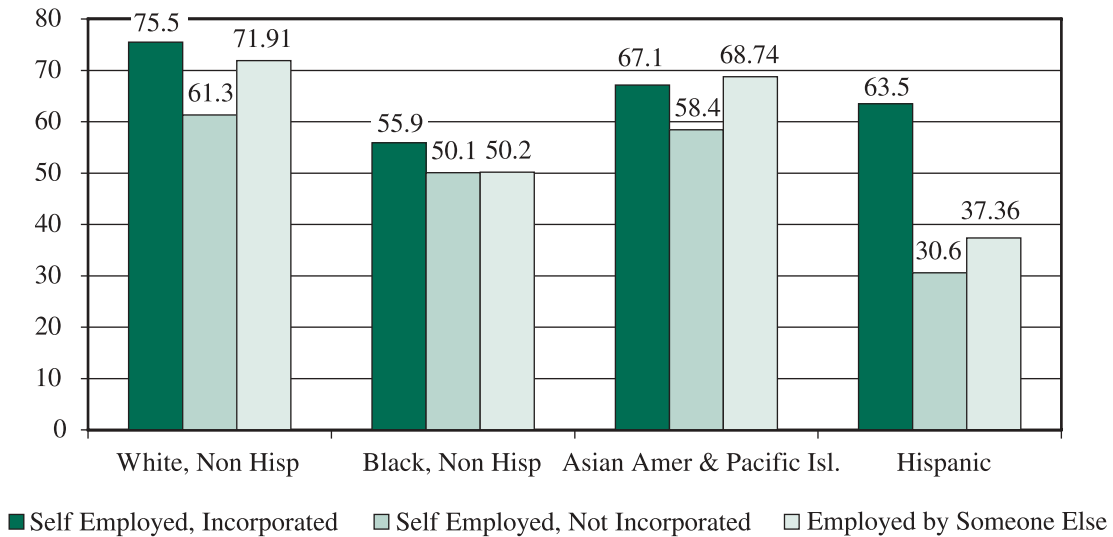
Percent of Employed Population



Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

Figure 7
Internet Use From Any Location
September 2001

Percent of Employed Population



Source: Economics and Statistics Administration, U.S. Department of Commerce, calculations based on the September 2001 *Current Population Survey*.

Conclusion

Defining entrepreneurs as people who start small businesses that they intend to grow into larger businesses, this report explores the entrepreneurial experience of the minority business community. The report finds that although entrepreneurial energy is high and the number of minority-owned firms is increasing, entrepreneurial success appears to be lagging—minority-owned businesses are remaining smaller than other businesses.

Entrepreneurial success of minority-owned firms appears to be related to ability to access capital and use information technology. Minority business-owners with high income and education, for example, are more like their non-minority counterparts in owning businesses that are presumed to be large. The extent to which minority businesses are investing in and using technology is another important factor influencing the ability of minority-owned firms to grow and prosper. The fact that minority business owners are less likely to be computer or Internet users may be a limiting factor in their adoption of electronic business processes that could substantially improve the productivity of their businesses.

U.S. Department of Commerce

Economics and Statistics Administration

www.esa.doc.gov

Minority Business Development Agency

www.mbda.gov

