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## Who Are the Self-Employed?

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Self-employment, or entrepreneurship, is commonly held to provide an important avenue for individuals to advance up the income ladder. For some, it may provide a better route than paid employment, while for others, who may be disadvantaged when pursuing paid employment, it may provide the only route.<sup>1</sup> The perceived importance of self-employment is reflected in government programs such as the U.S. Small Business Administration's loan programs and the Self-Employment Assistance programs that several states have used to help the unemployed to open their own businesses.<sup>2</sup>

Despite the perceived importance of self-employment, there has not been a great deal of basic data analysis to identify who the self-employed are and what they do. As a partial remedy, this paper uses data from the 1998 March Supplement to the Current Population Survey (CPS) to provide a snapshot of self-employment in the United States, with particular focus on the differences between self-employed men and self-employed women. The purpose of this is to inform more-rigorous analyses that try to identify the determinants of self-employment. It supplements and updates earlier looks at CPS self-employment, particularly Bregger (1996), who looked at self-employed men and women combined, and Devine (1994a), who compared male and female self-employment for the years up to 1990.

Because men and women face vastly different costs and benefits to self-employment relative to other labor market options, the self-employment decisions of men and women differ a great deal. Unsurprisingly then, self-employed men and self-employed women tend to do different things and have different labor market characteristics. Nonetheless, most studies that try to explain the decision to be self-employed use data for men only or they combine men and women into one data set. The most recent study that uses combined data on men and women is Blanchflower (2000), which estimates

the determinants of self-employment for 23 Organization for Economic Co-operation and Development (OCED) countries.<sup>3</sup> Of the few studies that examine women's decisions to become self-employed, the most prominent are Macpherson (1988), Connelly (1992), and Devine (1994b). To our knowledge, Georgellis and Wall (1999) is the only study that has direct comparisons of the determinants of men's and women's self-employment decisions.

There are many factors that make a woman's self-employment decision differ from a man's. First, differences in male and female labor-market opportunities due to things like discrimination, experience and skill differentials, and labor-market segmentation may be more pronounced in some types of self-employment than in others.<sup>4</sup> Also, due primarily to child-care concerns, a woman may have a different lifetime occupational strategy than a man with otherwise identical characteristics. Consequently, some types of self-employment may be more preferable to some women because they reduce the costs of child care or allow for more time-flexibility or work from home (Connelly, 1992, and Macpherson, 1988). To some extent, for women, self-employment can be considered a closer substitute for part-time paid employment or being out of the labor force than it is for men. This is consistent with Georgellis and Wall (1999), who found that German women are less responsive to the difference between the wages in paid employment and self-employment and are more likely to have been out of the labor force or in part-time paid employment immediately prior to becoming self-employed.

### CPS SELF-EMPLOYMENT DATA

Before beginning our analysis of the self-employment data, we should be clear about how we define

<sup>1</sup> Holtz-Eakin, Rosen, and Weathers (2000) find evidence that self-employment can move low-income individuals ahead of those who pursue paid employment.

<sup>2</sup> See Vroman (1997) for a description.

<sup>3</sup> It also has an extensive literature review and reference list.

<sup>4</sup> Devine (1994b) finds that for the period 1975–87, the rise in female self-employment was driven by an increasing tendency for high-skilled women to choose self-employment over paid employment.

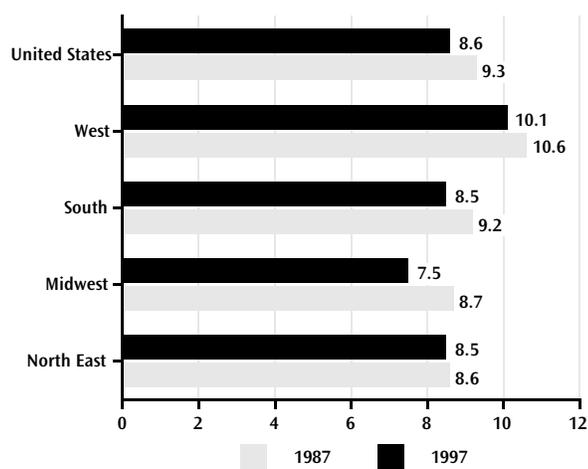
**Table 1**

**U.S. Self-Employment Rates**

	1987	1997
Total	9.3	8.6
Males	11.9	11.0
Females	6.3	6.0

**Figure 1**

**Self-Employment Rates by Region, 1987 and 1997**



self-employment. First, because the self-employment rate in agriculture—typically around 45 percent of total industry employment—is much higher than in other industries, we look at non-agricultural self-employment only. Second, in the CPS March supplement the class of a worker is determined by the job that was held the longest during the previous year.<sup>5</sup> In contrast, the class of a worker in the monthly CPS is the job that is currently held, so the self-employment rates derived from the monthly surveys are usually higher than for the March supplement. This is because within a monthly survey there will be some people who are self-employed for only a short period and, therefore, would not be captured by the March supplement. As long as the difference between the two measures is consistent across the various demographic, occupation, and industry groupings, then the issue that we are interested in—the com-

position of the self-employed—is not sensitive to this distinction.

The CPS is idiosyncratic because persons who work for themselves, but have incorporated their businesses, are not considered self-employed. This is because, technically, they do not work for themselves, but for a corporation. Thus, the usefulness of the CPS measure for looking at the cross-sectional composition of self-employment depends on the extent to which the decision to incorporate differs across the groupings we consider. Similarly, its usefulness for making comparisons over time depends on the extent of year-to-year changes in the tendency for the self-employed to incorporate. Manser and Picot (1999) show that there was a large jump in the share of the incorporated self-employed after the 1994 revision of the CPS survey, although it has not changed much since then. Therefore, comparisons of pre- and post-1994 self-employment should be taken with a grain of salt.

Keeping these caveats in mind, we will restrict ourselves, for the most part, to cross-sectional differences among the self-employed. Nonetheless, when they are of particular interest, we will refer to changes since the 1988 CPS.

**AGGREGATE SELF-EMPLOYMENT RATES**

As reported in Table 1, in 1997, 8.6 percent of those who were employed were self-employed, which was a decrease from the self-employment rate of 9.3 percent ten years earlier. However, as noted above, this decline may partly reflect a greater tendency for people to incorporate their businesses and not be counted as self-employed. More tellingly, Table 1 also shows that for 1987 and 1997: of those who were employed, men were much more likely to be self-employed, and this tendency changed very little between the two years.

There also are notable differences in self-employment when broken down according to region and race. Specifically, as shown by Figure 1, for 1987 and 1997, the self-employment rate for all regions but the West was below the national rate. While the Northeast and the South had self-employment rates only slightly below the national rate in 1997, the Midwest's had fallen to much below it. Further, although all regions saw declines in self-employment

<sup>5</sup> The six non-agricultural job classes are private household, other private, government, self-employed, unpaid, and never worked.

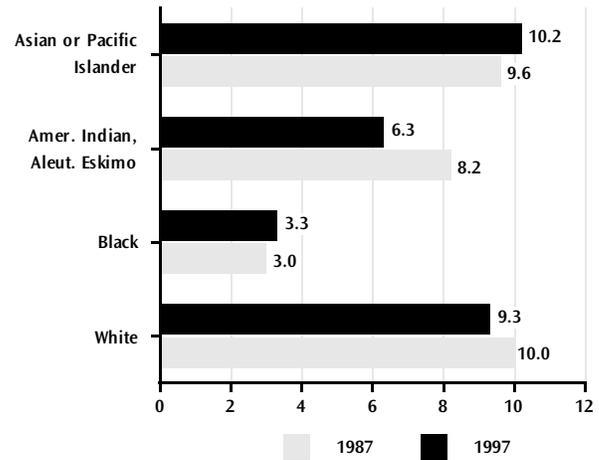
between 1987 and 1997, the Northeast experienced a large relative rise; its self-employment rate was nearly the same during 1997 as for the nation as a whole, having been much lower than the nation's ten years earlier. Explanations for these regional differences are hard to come by. To date, there are no studies of the regional differences in self-employment in the United States, although a study of British self-employment by Georgellis and Wall (2000) may shed some light. They found that, not surprisingly, regional self-employment rates tended to differ according to regional differences in labor-market conditions, labor-force composition, and industry composition. They also found that region-specific factors that are unobservable or difficult to quantify—such as entrepreneurial spirit—play a role. For the United States, differences in state policies such as taxes, support for small business, and bankruptcy laws also may be important.

As Figure 2 shows, two racial groups, whites and Asians or Pacific Islanders, had self-employment rates above the national average for both 1987 and 1997. Interestingly, although the fall in the tendency of whites to be self-employed mirrored that of the nation, the Asian self-employment rate rose over the period, and, by 1997, exceeded that of whites. The two other racial groups—blacks and Native Americans—had self-employment rates well below the national average. While the Native American self-employment rate plunged between 1987 and 1997, from 8.2 percent to 6.3 percent, the black self-employment rate went against the national trend and rose from 3 percent to 3.3 percent.

Note, however, that because the CPS relies on a sampling of the population, one should be careful about reading much into changes in self-employment among minority groups. For example, assume that there are 60,000 people in the CPS, blacks make up 12 percent of the sampled population, the average household has 1.5 adults, 60 percent of the black population is employed, and 3.3 percent of the employed blacks are self-employed. Under these realistic assumptions, the CPS sample would have only 214 blacks that were self-employed. Given this small number, large fluctuations in the aggregate black self-employment rate might be due simply to random sampling error. This also means that one should be wary of disaggregating the CPS categories according to race. It would not be particularly meaningful, for example, to split the 214 self-employed blacks from our example into the 29 detailed industry categories of the CPS. Obviously,

**Figure 2**

**Self-Employment Rates by Race, 1987 and 1997**



such problems are even more severe when disaggregating data for smaller minority groups such as Native Americans and Asian or Pacific Islanders.

**WHAT DO THE SELF-EMPLOYED DO?**

As shown by Figure 3, during 1997 self-employed men and women were concentrated in a small number of occupations—87 percent of self-employed men were in one of four occupations and 94 percent of women were in one of five occupations.<sup>6</sup> Self-employed men and women were similar in that three occupations—sales; professional specialty; and executive, administrative, and managerial—had large shares of both. Nevertheless, there were large differences: Whereas nearly a quarter of self-employed men were in precision production, very few self-employed women were. Instead, large shares of self-employed women were in service or administrative support occupations, where self-employed men were not likely to be.

Compared with 1987, the 1997 occupational distribution of self-employed men was little changed, although shares for professional specialty and pre-

<sup>6</sup> This is out of 12 two-digit non-agricultural occupational classifications.

Figure 3

Shares of the Self-Employed by Occupation, 1997

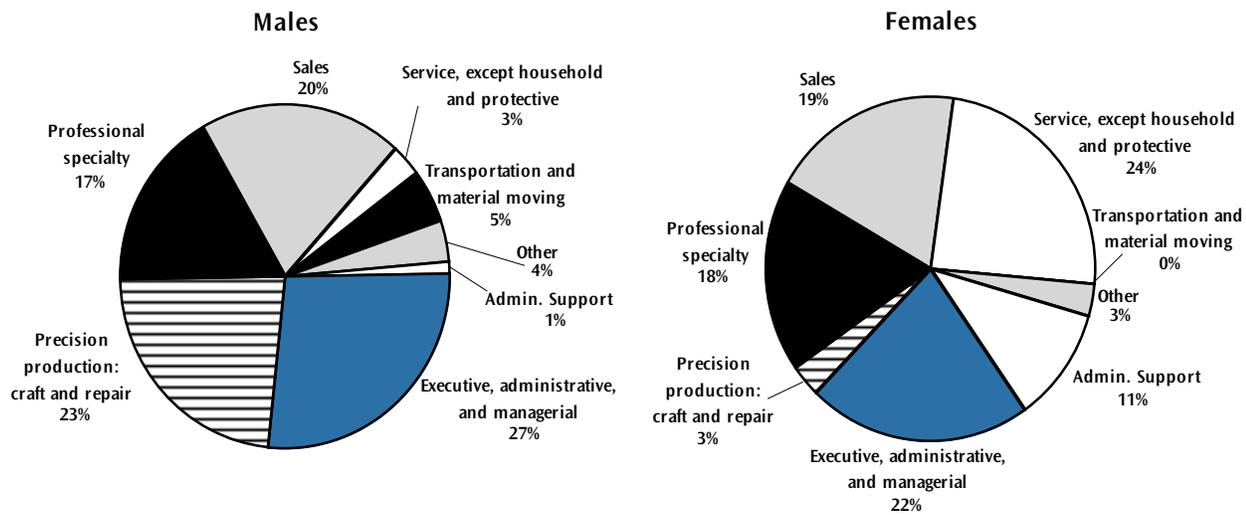
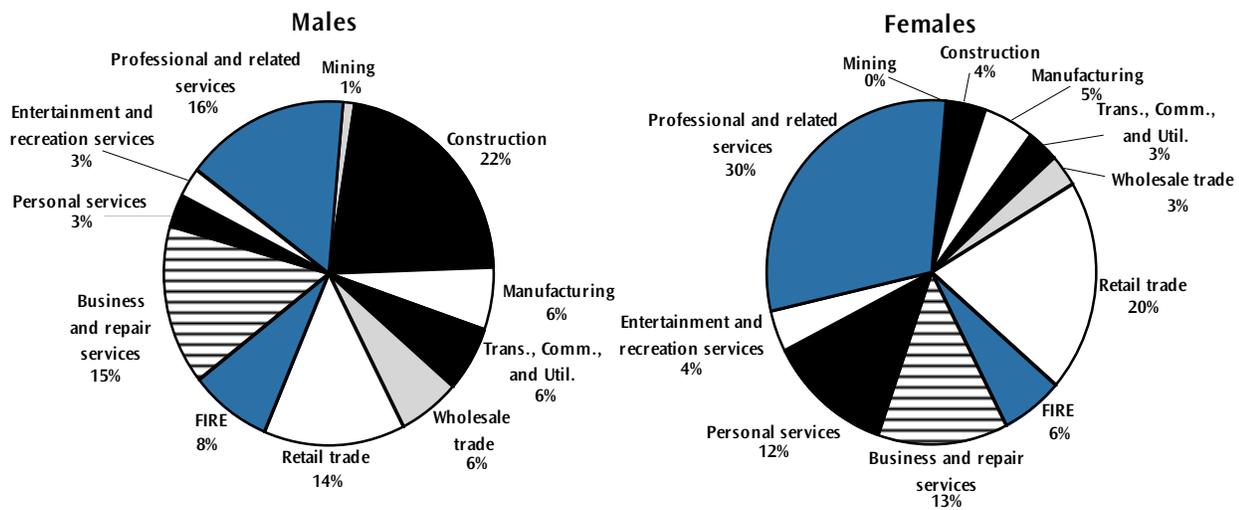


Figure 4

Shares of the Self-Employed by Industry, 1997

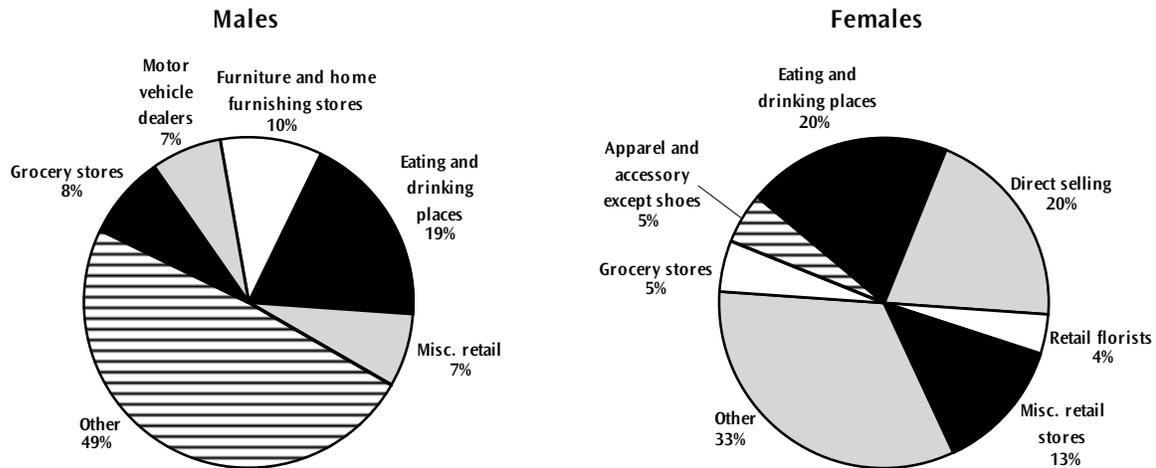


recision production were slightly higher (between 1 and 2 percentage points) and the share in sales was slightly lower (3 percentage points). In contrast, the occupational distribution of women changed quite a bit. There were relatively large shifts of self-employed women toward professional specialty (6 percentage points higher) and executive, adminis-

trative, and managerial (4 percentage points higher); and away from service and sales occupations (both 4 percentage points lower). Thus, in common with women in paid employment, self-employed women appear to be moving away from traditional female service and sales occupations toward professional and executive ones.

**Figure 5**

**Detailed Shares of the Self-Employed in Retail Trade, 1997**



Because of this, the occupational distributions of self-employed men and women are becoming more similar over time.

Partly mirroring the differences in occupations, self-employed men and women are not always found in the same industries. As illustrated by Figure 4, during 1997, large shares of self-employed men and women worked in professional and related services, retail trade, and business and repair services industries. However, the shares of self-employed women in the first two of these industries were much higher than those for self-employed men. The construction industry was also a popular industry for self-employed men, although self-employed women were relatively scarce there. Instead, self-employed women were more likely to be in the personal services industry, which had relatively few of the self-employed men.

Self-employed men tended to be in the same industries during 1997 as they were in 1987, although there were slightly higher shares in construction and professional and related services during 1997 (1.7 and 1.5 percent, respectively). In contrast, during 1997, self-employed women were much more likely to be in professional and related services than during 1987, as their share in that industry rose by 13.2 percentage points over the period. This was made up for by large decreases in the shares of self-employed

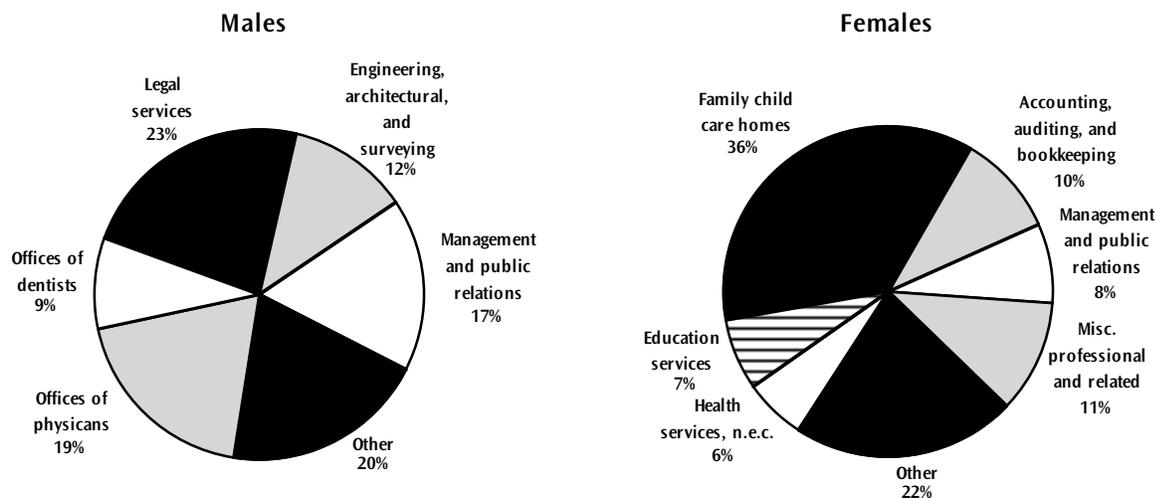
women in retail sales (5 percentage points lower) and personal services (10.6 percentage points lower).

On the face of it, the data indicate a trend toward self-employed men and women doing similar things in similar industries. However, a closer look reveals that this is not true, as men and women do very different things within the broad industry classifications discussed above. For example, as illustrated by Figure 5, if we disaggregate the retail trade industry we see that the only subindustry where self-employed men and women both tended to be in similar numbers was eating and drinking places. Self-employed men and women were also both likely to be in grocery stores and miscellaneous retail, but men were much more likely to be in the former and women more likely to be in the latter. Self-employed men also tended to own motor vehicle dealerships and furniture and home furnishing stores, which were rarely owned by self-employed women. On the other hand, self-employed women were much more likely to be retail florists, be involved in direct selling, or own non-shoe apparel and accessory stores.

A similar disaggregation of the professional and related services industry reveals that there was only one subindustry—management and public relations—for which the shares of self-employed men and women were both higher than 6 percent. Even

Figure 6

Detailed Shares of the Self-Employed in Professional and Related Services, 1997



there, the share of self-employed men was more than twice that of self-employed women. As illustrated by Figure 6, self-employed men in professional and related services tended to work in medicine, dentistry, legal services, engineering, architecture, or surveying. In contrast, self-employed women in the industry tended to be in accounting, auditing, and bookkeeping; education services; health services; and, most commonly, child-care provision.

**EDUCATION AND THE SELF-EMPLOYED**

Many studies of the determinants of self-employment take a person’s education to be an important factor in the decision to be self-employed and therefore include in their regressions a variable such as “years of education.”<sup>7</sup> However, given the wide variety of occupations and industries where the self-employed are, the relationship between education and self-employment is not that simple. As Figure 7 shows, during 1997, 57 percent of self-employed men and women did not have a post-secondary degree, reflecting that some of the occupations and industries where the self-employed are prevalent provide relatively low returns to higher education. Other occupations popular with the self-employed, such as professional specialty and executive, administrative, and managerial, require a post-secondary diploma and thus provide high returns

to education. Nonetheless, of the self-employed with post-secondary degrees, most have no more than a bachelor’s degree.

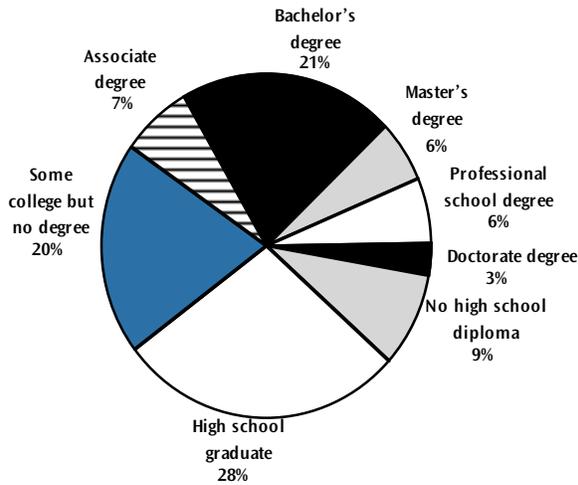
To a large extent, Figure 7 simply reflects the shares of those who are employed according to education groups, rather than the tendencies of the education groups to be self-employed. For instance, although those who have not had any education beyond high school account for 37 percent of the self-employed, they account for an even larger share of overall employment (44 percent). On the other hand, those with a bachelor’s degree or higher account for 34 percent of the self-employed, although they account for only 29 percent of total employment. It is perhaps more instructive to look at the self-employment rates within a given education group. Rather than telling us who the self-employed are, as education shares do, they tell us the likelihood that a person with a given level of education will be self-employed.

As Figure 8 illustrates, the relationship between education level and the likelihood of self-employment was not monotonic, and it differed between men and women. For men, those with professional school degrees (M.D., D.D.S., D.V.M., L.L.B., and J.D.)

<sup>7</sup> This includes Macpherson (1988), Connelly (1992), and Devine (1994b).

**Figure 7**

**Shares of the Self-Employed by Education, 1997**  
Males and Females Combined



were the ones most likely to be self-employed, as over 38 percent of such men were. The next highest self-employment rates for men were for those with doctorate degrees (Ph.D. and E.D.D.) and those with associate degrees. Men who held master's (M.A., M.S., M.ENG., M.ED., M.S.W., and M.B.A.) or bachelor's degrees were much less likely to be self-employed than were men with education levels either just higher or just lower. For men without a post-secondary degree, less education meant a lower likelihood of self-employment.

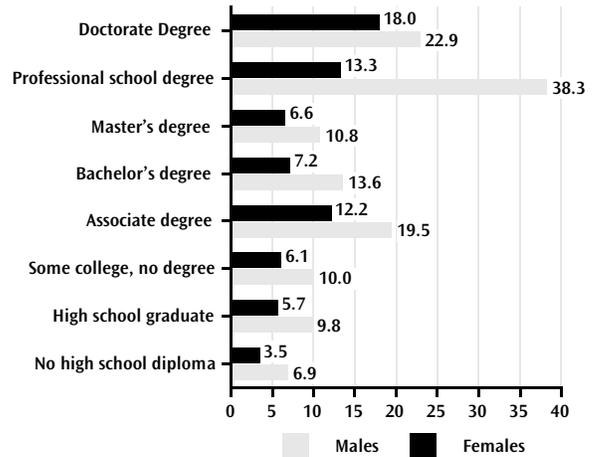
Consistent with their lower aggregate self-employment rate, women were less likely to be self-employed than were men with the same level of education. As with men, for those with an associate degree or less, self-employment rates were greater the higher the level of educational attainment. Also, for women with degrees, those with bachelor's or master's degrees had the lowest self-employment rates. Here, the major difference between men and women is that women with professional degrees were only about one third as likely to be self-employed as were men with the same education level.

**AGE AND THE SELF-EMPLOYED**

The self-employed have a clear age profile, although there is very little difference between the age profile of self-employed women and that of

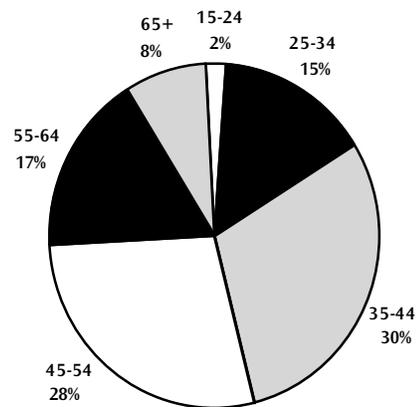
**Figure 8**

**Male and Female Self-Employment Rates by Education, 1997**



**Figure 9**

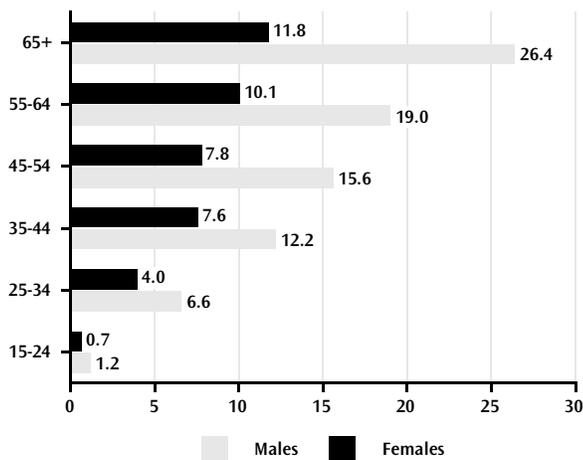
**Shares of the Self-Employed by Age, 1997**  
Males and Females Combined



self-employed men. As shown by Figure 9, during 1997, roughly equal numbers of the self-employed were either 35 to 44 years old or 45 to 54 years old, and these two age groups accounted for 58 percent of the self-employed. In contrast, there were relatively few of the self-employed who were between 25 and 34 years old, despite being almost as numer-

**Figure 10**

**Male and Female Self-Employment Rates by Age, 1997**



ous in the workforce as 35- to 44-year-olds. To put this in perspective: About twice as many 35- to 44-year-olds were self-employed, even though there were only 13 percent more 35- to 44-year-olds in the workforce. Even more telling is that there were more self-employed people between the ages of 55 and 64 than there were between the ages 25 and 34, even though 61 percent fewer of the older group are employed in any capacity.

A different perspective on the same phenomenon is provided by Figure 10, which reports the self-employment rates for men and women in the various age groups during 1997. The obvious pattern is that, for those who are employed, the tendency to be self-employed rises with age. The usual explanation for this is that success in self-employment is more dependent on experience than is success in paid employment. Because of this, older workers are more likely than younger workers to choose self-employment over paid employment. This is likely to be a good explanation of the pattern at the low end of the age distribution. However, a tendency for the self-employed to retire later in life than those in paid employment would go a long way in explaining the positive link between age and self-employment rates among older workers.

For whatever reason self-employment rates rise with age, this effect was not as strong for women as it was for men. For the youngest three age

groups, an employed man was between 60 to 70 percent more likely to be self-employed than was an employed woman. In contrast, for the oldest three age groups, an employed man was between 90 to 120 percent more likely than an employed woman to be self-employed.

**CONCLUDING REMARKS**

For researchers, this snapshot of U.S. self-employment reveals that there are many factors to keep in mind when studying the determinants of self-employment. These include differences in self-employment according to characteristics such as sex, race, region, age, and education. They also include differences in the occupations and industries in which self-employed men and women tend to be found. Because of these many differences, questions arise about whether policies designed to spur self-employment have different effects on the various categories: Are they more appropriate for occupations in which men or whites tend to be self-employed? Do they tend to favor certain types of self-employed people, such as those with professional degrees? Are they useful for home-based or part-time self-employment, which may be more amenable to women’s career strategies because they decrease the costs of childcare? Are they more useful for some states because of the states’ industrial composition?

We do not attempt to answer these questions here, but they certainly indicate that there is much more to self-employment than has been addressed in previous studies which tend to ignore many of the differences outlined here.

**REFERENCES**

Blanchflower, David G. “Self-Employment in OECD Countries,” National Bureau of Economic Research Working Paper 7486, January 2000.

Bregger, John E. “Measuring Self-Employment in the United States,” *Monthly Labor Review* (January/February 1996), pp. 3-9.

Connelly, Rachel. “Self-Employment and Providing Child Care,” *Demography* (February 1992), pp. 17-29.

Devine, Theresa J. “Characteristics of Self-Employed Women in the United States,” *Monthly Labor Review* (March 1994a), pp. 20-34.

\_\_\_\_\_. “Changes in Wage-and-Salary Returns to Skill and the Recent Rise in Female Self-Employment,” *American Economic Review* (May 1994b), pp. 108-13.

Georgellis, Yannis and Howard J. Wall. "What Makes a Region Entrepreneurial? Evidence from Britain," *Annals of Regional Science* (2000), pp. 385-403.

\_\_\_\_\_ and \_\_\_\_\_. "Gender Differences in Self-Employment: Panel Evidence from the Former West Germany," Federal Reserve Bank of St. Louis Working Paper 99-008B, January 1999.

Holtz-Eakin, Douglas, Harvey S. Rosen, and Robert Weathers. "Horatio Alger Meets the Mobility Tables," National Bureau of Economic Research Working Paper 7619, March 2000.

Manser, Marilyn E. and Garnett Picot. "The Role of Self-Employment in U.S. and Canadian Job Growth," *Monthly Labor Review* (April 1999), pp. 10-25.

Macpherson, David A. "Self-Employment and Married Women," *Economics Letters* (1988), pp. 281-4.

Vroman, Wayne. "Self-Employment Assistance: Revised Report," The Urban Institute, December 1997.

## REVIEW

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