

## Educational Attainment and Other Characteristics of the Self-Employed: An Examination using Data from the Panel Study of Income Dynamics

Office of Advocacy Working Paper

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### Purpose

It was once assumed that college graduates would graduate and then go to work for a Fortune 500 firm; that is still true for many people. What is also true, though, is that more students today see entrepreneurship as a viable option for their careers.

This study examines the relationship between education and the choice to become an entrepreneur. In doing so, it builds on previous research linking entrepreneurial activity with educational attainment. Weaver, Dickson, and Solomon (2006), for example, survey the literature on this topic, and find that individuals with more education are more likely to be self-employed and successful. Brush and Manolova (2004) write that “human capital is the starting point for obtaining and developing other types of resources when a new venture is founded and directly influences its start-up process, survival, performance, and strategic direction.”

Using the Panel Study of Income Dynamics (PSID), this paper examines such linkages by analyzing the characteristics of the self-employed compared with individuals employed by others. An examination of differences between these two populations, both through univariate statistical comparisons and multivariate logit modeling, will provide information about various determinants of the self-employed, including educational attainment and non-educational factors.

Note that heads of households can be either male or female. For those who are male, this analysis examines the employment decisions of their wives. The PSID’s lack of information about male

spouses of female heads of household or about same-sex partners is a statistical artifact of the panel study’s 1968 origins.

### Overall Findings

This study finds that educational attainment is an important determinant of self-employment. Individuals with more schooling are more likely to start their own business, particularly in certain industries. Heads of household with post-baccalaureate experience are up to 8.3 percent more likely to be their own boss rather than work for someone else.

Wealth (as defined by home ownership or the value of one’s home) and prior military service also significantly increase the likelihood of self-employment

### Highlights

- Obtaining more education increases the probability of self-employment. For instance, a head of household with some college (but less than a bachelor’s degree) is 3.3 percent more likely to be self-employed than not. That figure rises to 4.4 percent for those with a baccalaureate degree and to 8.3 percent for those with graduate experience. The same holds true for wives; however, the impacts are smaller and sometimes statistically insignificant.

- Individuals with military experience are 9.4 to 11 percent more likely to be self-employed than to work for someone else, all else equal. The presence of military experience is the strongest predictor of self-employment in the model.

- The ability to start a business is often tied to financial assets, and the PSID data have two proxies

for measuring this – the value of a home and whether or not the household has a mortgage. Those respondents who work for someone else had a greater likelihood of being a nonhomeowner or having a less valuable home than their self-employed counterparts.

- The homeownership variable is one of the better indicators of self-employment, with homeowners being around 7 percent more likely than nonhomeowners to be self-employed. Moreover, for every \$100,000 increase in the value of an individual's house, the probability of self-employment increases by 2 percent.

- For heads of household, the self-employed are more likely to be older, married, white, military veterans, Internet savvy, and rural. For wives, the self-employed are more likely to be older than 30 years of age, white, and military veterans; they are also more prone to be employed in the service sector and have greater relative wealth (as measured by the value of their home).

- Goods-producing entrepreneurs tend to be in construction. In the service-producing industries more of the self-employed are in the “soft” service sectors. The “soft” service sector would be industries that are more “white collar” in nature, and not coincidentally, they would also be the ones that would require more college education as preparation.

- Heads of households in the service sector are 1.4 percent less likely to be self-employed. However, heads of household employed in the nongovernmental “soft” service sector are 2.9 percent more likely to be self-employed.

## Scope and Methodology

This study utilizes PSID data from 2003, although there is also a comparison made in one of the tables with data from 1990. The PSID data set is unique in that it tracks families over time, beginning in 1968. As children marry and start their own families, for instance, the PSID survey will continue to follow them.

The PSID contains information on the employment status of its respondents. It asks the head of household and, when applicable, the wife if they were self-employed or worked for someone else in a given year, allowing examination of self-employment in this sample. Examinations of the differences between the self-employed and the non-self-employed, both through univariate statistical comparisons and multivariate logit modeling, provide useful information about the various determinants of self-employment.

The PSID study and this analysis refer to “wives” and not women. It is possible that a woman could be the head of household; however, the head of household is male at least 76 percent of the time.

Nongovernment “soft” service sector industries used in this analysis of PSID data include the following two-digit NAICS major industries: retail trade; information; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; management, administrative and support, and waste management services; educational services; health care and social assistance; accommodation and food services; and other services.

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