National Longitudinal Surveys

Discussion Paper

Capital Market Constraints, Parental Wealth and the
Transition to Self-Employment among Men and Women

Thomas Dunn
Douglas Holtz-Eakin
Syracuse University

August 1995

The National Longitudinal Surveys (NLS) program supports many studies designed to increase understanding of the labor market and methods of data collection. The *Discussion Papers* series incorporates some of the research coming out of the program. Many of the papers in this series have been delivered as final reports commissioned as part of an extramural grant program, under which grants are awarded through a competitive process. The series is intended to circulate the findings to interested readers within and outside the Bureau of Labor Statistics.

Persons interested in obtaining a copy of any Discussion Paper, other NLS reports, or general information about the NLS program and surveys should contact the Bureau of Labor Statistics, Office of Economic Research, Washington, DC 20212-0001, or call (202) 606-7405.

Material in this publication is in the public domain and, with appropriate credit, may be reproduced without permission.

Capital Market Constraints, Parental Wealth and the Transition

to Self-Employment among Men and Women

Thomas Dunn

Douglas Holtz-Eakin

Center for Policy Research
Syracuse University

August 1995

ABSTRACT

The environment for business creation is central to economic policy as entrepreneurs are believed to be forces of innovation, employment and economic dynamism. We use data from the National Longitudinal Surveys (NLS) to investigate the relative impacts of parental wealth and human capital on the probability that an individual will make the transition from a wage and salary job to self-employment, and to examine differences between men and women in the determinants of self-employment.

We find that the financial assets of young men exert a statistically significant, but quantitatively modest effect on the probability of self-employment and the transition to self-employment. In contrast, financial assets are not a significant determinant of these activities for young women, casting doubt on the importance of capital market constraints for female entrepreneurs. For both males and females, parents exert a large influence. The channel for this effect runs not through financial means, but rather through intergenerational correlation in self-employment. Moreover, parents are not "created equal"; the influence across generations is stronger along gender lines.

Thomas Dunn
Department of Economics
Center for Policy Research
Syracuse University
Syracuse, NY 13244-1090
(315) 443-5053
tdunn@maxwell.syr.edu

Douglas Holtz-Eakin
Department of Economics
Center for Policy Research
Syracuse University
Syracuse, NY 13244-1090
(315) 443-3115
djheakin@maxwell.syr.edu

New entrepreneurs are valuable sources of innovation, employment, and economic dynamism, thus making it important for policy makers and analysts to understand why people become and remain entrepreneurs. Research into entrepreneurship has identified two important empirical phenomena: the greater propensity of the offspring of the self-employed to become entrepreneurs, and the importance of access to capital in starting a new business. One possibility is that these two features of the data both reflect access to capital. Successful entrepreneurs may be more able and willing to transfer financial wealth to their offspring, thereby relaxing capital market constraints. Alternatively, intergenerational links may operate because of the transmission of managerial human capital. In short, understanding links in self-employment across generations involves consideration of the intergenerational transmission of both human and financial capital. Quantifying the importance of each feature of this process may permit one to identify those policies that create an environment favorable to entrepreneurism. In doing so, it is of interest is to examine whether the effects of human and financial capital differ by gender. The rise in female self-employment has been a striking feature of the labor market in the 1980s; a rise thus far without a dominant explanation. One might conjecture that either capital markets affect men and women differently, or that the transmission of human capital has gender-specific elements, or both. We also explore these possibilities.

We examine data are drawn from the four original cohorts of the National Longitudinal Surveys of Labor Market Experience (NLS). The construction of the NLS makes it possible to both match parent-child pairs and to exploit the availability of panel data. We are able to construct a rich panel data for both members of a parent-child pair and for each member's spouse

that encompasses demographic variables, income variables, education variables, asset measures, and indicators of self-employment.

An examination of the propensity for self-employment in the NLS indicates several important features of the data. Self-employment experiences are an important aspect of the careers of young men. While the annual self-employment rate reaches only 15 percent, self-employment touches one-fifth of the young men, occupying nearly one-half of their early careers. For young women, the self-employment rate is roughly one-third lower. While young womens' overall exposure to self-employment is lower than for young men, they enter self-employment at roughly the same age and spend nearly as much of their working time self-employed. Even a glance at the raw data suggest important differences between young men and young women in the incidence and intensity of self-employment.

Turning to the intergenerational transmission of self-employment through financial or human capital linkages, one finds that the self-employment rate for sons and daughters is much higher whenever either parent has a history of self-employment. Thus, while parental experiences do not seemingly affect either the intensity of self-employment or the age at which self-employment begins, they are associated with a greater propensity to become self-employed at all, i.e., on entry into self-employment. In contrast, the effects of financial capital differ strongly by gender. Among young men there is a positive correlation between asset holdings and self-employment, especially at the upper end of the wealth distribution, while the data suggests little relationship between assets and self-employment rates among young women.

As noted at the outset, parental wealth may provide indirect access to capital, thereby easing the entry into self-employment, and the raw data display a moderate positive relationship between self-employment and parental wealth.

In short, a simple, direct examination of the data reveals a positive relationship between self-employment propensities and their parents' self-employment and wealth. Moreover, there is suggestive evidence that own-wealth accumulation aids self-employment among young men, but not young women. It is useful to examine the degree to which these findings survive in a multivariate context.

The results of cross-section based logit analyses reveal that for sons the effects of parents' assets are estimated precisely, but are quite small. For daughters, however, neither own assets nor parents' assets are significant predictors of self-employment. Thus, the basic difference regarding the importance of assets for male and female self-employment survives intact. With regard to the role of human capital, parents' self-employment enters significantly with a large positive coefficient for both sons and daughters. At the same time, the parents' asset coefficients diminish and lose significance.

We conclude with an analysis of transitions into self-employment. As with the cross-sectional analyses, parents' financial wealth appears to be far less important than their self-employment experiences. Thus, these data suggest again a greater role for human capital than financial assets in enhancing the probability of making a transition to being an entrepreneur. Interestingly, parents do not have equal effects on sons and daughters; the influence of fathers is greater upon sons, while the influence of mothers is greater upon their daughters.

1.   Introduction

Senator Robert Kasten has summarized the view that entrepreneurs are valuable sources of innovation, employment, and economic dynamism: "They create new jobs. They provide new competition to existing businesses. They help to improve product quality, help to reduce prices, add new goods and services never before thought of, advance new technologies, America's competitive stance."[1] It is of interest to understand why people become and remain entrepreneurs.

Because credit rationing can emerge even when all agents optimize (e.g. Stiglitz and Weiss (1981)), economists have explored the hypothesis that capital markets constrain entrepreneurs. An important empirical phenomenon in this regard is the greater propensity of the offspring of the self-employed to become entrepreneurs. Successful entrepreneurs may be more able and willing to transfer financial wealth to their offspring, thereby relaxing capital market constraints. Alternatively, self-employment may be correlated across generations because of the transmission of managerial human capital.

In short, understanding links in self-employment across generations involves consideration of the intergenerational transmission of both human and financial capital. Moreover, identifying the quantitatively important features of this process may permit us to identify those policies that create an environment favorable to entrepreneurism.

1.1   Previous Research

Empirical work on liquidity constraints and entrepreneurs has been guided by the following logic. Initial capital is required for a new enterprise. If individuals are price takers in the credit market, then the ability to obtain capital and start the enterprise will be independent of the entrepreneur's personal finances. However, Meyer (1990) found that the probability of being

- 1 -

self-employed increases with an individual's net worth, *ceteris paribus*. Similarly, Blanchflower and Oswald's (1990) study of British young men found that a receipt of a £5,000 inheritance doubled the probability of setting up a business.

Meyer (1990) and others have argued that longitudinal data has an advantage because explanatory variables may be dated prior to the time of the decision, reducing the chances that the explanatory variables are consequences, not causes, of being self-employed. For example, in a cross section, a positive sign on assets could suggest that wealth permits entrepreneurship, but also that entrepreneurs accumulate more wealth.

Using the National Longitudinal Survey of Young Men, Evans and Leighton (1989) found that the probability of becoming self-employed increased with assets. Evans and Jovanovic (1989) used data from the same survey to analyze transitions to self-employment. They found the coefficient on assets to be positive and statistically significant, pointing to the presence of liquidity constraints. Meyer (1990) also examined transitions from wage-earning to self-employment and found that from a statistical point of view, assets were significant, but their quantitative impact was quite minor. Finally, in a pair of studies Holtz-Eakin, Joulfaian and Rosen (1994a, 1994b) found that receipt of an inheritance increases the probability of becoming self-employed, raises the capital invested in a new enterprise, enhances the survival probability of extant sole-proprietors, and increases the gross receipts of existing entrepreneurs. Each of these effects suggests that the windfall of capital relaxes capital market constraints.

For purposes of this research, an important related literature concerns intergenerational transmission of labor market status. Recent studies (Altonji and Dunn (1991), Solon (1992) and Zimmerman (1992)) have estimated intergenerational income correlations to be about 0.40, indicating a smaller degree of mobility than previously documented (see Becker and Tomes (1986)). However, few studies have looked at the channels through which such correlations

arise. Altonji and Dunn estimate strong correlations in work hours, wages and earnings of fathers and sons and mothers and daughters. They also show that the probability that a young man belongs to a union is higher when his father is a union member. Lentz and Laband (1990) show that the probability that a young man is self-employed is significantly higher when his father is self-employed.

In short, the previous literature suggest a role for both financial and human capital in explaining the intergenerational correlation in self-employment. Given this, we attempt to determine in a more direct way the separate effects of family financial resources and family human capital on the likelihood of a young adult becoming self-employed.

1.2 Organization

The remainder is organized as follows. In Section 2, we develop a framework for our analysis, while in Section 3 we describe briefly the data used in our analysis. Section 4 is devoted to cross-sectional analyses of the probability of being self-employed, while Section 5 analyzes the transition from wage and salary jobs to self-employment. In Section 6 we decompose the importance of intergenerational influences along gender lines. Section 7 summarizes our findings with particular emphasis on the relative importance of financial and human capital.

2. Framework for Analysis

The model on which we base our empirical work focuses on the new entrepreneur's demand for capital and its interaction with becoming an entrepreneur.[2] We begin by ignoring intergenerational or other family links. For each individual, let utility depend on income (Y_i) and a vector (Z_i) of personal characteristics such as those available in our data: education, race,

marital status, number of children, and number of siblings. If earnings ability in a wage and salary job is w_i, assets are A_i and the net rate of return r, then income as a wage-earner is $w_i + rA_i$.

As a self-employed entrepreneur, the individual's gross earnings are $\theta_i f(k_i)\varepsilon$, where $f()$ is a production function using capital (k_i), θ_i is the individual's unobserved ability as an entrepreneur and ε is a random element. Ability, θ_i, has a distribution across individuals and is not revealed to the individual until after becoming an entrepreneur. It is also likely influenced by the human capital acquired by the individual from parents and other sources; we return to this below. We assume that ε has a mean of one and finite variance, and that ε is independent of θ_i. After investing in the business, the individual has $A_i - k_i$ available to earn capital income, and the individual's net entrepreneurial income is $\theta_i f(k_i)\varepsilon + r(A_i - k_i)$. By definition, if $k_i > A_i$, then $k_i - A_i$ is the amount of capital financed by borrowing. We capture the possibility that capital market constraints limit borrowing according to the individual's net assets using the liquidity constraint: $k_i \leq l_k(A_i)$. If the individual becomes an entrepreneur, his optimal amount of capital maximizes expected entrepreneurial income subject to the liquidity constraint. The solution to this problem implies that $k_i^* = g(A_i, \theta_i^e)$, where θ_i^e is the individual's expected ability as an entrepreneur. The impact on k_i^* of changing A_i depends on whether the entrepreneurial venture is liquidity constrained. If so, $k_i^* = l_k(A_i)$, leading directly to $\dfrac{dk_i^*}{dA_i} = l_k'(A_i) > 0$. Otherwise, $\dfrac{dk_i^*}{dA_i} = 0$.

So far we have discussed behavior conditional on being an entrepreneur. The individual will opt for entrepreneurship if expected utility is higher in that setting. That is, if

$$E\{U([\theta_i f(k_i^*)\varepsilon + r(A_i - k_i^*)]; Z_i)\} > E\{U([w_i + rA_i]; Z_i)\}. \tag{1}$$

- 4 -

As (1) indicates, the decision to become an entrepreneur depends on relative ability in each mode, resources, and tastes. This suggests an empirical implementation of the form:

$$p_{it} = p(Z_{it}, w_{it}, A_{it}, \mu_{it}), \tag{2}$$

where p_{it} is the probability that individual i is self-employed during year t and μ_{it} is a stochastic error term.[3]

Parental linkages affect the decision-making process in two ways. First, it is possible that the offspring of wealthy parents have better access to capital assets either directly or through the influence of their parents' wealth. If so, it suggests that equation (2) should include parents' assets as well as the individual's assets. That is,

$$p_{it} = p(Z_{it}, w_{it}, A_{it}, A_{it}^P, \mu_{it}), \tag{3}$$

where A^P denotes parents' assets.

Financial capital is only one possible intergenerational linkage. Lentz and Laband (1983, 1990) and others have argued that the probability that an individual is self-employed increases if his or her parents were also self-employed. This propensity may derive from similarities among family members in attitudes or preferences for autonomy, or the transmission of human capital (general managerial expertise or job-specific knowledge), or the transmission of non-human capital (brand name loyalty). Moreover, there may be other attributes of families—hard-working, disciplined, independent, etc.—that will be correlated both with family wealth and with the probability of becoming self-employed. In these circumstances, a finding that parental wealth "matters" may reflect not the role of access to capital, but rather the value of this human capital.

In terms of the formal model, ability (θ) may be influenced by parents' experiences as self-employed entrepreneurs. Expanding our specification to accommodate this feature yields:

$$p_{it} = p(Z_{it}, w_{it}, A_{it}, A_{it}^{p}, \theta_{i}^{p}, \mu_{it}) \quad . \tag{4}$$

In our empirical work below, access to matched family member data allows us to exploit these links between children and their parents, permitting more reliable estimates of the impact of human and financial capital as determinants of entrepreneurship.

A final topic of interest is to permit the effect of both human and financial capital to differ by gender. The rise in female self-employment has been a striking feature of the labor market in the 1980s; a rise thus far without a dominant explanation (see, e.g., Devine (1994)). One might conjecture that capital market constraints affect men and women differently, and our data permit us to examine directly this possibility. Moreover, it may be the case that the transmission of human capital has gender-specific elements; i.e., one possibility is that sons tend to be more influenced by the self-employment experiences of their fathers while daughters tend to follow their mothers. We explore this possibility below.

3. Data

The data are drawn from the four original cohorts of the National Longitudinal Surveys of Labor Market Experience (NLS). Specifically, we work with the sample of young men who were aged 14 to 24 in 1966 and were followed through 1981 (12 survey years), the samples of young women who were aged 14 to 24 in 1968 and mature women who were aged 30 to 44 in 1967 and continue to be followed, and the sample of older men who were aged 45 to 59 in 1966 and were last surveyed in 1990. We use data only through 1981 (11 survey years) in the case of older men because in the later years of the survey only very small number of respondents satisfy

- 6 -

the criteria described below. We use data through 1988 in the case of the young women (15 survey years) and through 1982 in the case of mature women (11 survey years). Many of the households contributed more than one person to the young men and young women cohorts, and in some cases the households contributed to both the youth surveys and the older men and mature women surveys. Consequently, it is possible to match data for sibling pairs and parent-child pairs. Some of our analyses below use the entire samples of young men and young women, while others are restricted to the subset of children who can be matched to a parent. The Appendix provides summary statistics for the original cohorts, and the samples of matched family members.[4,5,6]

Many of our analyses exploit the availability of panel data on the individuals in the sample. However, data on a particular question may be missing either because the individual left the sample prior to the year of a particular survey or because the response is invalid for some reason. In the case of the young men and young women we restrict our attention to observations from years in which the individual was out of school and did not return to school in a subsequent year. We keep observations for the parents in the older cohorts until the parent reaches age 65 or first reports being retired.[7]

3.1   Variables

The NLS respondents answer a wide variety of labor market, demographic and family structure questions in each survey year. When we match young men and women to their parents in the older cohorts, we get rich panel data for both members of the pair and for each member's spouse. We employ a standard set of demographic variables (age, race, marital status, number of children, number of siblings, whether the individual lives in the South or in an SMSA) and income variables, and create education, self-employment, and asset measures.

We use yearly enrollment and highest grade completed reports to construct a measure of educational attainment (a series of indicator variables for less than high school, high school graduate, some college, college graduate, and post college) for the young men and women. We ignore observations for each individual from years previous to his or her school-leaving year.

We count an individual as self-employed in a particular survey year if his or her "class of worker" report category for only the current or most recent job is "own farm or business," incorporated or otherwise.[8] One might wish to exclude farmers from the analysis. We do not do so because farmers account for only a small fraction of the self-employed young men and women (0.7 percent and 4.3 percent, respectively). They do, however, represent a larger fraction of the older cohorts: 30.8 percent of the self-employed older men and 9.1 percent of the self-employed mature women. In the case of spouses, we lack a direct report of whether the spouse is self-employed, so we rely on an affirmative response to whether the spouse had income from a farm, business or professional practice.[9]

Along with the yearly indicator, we constructed several other measures of self-employment: whether the individual was *ever* self-employed over the course of his or her time in the survey, the age when he or she first became self-employed (for young men and young women only), the fraction of valid survey years the individual is self-employed, and this same fraction conditional on ever being self-employed. In the older cohorts, we also created an indicator variable to show if either the respondent or spouse was ever self-employed.[10]

In each survey year, respondents in each cohort reported their income from wages and salary, income from farm, business or professional practice, their spouse's income from these sources, and total family income from all sources. In several survey years, detailed questions were asked about the value of various household assets and liabilities including the value of savings accounts, stocks, bonds and mutual funds, residence and real estate market value and

- 8 -

liability, and farm and business market value and liability.[11] In addition to the total net value of assets, we construct another measure which excludes farm and business assets and liabilities. Using only the survey years in which assets were reported would greatly reduce the number of observations we have for each person. In order to more fully exploit the panel aspect of the data, we constructed an asset value for every survey year between each two consecutive asset reports. We used the two asset reports to calculate an annualized asset growth rate for each individual and then compound the earlier asset value by the growth rate for each intervening survey year. We perform this smoothing routine for both non-business and total assets. All dollar values have been converted to 1982-84 dollars using the Consumer Price Index.

3.2   Self-Employment In the NLS

To gain a feel for the data, we present a preliminary look at the propensity for self-employment as revealed by the NLS. Table 1 shows year-by-year (population-weighted) rates of self-employment for the four groups covered by our data: young men ("boys"), young women ("girls"), mature men ("men"), and mature women ("women").

As shown in the first column of the table, the rate of self-employment for boys rises steadily as the cohort ages: from four percent in 1966 to 15 percent in 1981. Also shown at the bottom of the table are our measures of the overall propensity toward self-employment. Using these measures, 20 percent of the boys reported being self-employed at least once during the 1966-1981 period, with the mean age of first self-employment being roughly 27 years. Using a slightly different metric that captures intensity of self-employment, on average nine percent of the working years of boys in the sample were devoted to self-employment. This computation includes, however, those boys who were never self-employed. Restricting the sample to those

- 9 -

(20 percent) who reported self-employment at some point during the sample, the fraction of time devoted to self-employment rises to 43 percent.

In short, self-employment experiences are an important aspect of the careers of young men. Self-employment touches one-fifth of the boys, occupying nearly one-half of their early careers.

How does self-employment differ across genders? The second column of Table 1 presents similar information for the girls in our sample. As with the boys, self-employment rises steadily among the girls from one percent in 1967 to 10 percent in 1987. One clear pattern is that, although their ages are similar, the self-employment rate is lower among girls than among boys. The gap is especially apparent toward the end of the sample period. Comparing the boys' rate in 1981 (when the boys are between 29 and 39 years old) to the girls' rate in 1982 (when they are between 28 and 38), shows the girls' rate to be about two-thirds (0.09 versus 0.15) of the boys'.

Turning to the summary measures at the bottom of the table, a few interesting results stand out. First, girls' overall exposure to self-employment is lower than boys: as of 1982, 14 percent of girls and 20 percent of boys experienced at least one episode of self-employment. However, girls enter self-employment at the same age, on average, as boys and spend only a little less of their working time self-employed (36 percent for girls and 43 percent for boys). Taking into account the three additional years of data, the girls' "ever self-employed" rate (19 percent through 1987) matches the boys in 1981, but their 1987 self-employment rate and time spent self-employed are lower than the boys' while the age first self-employed is higher. Taken together, the computations in Table 1 suggest differences between boys and girls in the incidence and intensity of self-employment.

The final two columns of Table 1 report our self-employment measures for men and women, respectively. These samples serve as the source of parental information in our investigation of the intergenerational links in self-employment. For the moment, however, we view them in isolation. Not surprisingly, self-employment rates are higher among the men (rising from 20 percent to 24 percent over the period) than among women (rising from four percent to nine percent). In contrast to the younger cohorts, exposure to self-employment is quite different between men (28 percent) and women (15 percent), as are our measures of the fraction of time spent in self-employment.[12] Nevertheless, when viewed as a whole Table 1 suggests substantial self-employment activity among the mature men and women in the sample.

A natural question arises as to whether the NLS reports of self-employment are indicative of self-employment in the population as a whole. To shed some light on this issue, we present in Table 2 self-employment rates for each of our four age-gender groups calculated using both the NLS and the Current Population Survey (CPS).[13] We restrict the comparisons to the three years in which we have self-employment rates for all four cohorts. A glance at Table 2 suggests that the incidence of self-employment in the NLS is quite close to that of the population in general.[14]

Our focus is upon aspects of the intergenerational transmission of self-employment through financial or human capital linkages. It is useful, therefore, to examine self-employment within the samples of parents and children that can be successfully linked in the NLS. Table 3 presents our measures of self-employment in these groups; "sons" and "daughters" represent the subset of "boys" and "girls," respectively, that can be matched to parents while "fathers" and "mothers" are similar subsets of "men" and "women."

The natural comparison is between corresponding entries in Table 1 and Table 3. In general, the corresponding entries are quite similar in value. To the extent that a difference emerges, the age of first employment is slightly younger among sons and daughters than among

boys and girls as a whole. Otherwise, the matched subsamples look very much like the cohorts from which they are drawn.

3.3   Intergenerational Links in Self-Employment

We turn now to an explicit analysis of the role of parental self-employment experiences in the self-employment propensities of their children. Specifically, in Table 4 we compare the self-employment rates between sons and daughters, respectively, based upon the self-employment histories of their parents. Consider, for example, the entries for 1971 shown in the second row of the table. The entries show that seven percent of those sons whose fathers were ever self-employed were themselves self-employed in 1971. In contrast, among sons whose fathers were not ever self-employed during the survey, the rate was only four percent. Of course, a father's self-employment is not the only possible source of intergenerational links in self-employment; the next two columns display similar comparisons using mothers' self-employment experiences as the key event. As shown, the self-employment rate among sons of mothers with self-employment experience (six percent) is twice as high as for those sons whose mothers were not self-employed (three percent).

The final four columns of the table display analogous computations for daughters. In 1971, a similar pattern emerges as daughters of either fathers or mothers with a history of self-employment are more likely to be self-employed than daughters whose parents were not self-employed.

Taken as a whole, what patterns does Table 4 reveal? First, in any given year the self-employment rate for sons and daughters is much higher whenever either parent has a history of self-employment than otherwise. Second, using "any self-employment" as our measure summarizes the overall tendency quite well. On the whole, this self-employment measure is on

the order of twice as high whenever a parent has been self-employed.[15] The final rows of the table indicate that parental experiences do not affect either the intensity of self-employment (fraction of years spent self-employed conditional upon self-employment) or the age at which self-employment begins (except in the case of boys and their fathers).[16] Instead, the positive intergenerational correlation appears to stem from a greater propensity to become self-employed at all, i.e., on the entry into self-employment.

3.4   Self-Employment and Intergenerational Access to Wealth

One possibility is that the simple, bivariate correlation in self-employment across generations displayed in Table 4 stems from an omitted, common factor. And a likely candidate for this role is wealth. As noted at the outset, a growing body of research documents the importance of capital market constraints in determining entry into self-employment. One might conjecture that those parents who survive as entrepreneurs may have greater access to financial capital and are able to influence their children's employment choices by example or by providing start-up capital. We turn in this section to the pattern of self-employment and wealth accumulation in the NLS.

We begin by looking at the direct relationships between asset holdings and self-employment among boys (Table 5) and girls (Table 6). Consider first panel (a) of Table 5. The entries indicate, for example, that in 1981 five percent of the boys in the first quartile of total asset holdings were self-employed. Notice, however, that as one moves successively into higher quartiles of the wealth distribution the self-employment rate rises to seven, nine, and ultimately 33 percent. That is, there is a positive correlation between asset holdings and self-employment, especially at the upper end of the wealth distribution. Moreover, this finding is not unique to 1981 as the same pattern prevails in each of the years in which asset values are reported.

One possibility is that the positive correlation in panel (a) is an artifact of business success itself; that is, it may be the case that successful self-employed boys have accumulated business assets, rather than that financial assets have eased or enhanced the entry into self-employment. As a crude means of controlling for this possibility, we present in panel (b) similar computations in which wealth is measured as non-business asset holdings only. Removing business assets has the effect of moderating the positive correlation somewhat. In particular, the relationship between self-employment and assets is no longer strictly monotonic. In general, however, the results remain suggestive of an important role for wealth in the self-employment process.

Is the same true for females? Table 6 shows the per-quartile self-employment rates for girls in the sample. While it remains true that there is a positive relationship between assets and self-employment in panel (a), it is less clear than the relationship for boys. Even more striking, however, is the effect of removing business assets. Panel (b) suggests little relationship between non-business assets and self-employment rates among girls. Although the simple comparisons in Tables 5 and 6 are no substitute for a full-fledged, multivariate analysis of the determinants of self-employment, they are suggestive of important differences between boys and girls in the factors that determine self-employment.

In addition to their own financial assets, individuals may have access to the wealth accumulations of their parents. Hence, in analogy to the intergenerational links in self-employment experiences presented in Table 4, we show in Tables 7 and 8 the links across generations in assets and self-employment. Specifically, we show in Table 7 the propensity for self-employment among boys based upon the location of their parents in the wealth distribution. Under the hypothesis that children have access to their parents' wealth, and that greater financial assets enhances the transition to self-employment and survival of new businesses, one would

- 14 -

expect to find a positive relationship between parents' wealth and self-employment among children.

As the first panel of the table indicates, there is a moderate positive relationship between self-employment and parental wealth, with the largest effect concentrated in the difference in self-employment rates for the sons whose parents are in the third versus the fourth quartile of the asset distribution.

One potential concern about the computations in panel (a) is that parents' assets may be dominated by their ownership of a business. If so, the self-employment among sons may possibly reflect assuming a family business, and not the role of parents' assets in relaxing liquidity constraints.[17] As before, we control crudely for this possibility by removing all business assets from our wealth measures. The results of this procedure are shown in panel (b) of the table. With the exception of survey year 1971, the positive relationship between parents' assets and son's self-employment survives virtually unchanged. Indeed a perusal of Table 8 indicates that this result is not unique to sons as the patterns in panels (a) and (b) of Table 8 for girls are remarkably similar to those in Table 7.

3.5   Empirical Strategy

A relatively simple examination of our data reveals that for both boys and girls there is a positive relationship between their self-employment propensities and their parents' self-employment and wealth. This suggests that the intergenerational transmission of human and financial capital may play a significant role in the processes that generate self-employment among men and women. Moreover, there is suggestive evidence that own-wealth accumulation aids self-employment among boys, but not girls. Of course, it is useful to examine the degree to which these findings survive a multivariate analysis of self-employment. In conducting our

analysis, we proceed along two dimensions. In the first, we contrast the results of cross-sectional analyses of the probability of self-employment with explicit analyses of the transition from wage and salary employment to self-employment. Along the second dimension, we vary our specification of the human capital and financial capital variables. We begin with specifications that focus on boys' and girls' own financial attributes, and then successively augment our equations with variables capturing the potential contributions of their parents.

4.   Determinants of Self-Employment in the Cross-Section

The discussion in Section 3 has established suggestive patterns of intergenerational correlation in the propensity for self-employment that may stem from the transmission of human capital, financial capital, or both. In this section we begin our multivariate analysis of self-employment decision by examining the cross-sectional determinants of self-employment.

To begin, we present in Table 9 the estimates of a series of cross-sectional logit equations predicting the probability of self-employment among boys for each year in which assets were reported. For each variable we report the logit coefficient, the p-value for the coefficient and the marginal effect of the variable evaluated at the variable's mean. Table 10 contains estimates of analogous equations for our samples of girls in the NLS.

We leave it to the reader to examine each of the many coefficient estimates in the tables. Instead, we focus on a strong difference in the performance of the non-business asset variable in the two tables. For boys, the asset variable is always statistically significant at conventional levels and—with the exception of the anomalous estimate for 1981—has a positive sign.[18] In contrast, among the girls, the own-asset variable is never statistically significant and varies in sign from year to year. Thus, our cross-sectional estimates suggest a very different role for personal wealth depending upon the gender of the individual.

- 16 -

To gain a better feel for the underlying patterns in the data and to enhance the precision of our estimates, we augment the basic specification with year-specific indicator variables, pool the data for all survey years, and re-estimate the equations. In order to use the data from all the survey years (rather than only from the years in which assets were reported) we construct asset values for the intervening survey years using the smoothing routine described in Section 3.1. We present these results in Table 11.

Begin with the results for boys in the first column of the table. The coefficients on the age and age squared variables capture the typical life-cycle pattern of self-employment experiences. The estimated coefficients indicate an inverted-U shaped pattern, with the probability of self-employment rising until age 39 and falling thereafter.

The next four variables are indicators of levels of educational attainment, which must be interpreted relative to completing high school (the omitted category). For the boys, the probability of being self-employed is diminished by the failure to complete high school (the coefficient on LTHS is negative and significantly different from zero) and enhanced by at least some college education. Interestingly, however, neither completion of college nor post-college education has a significant effect on the probability of self-employment.

Turning to the other variables, our estimates replicate the common finding that the propensity for self-employment is lower among blacks. We find no effect, however, of the number of siblings on the probability of self-employment. The estimates indicate that self-employment is lower within standard metropolitan statistical areas (SMSAs), either in the central city itself or within the metropolitan area. Finally, we find no effect of region, marital status, or the number of dependents on the self-employment process.

The final two variables capture alternative aspects of the economic situation within the household. The estimates indicate that the probability of self-employment declines as the level

- 17 -

of spousal earnings rises. Lastly, the final coefficient indicates that after controlling for the other factors, increased levels of assets are correlated with a higher probability of self-employment.

The estimates for girls in the second column of the table present some intriguing differences from the results for boys. First, while the sign pattern on the age coefficients is similar, the estimates indicate that the probability of self-employment is maximized at age 54, a figure that is far out of the sample and much later than for the boys. (Recall that the mean age of self-employment in Table 1 was higher for girls, although the difference was not so dramatic.) Second, the coefficients on the formal schooling variables indicate essentially no effect; the only caveat being the marginally significant, positive effect of post-graduate education.

Next, for girls the measures of family background and marital status are significant. Specifically, the probability of self-employment declines as the number of siblings increases, and is positively related to being married and the number of dependents.

Lastly, the coefficient of the asset variable, while positive, is statistically insignificant by conventional standards. This result indicates that the findings of our simple investigation of assets and self-employment in Section 3 survive in a more elaborate statistical setting.

As noted earlier, one potential concern is that the estimated coefficient on the asset variable may be contaminated by simultaneity bias: in a cross-section, assets are higher for the self-employed because they are successful and survive in the self-employed status. The final two columns of Table 11 attempt to address this concern by modifying our specification, replacing the contemporaneous measure of assets with the "lagged" value of assets; i.e., the value of assets from the previous survey year.

Comparing corresponding columns of Table 11 indicates that this specification change has little effect on the basic results. With regard to the asset variable coefficients themselves, comparing the third and first columns indicates that for boys the coefficient remains positive and

- 18 -

statistically significant. Indeed, the estimated value rises.[19] For girls, however, the coefficient declines in magnitude and remains statistically insignificant. Thus far, at least, this basic difference regarding the importance of assets for male and female self-employment survives intact.

We turn now to the influences of parents' self-employment and assets on children's self-employment that were seen in the tabulations in Section 3.3. We begin with our specification using the child's own lagged non-business assets to reduce the potential endogeneity of the asset measure. From the parents' data we draw our measures of non-business and total assets for each survey year, indicators for whether either parent was self-employed in each survey year, and whether either parent was *ever* self-employed during the course of the responding parent's time in the survey (PANYSE). We augment our basic logit specification to examine the effects of parents' assets and self-employment on the child's probability of self-employment in the pooled cross-section.[20]

The first column of Table 12 reproduces the specification in column 3 of Table 11 for the sample of sons. While the same control variables are included in the regression, we focus on the son's own asset and parents' variables. The sample probability of self-employment is slightly lower in the matched sample of young men (0.078 versus 0.089 for all young men), and the effect of own assets is much smaller and is imprecisely estimated: a $10,000 increase in own assets raises the probability of self-employment in the sons' sample by 0.0007, whereas the effect in the sample of young men is 0.0034.

In column 2 we add parents' non-business assets, while in column 3 we include instead parents' total assets. The effects of parents' assets are estimated precisely, but are quite small. Increasing their non-business assets (total assets) by $10,000 raises the sons' self-employment probability by only 0.0004 (0.0011). For daughters (see Table 13), neither own assets nor

- 19 -

parents' assets are significant predictors of self-employment. Own assets enters with a relatively large, negative, and insignificant coefficient. (Recall that in the sample of all young women the coefficient on own assets was also essentially zero.) Parents' assets, net or total, enter with very small, imprecisely estimated, and negative coefficients.

We turn next to the role of human capital. Columns 4 through 6 of each table add the parents' ever self-employed indicator either in isolation or in conjunction with the parental wealth variables.[21] In the last three columns of both Table 12 and Table 13, PANYSE enters significantly with a large positive coefficient. For example, in column 4 of Table 12, the marginal effect of PANYSE is 0.051, an enormous change relative to the probability of self-employment (0.078) in the sample. Parents' assets have very little effect on the PANYSE coefficient or its significance in any of our specifications in Table 12. In practice, the parents' asset coefficients diminish and non-business assets lose significance when PANYSE is added (compare columns 2 to 5 and 3 to 6). A similar pattern appears for daughters (Table 13): PANYSE has a large positive significant coefficient (the marginal effect in column 4 is 0.018 compared with the sample probability of 0.028), while parents' assets remain inconsequential.

5.   Determinants of Transitions to Self-Employment

In this section, we turn from analyzing the probability of self-employment *per se* to an examination of transitions into self-employment. As noted at the outset, focusing on transitions eases concerns regarding the simultaneity of asset accumulation and entrepreneurship in a cross-section by including variables that are dated at a time prior to the entry into self-employment.

In the case of boys, the sample probability of entering self-employment is 3.4 percent.[22] To begin, consider the estimates presented in Table 14. The first column presents estimates of the probability of making a transition from wage and salary employment into self-employment

for boys, while the corresponding estimates for girls are in the second column. The estimates for age and age squared imply that the probability of making a transition into self-employment peaks at age 26 and declines thereafter.[23] In contrast, the probability is maximized seven years later, at age 33, for girls.[24]

As in the cross-sections, the family status variables have very different effects for boys and girls. Among girls, the probability of a transition increases if married and with the number of dependents, while there are no such effects for the boys.

The final coefficients in each column show the effects of individuals' assets on the probability of self-employment. For boys, the estimated coefficient is 0.0053 and statistically significant, a finding consistent with the literature indicating the importance of capital market constraints on the entry into entrepreneurship.[25] The estimated coefficient for girls, however, is both negative and insignificant.[26]

As with our cross-sectional analysis, we devote the next two tables to the influence of the parents' variables on the child's transition into self-employment. As stated earlier, the use of transitions has the advantage of minimizing the endogeneity of own assets. The first column of Table 15 is analogous to the young men's column in Table 14. Although the estimated coefficient on own assets is larger for sons than for all boys (0.0076 versus 0.0053), the marginal effect of assets on the probability of a transition is slightly smaller (0.00014 versus 0.00021). We then add parents' non-business assets to the specification in column 2; the estimated coefficient is positive, but small and imprecisely estimated. Using instead total assets (column 3) gives slightly stronger and significant estimate, but the effect is still quite small. A $10,000 increase in parents' total assets raises the probability of a son's transition into self-employment by 0.0002.

In the remaining columns of the table we measure parents' assets in 1966, rather than in the current year, in an attempt to minimize the possibility that parents' assets may be endogenous. This is the beginning of the survey period and the children are quite young, thus lessening the possibility that parental asset accumulation is driven by the business plans of the offspring. For symmetry, we also use an indicator for whether either parent was self-employed in 1966, rather than the "ever self-employed" indicator. The effect of parents' assets remains small (see columns 4 and 5). In the last three columns the specifications control for parents' self-employment. This variable has a strong positive effect, as PANYSE did in the previous estimates, and including it reduces the effect of parents' assets. Notice, however, that the own asset effect is largely unchanged.[27] Holding the son's characteristics at the mean values and switching the parents' self-employment indicator from zero to one raises the probability of a transition from 0.010 to 0.034, an increase of 0.024 which is large compared to the sample transition probability of 0.032.[28]

For daughters (Table 16), a familiar pattern prevails: none of the own assets or parents' assets variables help to explain the transition into self-employment. However, parents' self-employment has a large and positive effect. Changing the value of this variable from zero to one raises the transition probability by 0.001. This is the largest effect of any variable in the specification.

In summary, parents' assets exert a positive, but very small influence on sons' self-employment, and none on daughters'. On the other hand, parents' self-employment experience has very large positive and significant effects, more than tripling the probability of entering self-employment for sons. It is the strongest and clearest predictor of self-employment of young men and women.

6.   <u>Effects of Parent's Gender on Children's Self-Employment</u>

The results presented thus far suggest an important role for the intergenerational transmission of entrepreneurial human capital. However, to this point we have examined the effects of parents' self-employment experiences using an indicator for whether at least one parent was ever self-employed. This approach precludes identifying any separate effects that fathers' self-employment and mothers' self-employment may exert on children.

Why might we expect these effects to be different? One possibility is that children observe and take as their example the labor supply of the parent with the stronger labor force attachment. In these cohorts, the older mens' labor force participation is on average much higher than the womens', so we would expect the father's effect to be stronger for both sons and daughters. Another possibility is that, given the relative infrequency of female self-employment, it may be the case that a mothers' self-employment has a disproportionate effect on the children. If so, we would expect that it would show up as a stronger predictor of children's self-employment propensities than would a fathers' self-employment. A third alternative is that the parent of the same gender as the child is the more important role model. In this case we would expect the mother's self-employment to have a larger impact than the father's on daughters and the reverse for sons.

In Tables 17 and 18 we examine these conjectures by allowing separate effects of each parents' self-employment on the probability of self-employment and the transition into self-employment for boys and for girls. In the tables, DADANYSE (MOMANYSE) indicates whether the father (mother) was ever self-employed during his (her) time in the survey. This variable is zero if the parent never worked or held only wage or salary jobs over the course of the survey. Column 1 in Table 17 reproduces column 5 in Table 12 which showed the very strong effect of parents' self-employment on the probability that a son is self-employed. The next three

- 23 -

columns demonstrate that for sons, the father's self-employment is a much stronger predictor than the mother's. When both are entered in the specification (column 2), the marginal effect of father's self-employment is 0.049, while the mother's is 0.032. In columns 3 and 4 we enter the respective parental indicators separately. Even given the opportunity to capture the full effect, the mothers' influence is dominated by the corresponding estimate for the father. Viewed another way, the results in columns (2) and (3) indicate that part of the large positive effect of father's self-employment is attributable to the influence of mother's self-employment.

Columns 5 through 8 consider the *transition* into self-employment. In column 5 we reproduce column 7 of Table 15 to provide a baseline. In columns 6 through 8, the effects of fathers' and mothers' self-employment are large and of roughly the same magnitude, but the mother's is not significant (even when the father's is omitted from the specification (column 8)). The effect of the father is large and statistically significant whether or not the mother's experience is included.

Table 18 repeats this analysis for girls. Interestingly, the table shows that the parents' effects are reversed for girls. Column 2 shows that when both fathers' and mothers' self-employment are included, the mother's effect is about twice as large as the father's (which is not significant), raising the probability of the daughter's self-employment by 0.020, large compared with the probability in the sample of 0.028. When entered alone, the father's effect is a bit more than half as large as the mother's (columns 3 and 4). Turning to the equations for the transition to self-employment in columns 5 through 8, the differences between the mother's and father's effects are not as pronounced as in the probability equations. Also, the gender effects are much more similar than for the boys.

In summary, these tables show that father's self-employment experience exerts a stronger effect than mother's on a son's self-employment, while for girls, the mother's effect is just

- 24 -

slightly stronger than the father's. These results are largely consistent with those of Altonji and Dunn (1994) who find strong similarities in the work hours of parents and children that run along gender lines and that this may be traced to intergenerational correlations in work preferences rather than to labor supply responses to similarities in wages.

7.   Summary

Recent research has focused on the importance of liquidity constraints and human capital accumulation in the determination of self-employment. Clearly, the intergenerational transmission of parental financial assets and job-market experiences is a potentially crucial aspect of the process the generates and sustains entrepreneurs. Our investigation of data from the National Longitudinal Surveys suggests that the roles of financial and human capital differ by gender and source.

Specifically, the results reported above indicate that the financial assets of young men exert a statistically significant, but quantitatively modest effect on the probability of self-employment and the transition to self-employment. We find no such effect for young women. Using this as our metric, we find a relatively small impact of capital market constraints in the NLS.

Similarly, our education variables do not indicate a monotonically increasing importance for formal schooling. We find that a high-school education appears to be the key hurdle among young men, while there is an additional effect of greater schooling among young women. Hence, using this as our measure of human capital does not support a scenario in which human capital is "the" key to successful self-employment.

In contrast, parents exert a large influence. The channel for this effect runs not through financial means, but rather through intergenerational correlation in self-employment. Thus, once

again these data suggest a greater role for human capital than financial assets in enhancing the probability of making a transition to or surviving as an entrepreneur. Interestingly, parents are not "created equal." The influence of fathers is greater upon sons, while the influence of mothers is greater upon their daughters.

1.   *Hearings before the Subcommittee on Entrepreneurship and Special Problems Facing Small Business of the Committee on Small Business, United States Senate*, S. Hrg. 99-677, U.S. Government Printing Office, Washington, D.C., 1986.

2.   See Evans and Jovanovic (1989) or Holtz-Eakin, Joulfaian, and Rosen (1994a).

3.   The interest rate, r, does not vary across individuals and is suppressed.

4.   It also should be noted that although the NLS provides yearly sampling weights for each member of each cohort, we do not employ a weighting scheme in most of our analyses. Because we work with a large number of family relationships and rely on unbalanced panel designs, it is difficult to formulate an appropriate weighting procedure. Furthermore, it is not clear how to apply the sampling weights for individuals to the family matches that we create. The original NLS samples were designed to be representative of the civilian non-institutionalized population at the time of the first survey, but because of the age requirements in the original cohorts the family member matches are not nationally representative. Black and low-income households were oversampled to insure their representation in the samples.

5.   A standard concern in analyses of sibling or intergenerational data is that the very fact that it was possible to collect data on several family members makes the data unrepresentative. In the case of the NLS, both the parent and the child must satisfy the age restrictions of the sample design in the base year of the survey. Since a substantial number of children leave the household by age 24, one might expect that the matched sample would over-represent individuals who are still living with their parents when they are in their early twenties. This problem is mitigated to some extent by the fact that the young men matched to a parent average about 1.4 years younger than the entire young men's sample: 16.7 versus 18.1 years in 1966. Young women matched to a parent are also younger on average than the entire young women's cohort: 17.5 versus 18.7 years in 1968.

6.   Because sample members are asked questions about the labor market activities of their spouses, it is possible to examine relationships between individuals who are related by marriage. For example, one could examine the relationship between the self-employment histories of fathers- and sons-in-law using the reports on spouses provided by members of the young women's cohort who can be matched to their fathers in the older men's cohort. Such an analysis is beyond the scope of this study.

7.   It is possible that eliminating observations for individuals based on retirement may lead to an undercount of the prevalence of self-employment. Fuchs (1982) shows that the self-employed retire later than the non-self-employed and that many people become self-employed after retiring from a wage and salary job. Our age and retirement restrictions affect this second group of switchers.

8.   Unfortunately, survey particpants were not asked about activity in dual or second jobs in each survey year. Hence, we are unable to gauge the importance of self-employment as a secondary job.

9.   One might be concerned over the accuracy of spousal reports. In the younger cohorts, the self-employment rates we derive for the husbands of the young women closely match those for the married subset of the young men's cohort. The same holds for the self-employment rates for the wives of the young men and the married young women. The spouse's self-employment rates in the older cohorts appear less reliable due to inconsistencies over time in the way the farm and business income questions were asked. For example, in the early survey years the farm and business questions did not attribute income separately to the respondent and spouse. Consequently, in any year we tend to have a smaller reported fraction of self-employed husbands than of married men in the older men's cohort and a slightly smaller reported fraction of self-employed wives than of married women in the mature women's cohort. However, these year-by-year reporting differences eventually average out; our "ever self-employed" rates are nearly identical for each of the two comparison groups.

10.   In the discussion below we call this variable "parent ever self-employed" even though the mother's husband might not be her child's father. The husband of a mature women would not appear in the older men's cohort if he did not meet the age limits of that sample (aged 45 to 59 in 1966), but he still could be the father of the child to whom the mother is matched.

11.   There are five years of asset reports for young men and older men, seven asset reports for young women, and five for mature women.

12.   Recall, however, that these comparisons will be influenced by the fact that, at any point in time, the women are, on average, 15 years younger than the men.

13.   We use the March CPS for each year shown.

14.   We focus in the NLS on boys and girls who are out of school and on men and women who are not older than 65 and not retired. Our CPS rates are calculated on the basis of age alone. Presumably, applying the schooling and retirement criteria to the CPS would make the rates even more similar.

15.   For each pair of columns, t-tests reject at conventional significance levels the hypothesis that the "any self-employment" rates are equal.

16.   In Lentz and Laband's (1990) sampleof self-employed men, second-generation proprietors on average entered self-employment at a younger age (34.7) than first-generation proprietors (36.6).

17.   The data do not allow us to distinguish between self-employment which reflects starting a new business and self-employment resulting from entering an existing family business. Lentz and Laband (1990) find that second-generation proprietors had higher earnings than first-generation proprietors, but they find no evidence that those second-generation

proprietors who inherited or bought their family business had higher earnings than those who did not. In their sample, 14.2 percent of proprietors (26.5 percent of second-generation proprietors) had inherited or bought a family business.

18. The coefficient estimate in 1981 seems to be an artifact of a handful of outliers. When we omit these observations the coefficient (p-value) on own assets in 1981 is 0.0026 (0.0001).

19. Returning to the year-by-year cross-sectional results in Table 9 reveals the underpinnings of this result. The coefficient on assets in the last year, 1981, is negative. The use of lagged assets removes this influence.

20. We focus on the pooled results for two reasons: to economize on space and because, especially in the early years of the surveys, the number of cross-sectional observations is small. The yearly cross-sectional results appear in Appendix Tables 2A and 2B.

21. It makes very little difference whether we use the parents' "ever self-employed" indicator or the parents' yearly indicator. We use the former because it increases the sample size.

22. This is very close to Fairlie's (1994) estimate of the transition probability for men in the PSID (3.3 percent).

23. Evans and Leighton (1989) also use the NLS but find the age profile of entry to self-employment is essentially flat up through age 40.

24. The correspondence between these estimates and the mean age first self-employed in Table 1 is quite close.

25. Fairlie (1994) uses a net of business asset measure similar to ours and finds that a $10,000 increase at the mean raises the probability of a transition by 0.005, our estimate is 0.0021. Using asset variation generated by the receipt of an inheritance, Holtz-Eakin, Joulfaian, and Rosen (1994b) find a substantial effect: a $100,000 inheritance raises the annual transition probability by 0.00825. In contrast, Meyer (1990) finds that an additional $100,000 of net worth raises the transition probability by only 0.00017.

26. Some experimentation indicates that the size and significance if the coefficient on the asset variable is sensitive to a few outliers. For example, deleting observations in both the top and bottom one percent of the asset distribution raises the estimate in column (1) of Table 14 from 0.0053 to 0.0078, an increase of nearly 50 percent. It remains statistically significant.

27. As noted earlier, deleting observations in the extremes of the asset distribution alters the estimated coefficients. For example, deleting the top and bottom one percent of the parents' asset distribution has essentially no effect on the own-asset coefficient (although its significance level rises to 0.0055). The coefficient on parents' asset, however, rises to 0.0032 (compared to -0.0007 in column (7)) with a p-value of 0.085. At the same time, the coefficient in PANYSE falls to 0.7998 (p-value of 0.0005). The role of asset outliers remains an interesting topic for future research.

- 29 -

28. Fairlie (1994) finds similar strong effects—father's self-employment raises the transition probability at the mean by 53 percent.

Appendix

Summary of NLS Data Sets

There are 5225 young men, 5159 young women, 5020 mature men, and 5083 mature women in the NLS panel. Young men were first surveyed in 1966 when they were between the ages of 14 and 24, and were surveyed 12 times between 1966 and 1981. Young women were first surveyed in 1968 (when they were also between the ages of 14 and 24) and were surveyed 15 times between 1968 and 1988. Older men were surveyed first in 1966 when they were between the ages of 45 and 59. Older women were between 30 and 44 when they were first surveyed in 1967. Both of the older cohorts were surveyed 11 times between 1966 and 1981. Data beyond 1981 is available for both older cohorts, but is not used here.

Survey data for the younger cohorts was kept in each year only if the respondent was out of school in that particular year and never returned thereafter. Responses from the older men were kept only if the man was less than age 65 and not retired. All of the responses from older women were kept as they never reached the age of 65 during the portion of the survey used here.

Young Men's Data Set

After imposing these screens we are left with 4737 young men. The number of observations per person depends on the amount of time spent in school as well as question refusals, invalid responses, and survey attrition. Of our initial sample of 5225 young men, 2495 of them can be matched to a parent: 1097 to fathers in the older men's cohort and 1671 to mothers in the older women's cohort (273 young men can be matched to both a father and a mother). Of these, 2200 have at least one valid observation during the survey. Appendix Table 1A compares the characteristics of the samples of young men and sons before and after the schooling screen is applied. About 9 percent of the young men are lost from the sample because

they did not finish school before they exited the survey. In short, the young men look very similar before and after the schooling screen is applied, except that assets are larger in the screened sample. Similarly, the mean characteristics of the sample of sons are unaffected by the schooling screen. There are differences, however, between the young men and the sons: the sons are younger on average and have substantially lower assets in all years.

Young Women's Data Set

After imposing our screens we are left with 4550 young women (a 12 percent reduction in the sample) who have at least one valid survey report. Of our initial sample of 5159 young women, 2569 can be matched to a parent: 988 to fathers, 1848 to mothers, and 267 to both. Of these, 2214 young women have at least one valid observation after the schooling screen is imposed.

Appendix Table 1B compares the samples of young women to the sample of daughters. The same patterns show up as in the young men's sample: the daughters are younger on average and have lower assets, and the schooling screen has little effect on the mean characteristics of the samples.

References

Altonji, Joseph G. and Thomas A. Dunn, "Relationships among the Family Incomes and Labor Market Outcomes of Relatives," in *Research in Labor Economics, Volume 12*, 1991, edited by R. Ehrenberg, JAI Press Inc., pp. 269-310.

Altonji, Joseph G. and Thomas A. Dunn, "An Intergenerational Model of Wages, Hours and Earnings," NBER Working Paper No. 4950, December 1994.

Becker, Gary S. and Nigel Tomes, "Human Capital and the Rise and Fall of Families," *Journal of Labor Economics*, 4, 3 (Part 2), July 1986, pp. S1- S39.

Blanchflower, David and Andrew Oswald, "What Makes an Entrepreneur?," London School of Economics, mimeo, 1990.

Devine, Theresa, "Changes in Wage-and-Salary Returns to Skill and the Recent Rise in Female Self-Employment," *American Economic Review*, May 1994, pp. 108-113.

Evans, David S. and Boyan Jovanovic, "An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints," *Journal of Political Economy*, 1989, pp. 808-827.

Evans, David S. and Linda Leighton, "Some Empirical Aspects of Entrepreneurship," *American Economic Review*, 1989, pp. 519-535.

Fairlie, Robert W., "The Absence of the African-American Owned Business: An Analysis of the Dynamics of Self-Employment," Center for Urban Affairs and Policy Research Working Paper No. 94-9, Northwestern University, February 1994.

Fuchs, Victor R., "Self Employment and Labor Force Participation of Older Men," *Journal of Human Resources*, 17, 3, 1982: pp. 339-357.

Holtz-Eakin, D., D. Joulfaian, and H.S. Rosen, "Sticking it Out: Entrepreneurial Survival and Liquidity Constraints," *Journal of Political Economy*, February 1994a, pp. 53-75.

Holtz-Eakin, D., D. Joulfaian, and H.S. Rosen, "Entrepreneurial Decisions and Liquidity Constraints," *Rand Journal of Economics*, 23, 2, Summer 1994b, pp. 53-75.

Lentz, Bernard S. and David N. Laband, "Entrepreneurial Success and Occupational Inheritance among Proprietors," *Canadian Journal of Economics*, XXIII, August 1990, pp. 563-579.

Lentz, Bernard S. and David N. Laband, "Like Father, Like Son: Toward and Economic Theory of Occupational Following," *Southern Economic Journal*, 50(2), 1993, pp. 474-493.

Meyer, Bruce, "Why Are There So Few Black Entrepreneurs?" National Bureau of Economic Research, Working Paper No. 3537, 1990.

Solon, Gary R., "Intergenerational Income Mobility in the United States," *American Economic Review*, 82, 3, June 1992, pp. 393- 408.

Stiglitz, Joseph and Andrew Weiss, "Credit Rationing in Markets with Imperfect Information," *American Economic Review*, June 1981, pp. 393-410.

Zimmerman, David J., "Regression Toward Mediocrity in Economic Stature," *American Economic Review*, 82, 3, June 1992, pp. 409- 429.

APPENDIX TABLE 1A: SUMMARY STATISTICS FOR SAMPLES OF BOYS AND SONS

	Boys		Sons	
	All N=5225	**Out of School** N=4737	**All** N=2495	**Out of School** N=2200
Age in 1966	18.1 (3.16)	18.2 (3.18)	16.7 (2.43)	16.9 (2.47)
Highest Grade Completed	12.9 (2.86)	12.8 (2.89)	13.0 (2.77)	13.0 (2.81)
Black	0.28 (0.45)	0.27 (0.44)	0.31 (0.46)	0.31 (0.46)
Number of Siblings	3.41 (2.59)	3.43 (2.60)	3.48 (2.59)	3.51 (2.60)
Ever Self-Employed	0.17 (0.38)	0.19 (0.39)	0.15 (0.36)	0.17 (0.37)
Age First Self-Employed	31.1 (4.85) N=891	31.1 (4.86) N=879	29.8 (4.27) N=371	29.8 (4.26) N=363
Non-Business Assets				
1966	1577 (8288) N=4783	1641 (8585) N=4340	847 (4506) N=2314	885 (4725) N=2036
1970	5401 (26445) N=3721	5484 (27070) N=3482	2527 (17552) N=1743	2514 (18087) N=1603
1971	6803 (31471) N=3703	6909 (32072) N=3500	4233 (35617) N=1733	4374 (36835) N=1615
1976	20793 (54600) N=3438	20915 (55277) N=3270	14261 (44531) N=1623	14265 (45398) N=1529
1981	26747 (157826) N=2687	26326 (161564) N=2548	16698 (152838) N=1313	15850 (157125) N=1236
Number of Survey Reports	5.73 (3.85)	6.33 (3.55)	4.92 (3.50)	5.58 (3.19)

Notes: Entries are unweighted sample means. Standard deviations shown in parentheses. N indicates the number of observations where appropriate.

APPENDIX TABLE 1B: SUMMARY STATISTICS FOR SAMPLES OF GIRLS AND DAUGHTERS

	Girls		Daughters	
	All N=5159	Out of School N=4550	All N=2569	Out of School N=2214
Age in 1966	18.7 (3.02)	18.8 (3.02)	17.5 (2.50)	17.5 (2.52)
Highest Grade Completed	12.7 (2.67)	12.6 (2.66)	13.0 (2.63)	12.9 (2.64)
Black	0.28 (0.45)	0.28 (0.45)	0.32 (0.47)	0.32 (0.47)
Number of Siblings	3.56 (2.61)	3.59 (2.63)	3.68 (2.66)	3.73 (2.69)
Ever Self-Employed	0.15 (0.35)	0.16 (0.37)	0.13 (0.34)	0.15 (0.36)
Age First Self-Employed	32.9 (6.29) N=751	32.8 (6.28) N=744	31.8 (5.60) N=342	31.8 (5.59) N=338
Non-Business Assets				
1967	2039 (17185) N=5101	2152 (18124) N=4504	1022 (8713) N=2549	1082 (9245) N=2202
1970	3271 (17858) N=4390	3361 (17932) N=3963	1959 (16604) N=2216	2154 (16473) N=1980
1971	4531 (35908) N=4235	4631 (36956) N=3849	2636 (15698) N=2124	2592 (13693) N=1906
1972	6376 (39102) N=4027	6432 (40222) N=3678	3480 (21944) N=2018	3260 (21917) N=1828
1977	16542 (67820) N=3880	16122 (69852) N=3568	12148 (60443) N=1925	11299 (62209) N=1793
1982	24018 (64610) N=3524	23649 (65594) N=3226	20441 (51055) N=1755	19711 (50906) N=1590
1987	36773 (94424) N=3494	36393 (96435) N=3175	32420 (81817) N=1735	31830 (82245) N=1563
Number of Survey Reports	784 (5.12)	8.89 (4.52)	7.70 (4.81)	8.35 (4.15)

Notes: Entries are unweighted sample means. Standard deviations shown in parentheses. N indicates the number of observations where appropriate.

APPENDIX TABLE 2A: CROSS-SECTIONAL LOGIT ESTIMATES OF PROBABILITY OF SELF-EMPLOYMENT: SONS

	1970	1971	1976	1981
Constant	-53.79 (0.0078)	-33.96 (0.0700)	6.489 (0.6952)	36.16 (0.0890)
AGE (age)	4.409 (0.0141)	2.240 (0.1491)	-0.6735 (0.5712)	-2.390 (0.0660)
AGE2 (age squared)	0.0956 (0.0158)	-0.0400 (0.2096)	0.0131 (0.5380)	0.0369 (0.0615)
LTHS (=1 if less than High School)	0.3344 (0.6262)	-0.4349 (0.5182)	-0.0344 (0.9390)	-0.7606 (0.2225)
SOCO (=1 if some college)	-0.2495 (0.7179)	-0.4385 (0.4871)	-0.3482 (0.4198)	0.5013 (0.1764)
COLG (=1 if college graduate)	0.3589 (0.6523)	-1.742 (0.1289)	-0.0134 (0.9788)	0.1679 (0.6856)
POST (=1 if post-graduate education)	-23.806 (0.9998)	-0.4656 (0.5874)	-0.4841 (0.4399)	0.9962 (0.0139)
BLACK (=1 if Black)	-0.9680 (0.1807)	-0.5814 (0.4268)	-1.472 (0.0107)	-1.907 (0.0011)
NUMSIBS (number of siblings)	-0.1169 (0.2070)	0.0207 (0.8263)	-0.0175 (0.8050)	0.0366 (0.5784)
SMSAN (=1 if SMSA, non-central city)	0.1027 (0.8793)	0.3501 (0.5388)	-0.8806 (0.0170)	-0.8885 (0.0047)
SMSAC (=1 if SMSA, central city)	0.6657 (0.2953)	0.3305 (0.5795)	-0.9847 (0.0222)	-1.278 (0.0011)
SOUTH (= 1 if in south)	-0.4458 (0.4410)	-0.2036 (0.6993)	0.1568 (0.6586)	-0.0629 (0.8373)
MARST (=1 if married)	-0.2312 (0.6761)	1.057 (0.0777)	0.4056 (0.3207)	0.0187 (0.9656)
NUMDP (number of dependents)	0.5104 (0.0105)	-0.5036 (0.1199)	0.1217 (0.4355)	0.1212 (0.3579)
SEARN (spouse earnings)	-0.1380 (0.1266)	-0.0925 (0.1173)	-0.1639 (0.0023)	0.0333 (0.1304)
ASSET (Assets)	0.0494 (0.0254)	0.0022 (0.6808)	-0.0005 (0.8997)	-0.0011 (0.0752)
NPASSET (parent's non-business assets)	0.0005 (0.3999)	0.0007 (0.6010)	0.0005 (0.8452)	0.0004 (0.6273)
PANYSE (parent's self-employed)	1.474 (0.0033)	1.168 (0.0179)	1.092 (0.0005)	1.058 (0.0001)
N (observations)	569	640	673	642
Sample probability	0.040	0.0375	0.080	0.120

Notes: Entries are estimated logit coefficients. Figures in parentheses are *p*-values for significance of estimates.

APPENDIX TABLE 2B: CROSS-SECTIONAL LOGIT ESTIMATES OF PROBABILITY OF SELF-EMPLOYMENT: DAUGHTERS

	1970	1971	1977	1982
Constant	-33.22 (0.3692)	18.37 (0.4485)	-18.48 (0.4489)	-41.92 (0.2753)
AGE (age)	2.568 (0.4646)	-2.082 (0.3671)	0.9394 (0.6002)	2.302 (0.3408)
AGE2 (age squared)	-0.0584 (0.4834)	0.0477 (0.3748)	-0.0161 (0.6233)	-0.0354 (0.3504)
LTHS (=1 if less than High School)	0.6345 (0.5216)	1.211 (0.2884)	0.6410 (0.3860)	-0.2032 (0.8127)
SOCO (=1 if some college)	0.1016 (0.9344)	26.07 (0.9999)	0.1805 (0.7527)	0.5506 (0.2688)
COLG (=1 if college graduate)	0.6650 (0.6363)	0.1013 (0.9426)	0.5344 (0.4215)	0.5994 (0.3272)
POST (=1 if post-graduate education)	-20.41 (0.9999)	-27.05 (1.0000)	-24.38 (0.9998)	-0.7458 (0.5044)
BLACK (=1 if Black)	-0.9459 (0.4646)	-25.21 (0.9999)	-2.537 (0.0433)	-1.650 (0.0247)
NUMSIBS (number of siblings)	0.0122 (0.9401)	-0.3285 (0.1657)	0.0300 (0.7945)	0.0147 (0.8799)
SMSAN (=1 if SMSA, non-central city)	0.0475 (0.9587)	-1.802 (0.0993)	-0.2412 (0.6418)	0.0617 (0.9047)
SMSAC (=1if SMSA, central city)	-0.9293 (0.3485)	-1.087 (0.2606)	-0.7585 (0.3035)	0.6148 (0.2426)
SOUTH (= 1 if in south)	0.3022 (0.7013)	-0.4009 (0.6784)	-0.7816 (0.1530)	-0.1005 (0.8306)
MARST (=1 if married)	3.118 (0.0136)	0.7585 (0.5814)	2.201 (0.0570)	1.119 (0.0570)
NUMDP (number of dependents)	0.1561 (0.6240)	-0.3185 (0.6405)	0.3601 (0.0444)	0.2840 (0.0918)
SEARN (spouse earnings)	-0.0965 (0.1379)	0.0519 (0.4211)	0.0005 (0.9822)	-0.0443 (0.0312)
ASSET (Assets)	-0.0108 (0.4962)	-0.0157 (0.5047)	0.0023 (0.6850)	-0.0070 (0.1371)
NPASSET (parent's non-business assets)	-0.0034 (0.5767)	0.0027 (0.3172)	-0.0013 (0.7241)	-0.0002 (0.8462)
PANYSE (parent's self-employed)	0.8004 (0.3201)	2.277 (0.0208)	0.9639 (0.0364)	1.720 (0.0002)
N (observations)	404	445	509	582
Sample probability	0.022	0.018	0.053	0.051

Notes: Entries are estimated logit coefficients. Figures in parentheses are *p*-values for significance of estimates.

TABLE 1: SELF-EMPLOYMENT RATES IN THE NLS

Year	Boys	Girls	Men	Women	Year	Boys	Girls	Men	Women
1966	0.04 [1513]	na	0.20 [4970]	0.04 [4860]	1976	0.12 [2870]	0.05 [2427]	0.23 [1762]	0.08 [2288]
1967	0.04 [1832]	0.01 [1689]	0.21 [4709]	na	1977	na	0.07 [1818]	na	na
1968	0.05 [2060]	0.02 [1515]	0.20 [4108]	0.05 [2727]	1978	0.14 [3076]	na	0.22 [1296]	0.08 [2520]
1969	0.06 [2274]	0.01 [1169]	0.20 [4016]	0.07 [2943]	1979	na	0.08 [2257]	na	na
1970	0.07 [2317]	0.04 [1307]	na	0.07 [2499]	1980	0.15 [3208]	na	0.23 [866]	0.08 [2432]
1971	0.07 [2564]	0.03 [1458]	0.21 [3469]	0.07 [2456]	1981	0.15 [3288]	0.09 [2350]	0.24 [612]	0.09 [2211]
1972	na	0.04 [1567]	na	na	1982	na	0.09 [2260]	na	na
1973	0.09 [2901]	na	0.21 [2789]	0.06 [2925]	1984	na	0.10 [2609]	na	na
1974	na	0.04 [2298]	na	na	1986	na	0.10 [2747]	na	na
1975	0.11 [2914]	na	0.21 [2077]	0.07 [2851]	1987	na	0.10 [2782]	na	na

	Boys	Girls		Men	Women
		calculated through 1982	1987		
Any self-employment	0.20 [4958]	0.14 [4184]	0.19 [4609]	0.28 [5020]	0.15 [4957]
Age first self-employed	27.4 [891]	27.4 [525]	29.9 [751]	na	na
Fraction of years spent self-employed					
Overall	0.09 [4958]	0.05 [4184]	0.06 [4609]	0.20 [5003]	0.06 [4957]
Conditional on any self-employment	0.43 [891]	0.36 [525]	0.34 [751]	0.71 [1281]	0.41 [694]

Notes: [a] All figures have been weighted to population means.
[b] Self-employment rates are conditional upon working at all.
[c] Numbers in brackets are sample sizes for each computation.
[d] "Boys" are aged 14 to 24 in 1966. "Girls" are aged 14 to 24 in 1968. "Men" are aged 45 to 59 in 1966. "Women" are aged 30 to 44 in 1967.

	Boys		Girls		Men		Women	
TABLE 2: SELF-EMPLOYMENT RATES: NATIONAL LONGITUDINAL SURVEY VERSUS CURRENT POPULATION SURVEY								
Year	NLS	CPS	NLS	CPS	NLS	CPS	NLS	CPS
1971	0.07	0.04	0.03	0.02	0.21	0.17	0.07	0.05
1976	0.12	0.07	0.05	0.02	0.23	0.18	0.08	0.05
1981	0.15	0.10	0.09	0.07	0.24	0.22	0.09	0.08

Notes: [a] NLS self-employment rates computed using weighted data and require that boys and girls be out of school, and that men and women are younger than 66 and are not retired.
[b] CPS self-employment rates computed using the March CPS for each year. CPS weights used in the computations. Age ranges are consistent with corresponding NLS sample.

TABLE 3: SELF-EMPLOYED RATES IN THE NLS: MATCHED PARENT-CHILD SAMPLES

Year	Sons	Daughters	Fathers	Mothers	Years	Sons	Daughters	Fathers	Mothers
1966	0.02 [412]	na	0.22 [1290]	0.05 [2080]	1976	0.10 [1968]	0.05 [1223]	0.23 [594]	0.08 [941]
1967	0.03 [595]	0.00 [548]	0.23 [1240]	na	1977	na	0.07 [898]	na	na
1968	0.03 [742]	0.01 [620]	0.21 [1109]	0.06 [1230]	1978	0.13 [1406]	na	0.23 [454]	0.08 [1019]
1969	0.04 [888]	0.01 [509]	0.21 [1103]	0.08 [1322]	1979	na	0.07 [1114]	na	na
1970	0.05 [897]	0.03 [628]	na	0.07 [1085]	1980	0.14 [1487]	na	0.23 [316]	0.08 [991]
1971	0.04 [1040]	0.03 [741]	0.22 [984]	0.08 [1087]	1981	0.15 [1554]	0.08 [1154]	0.24 [222]	0.09 [874]
1972	na	0.03 [779]	na	na	1982	na	0.08 [1102]	na	na
1973	0.08 [1264]	na	0.22 [854]	0.07 [1272]	1984	na	0.10 [1274]	na	na
1974	na	0.02 [1142]	na	na	1986	na	0.10 [1365]	na	na
1975	0.09 [1281]	na	0.22 [674]	0.08 [1192]	1987	na	0.09 [2569]	na	na

	Sons	Daughters		Fathers	Mothers
		calculated through 1982 1987			
Any self-employment	0.18 [2363]	0.13 [2045]	0.18 [2269]	0.30 [1294]	0.16 [2125]
Age first self-employed	26.8 [371]	26.3 [227]	29.0 [342]	na	na
Fraction of years spent self-employed					
Overall	0.08 [2363]	0.04 [2045]	0.06 [2269]	0.22 [1293]	0.07 [2125]
Conditional on any self-employment	0.43 [371]	0.34 [227]	0.32 [342]	0.72 [365]	0.43 [302]

Notes: [a]All figures have been weighted to population means.
[b]Self-employment rates are conditional upon working at all.
[c]Numbers in brackets are sample sizes for each computation.
[d]"Sons" are aged 14 to 24 in 1966. "Daughters" are aged 14 to 24 in 1968. "Fathers" are aged 45 to 59 in 1966. "Mothers" are aged 30 to 44 in 1967.

TABLE 4: INTERGENERATIONAL LINKS IN SELF-EMPLOYMENT

Year	Sons' Self-Employment Rate				Daughters' Self-Employment Rate			
	Father		Mother		Father		Mother	
	Self-Employed	Not Self-Employed	Self-Employed	Not Self-Employed	Self-Employed	Not Self-Employed	Self-Employed	Not Self-Employed
1966	0.05 (0.21)	0.00 ---	0.00 (0.00)	0.02 (0.15)	0.00 ---	0.00 ---	0.00 ---	0.00 ---
1971	0.07 (0.26)	0.04 (0.19)	0.06 (0.24)	0.03 (0.16)	0.05 (0.22)	0.01 (0.12)	0.03 (0.18)	0.02 (0.15)
1976	0.18 (0.38)	0.05 (0.23)	0.12 (0.32)	0.08 (0.28)	0.07 (0.25)	0.03 (0.18)	0.08 (0.27)	0.03 (0.17)
1981	0.28 (0.45)	0.09 (0.28)	0.21 (0.41)	0.11 (0.32)	0.12 (0.32)	0.07 (0.25)	0.09 (0.29)	0.06 (0.23)
Any self-employment	0.32 (0.47) [292]	0.12 (0.32) [746]	0.19 (0.40) [221]	0.13 (0.34) [1306]	0.24 (0.43) [271]	0.12 (0.33) [621]	0.23 (0.42) [226]	0.13 (0.33) [1343]
Age first self-employed	26.0 (4.68) [94]	27.5 (4.94) [87]	26.0 (4.57) [43]	26.4 (4.25) [171]	29.6 (5.46) [66]	30.2 (5.53) [77]	28.1 (4.78) [51]	28.6 (5.26) [170]
Fraction of years spent self-employed								
Overall	0.16 (0.28)	0.04 (0.14)	0.08 (0.20)	0.06 (0.18)	0.08 (0.18)	0.04 (0.14)	0.08 (0.18)	0.04 (0.13)
Conditional on any self-employment	0.48 (0.30)	0.37 (0.23)	0.42 (0.24)	0.43 (0.28)	0.31 (0.24)	0.32 (0.25)	0.34 (0.22)	0.32 (0.22)

Notes: [a] Self-employment rates are conditional upon working at all and are unweighted

[b] Numbers in parentheses are standard deviations; numbers in brackets are sample sizes.

[c] "Sons" are aged 14 to 24 in 1966. "Daughters" are aged 14 to 24 in 1968. "Fathers" are aged 45 to 59 in 1966. "Mothers" are aged 30 to 44 in 1967.

TABLE 5: ASSET HOLDINGS AND SELF-EMPLOYMENT: BOYS

	(a) Total Asset Holdings				(b) Non-Business Asset Holdings			
	Quartile 1	Quartile 2	Quartile 3	Quartile 4	Quartile 1	Quartile 2	Quartile 3	Quartile 4
1966	0.01 (0.12) [136]	0.01 (0.08) [143]	0.02 (0.13) [123]	0.16 (0.37) [138]	0.04 (0.20) [138]	0.01 (0.12) [147]	0.05 (0.22) [122]	0.10 (0.30) [133]
1970	0.03 (0.16) [328]	0.01 (0.11) [315]	0.04 (0.19) [311]	0.13 (0.34) [341]	0.05 (0.22) [327]	0.03 (0.16) [316]	0.05 (0.22) [313]	0.08 (0.28) [339]
1971	0.02 (0.12) [385]	0.02 (0.12) [379]	0.04 (0.21) [380]	0.15 (0.36) [430]	0.03 (0.18) [394]	0.03 (0.18) [372]	0.07 (0.26) [383]	0.10 (0.30) [425]
1976	0.04 (0.21) [521]	0.06 [0.24) [527]	0.08 (0.27) [562]	0.22 (0.42) [597]	0.06 (0.24) [526]	0.08 (0.28) [531]	0.11 (0.31) [560]	0.16 (0.37) [588]
1981	0.05 (0.21) [522]	0.07 (0.26) [528]	0.09 (0.29) [536]	0.33 (0.47) [536]	0.08 (0.28) [491]	0.12 (0.32) [504]	0.09 (0.29) [503]	0.22 (0.41) [515]

Notes: [a]Sample restricted to boys out of school.
[b]Entries show estimated self-employment rate, standard deviation of self-employment rate (in parentheses) and number of observations (in brackets).
[c]Assets measured net of liabilities.

TABLE 6: ASSET HOLDINGS AND SELF-EMPLOYMENT: GIRLS

	(a) Total Asset Holdings				(b) Non-Business Asset Holdings			
	Quartile 1	Quartile 2	Quartile 3	Quartile 4	Quartile 1	Quartile 2	Quartile 3	Quartile 4
1967	0.03 (0.16) [267]	0.00 (0.07) [213]	0.02 (0.13) [226]	0.02 (0.15) [269]	0.02 (0.15) [290]	0.00 (0.00) [301]	0.02 (0.14) [193]	0.02 (0.14) [295]
1970	0.07 (0.25) [173]	0.03 (0.17) [169]	0.02 (0.14) [194]	0.05 (0.21) [191]	0.07 (0.26) [180]	0.03 (0.17) [163]	0.04 (0.18) [199]	0.04 (0.19) [196]
1971	0.05 (0.21) [198]	0.03 (0.17) [204]	0.03 (0.17) [227]	0.07 (0.25) [224]	0.06 (0.23) [195]	0.05 (0.21) [216]	0.03 (0.18) [237]	0.05 (0.23) [223]
1972	0.04 (0.20) [245]	0.04 (0.19) [239]	0.04 (0.19) [292]	0.06 (0.24) [264]	0.04 (0.20) [248]	0.05 (0.22) [245]	0.04 (0.21) [296]	0.05 (0.22) [272]
1977	0.04 (0.19) [281]	0.02 (0.14) [342]	0.07 (0.25) [312]	0.15 (0.36) [290]	0.08 (0.26) [226]	0.04 (0.20) [474]	0.05 (0.21) [384]	0.14 (0.35) [330]
1982	0.04 (0.19) [274]	0.06 (0.24) [313]	0.07 (0.26) [288]	0.12 (0.33) [276]	0.08 (0.28) [219]	0.06 (0.24) [454]	0.09 (0.29) [372]	0.10 (0.30) [328]
1987	0.05 (0.22) [477]	0.05 (0.22) [534]	0.08 (0.27) [508]	0.16 (0.37) [493]	0.13 (0.33) [350]	0.08 (0.26) [883]	0.07 (0.25) [641]	0.13 (0.34) [611]

Notes: [a]Sample restricted to girls out of school.
[b]Entries show estimated self-employment rate, standard deviation of self-employment rate (in parentheses) and number of observations (in brackets).
[c]Assets measured net of liabilities.

TABLE 7: PARENTS' ASSETS AND SELF-EMPLOYMENT: SONS

	(a) Parents' Total Assets				(b) Parents' Non-Business Assets			
	Quartile 1	Quartile 2	Quartile 3	Quartile 4	Quartile 1	Quartile 2	Quartile 3	Quartile 4
1966	0.00 (0.00) [7]	0.00 (0.00) [4]	0.00 (0.00) [10]	0.29 (0.49) [7]	0.00 (0.00) [7]	0.20 (0.45) [5]	0.00 (0.00) [11]	0.20 (0.45) [5]
1969	0.00 (0.00) [70]	0.02 (0.14) [54]	0.06 (0.24) [68]	0.14 (0.35) [59]	0.01 (0.12) [69]	0.05 (0.22) [58]	0.02 (0.13) [58]	0.13 (0.34) [52]
1971	0.00 (0.00) [76]	0.02 (0.15) [94]	0.05 (0.22) [101]	0.09 (0.29) [117]	0.03 (0.16) [75]	0.05 (0.21) [86]	0.06 (0.24) [103]	0.05 (0.23) [112]
1976	0.03 (0.18) [124]	0.07 (0.26) [126]	0.08 (0.28) [169]	0.14 (0.35) [188]	0.06 (0.23) [126]	0.09 (0.29) [127]	0.07 (0.26) [153]	0.11 (0.31) [190]
1981	0.05 (0.21) [129]	0.13 (0.34) [156]	0.15 (0.35) [192]	0.25 (0.43) [208]	0.12 (0.32) [130]	0.14 (0.35) [145]	0.15 (0.35) [179]	0.21 (0.41) [207]

Notes: [a]Sample restricted to sons out of school.
[b]Entries show estimated self-employment rate, standard deviation of self-employment rate (in parentheses) and number of observations (in brackets).
[c]Assets measured net of liabilities.

TABLE 8: PARENTS' ASSETS AND SELF-EMPLOYMENT: DAUGHTERS

	(a) Parents' Total Assets				(b) Parents' Non-Business Assets			
	Quartile 1	**Quartile 2**	**Quartile 3**	**Quartile 4**	**Quartile 1**	**Quartile 2**	**Quartile 3**	**Quartile 4**
1966	0.00 --- [52]	0.00 --- [49]	0.00 --- [47]	0.00 --- [36]	0.00 (0.00) [58]	0.00 (0.00) [45]	0.00 (0.00) [47]	0.00 (0.00) [34]
1969	0.00 (0.00) [34]	0.00 (0.00) [39]	0.02 (0.13) [61]	0.02 (0.14) [51]	0.00 (0.00) [30]	0.00 (0.00) [45]	0.02 (0.14) [50]	0.02 (0.14) [48]
1971	0.00 (0.00) [48]	0.05 (0.21) [64]	0.03 (0.18) [94]	0.06 (0.23) [90]	0.02 (0.14) [49]	0.03 (0.17) [67]	0.00 (0.00) [71]	0.07 (0.25) [88]
1976	0.02 (0.12) [132]	0.02 (0.14) [144]	0.04 (0.19) [161]	0.07 (0.25) [162]	0.02 (0.15) [138]	0.03 (0.17) [138]	0.02 (0.14) [156]	0.08 (0.27) [154]
1981	0.02 (0.14) [88]	0.04 (0.20) [81]	0.03 (0.17) [117]	0.09 (0.29) [139]	0.03 (0.18) [90]	0.04 (0.20) [89]	0.03 (0.18) [106]	0.07 (0.26) [133]

Notes:　[a]Sample restricted to daughters out of school.
　　　　[b]Entries show estimated self-employment rate, standard deviation of self-employment rate (in parentheses) and number of observations (in brackets).
　　　　[c]Assets measured net of liabilities.

TABLE 9: CROSS-SECTIONAL LOGIT ESTIMATES OF PROBABILTY OF SELF-EMPLOYMENT: BOYS

	1966	1970	1971	1976	1981
Constant	-15.99 (0.3174) [-0.12091]	-20.32 (0.0075) [-0.72086]	-16.18 (0.0275) [-0.59232]	-3.190 (0.6189) [-0.24335]	1.239 (0.8778) [0.10771]
AGE (age)	1.0897 (0.4782) [0.00824]	1.398 (0.0309) [0.04958]	1.0137 (0.0925) [0.03711]	0.06270 (0.8878) [0.00478]	-0.2145 (0.6530) [-0.01865]
AGE2 (age squared)	-0.0209 (0.5678) [-0.00016]	-0.0263 (0.0532) [-0.00093]	-0.01805 (0.1394) [-0.00066]	0.00005222 (0.9945) [0.00000]	0.003928 (0.5753) [0.00034]
LTHS (=1 if less than high school)	-0.7383 (0.0727) [-0.00558]	-0.1922 (0.4939) [-0.00682]	-0.2239 (0.4244) [-0.00820]	-0.1935 (0.3804) [-0.01477]	-0.1980 (0.3954) [-0.01721]
SOCO (=1 if some college)	-0.9010 (0.1257) [-0.00688]	0.5047 (0.0539) [0.01791]	0.3956 (0.1134) [0.01448]	0.2098 (0.2463) [0.01600]	0.1492 (0.3933) [0.01297]
COLG (=1 if college graduate)	-25.92 (0.9997) [-0.19596]	-0.0957 (0.8149) [-0.00340]	-0.03212 (0.9255) [-0.00118]	0.02505 (0.9064) [0.00191]	0.1883 (0.3328) [0.01637]
POST (=1 if post-graduate education)	-0.4153 (0.7353) [-0.00314]	-1.047 (0.1021) [-0.03715]	-0.2431 (0.5520) [-0.00890]	-0.001666 (0.9940) [-0.00013]	0.4584 (0.0139) [0.03985]
BLACK (=1 if Black)	-1.945 (0.0120) [-0.01470]	-1.123 (0.0017) [-0.03984]	-0.9898 (0.0047) [-0.03624]	-1.208 (0.0001) [-0.09220]	-1.653 (0.0001) [-0.14366]
NUMSIBS (number of siblings)	0.0463 (0.5019) [0.00035]	0.00581 (0.8943) [0.00021]	-0.008860 (0.8357) [-0.00032]	-0.01836 (0.5564) [-0.00140]	-0.002759 (0.3591) [-0.00240]
SMSAN (=1 if SMSA, non-central city)	-1.056 (0.0087) [-0.00798]	-0.6538 (0.0079) [-0.02320]	-0.6383 (0.0042) [-0.02341]	-0.8325 (0.0001) [-0.06351]	-0.6198 (0.0001) [-0.05388]
SMSAC (=1, if SMSA, central city)	-1.178 (0.0073) [-0.00891]	-0.6613 (0.0141) [-0.02346]	-0.8719 (0.0008) [-0.03192]	-0.9992 (0.0001) [-0.07623]	-0.7354 (0.0001) [-0.06393]
SOUTH (=1 if in south)	-0.3568 (0.3448) [-0.00270]	0.05437 (0.8148) [0.00193]	0.006770 (0.9751) [0.00025]	0.1107 (0.4549) [0.00845]	-0.09833 (0.4784) [-0.00863]

TABLE 9 (CONTINUED)

	1966	1970	1971	1976	1981
MARST (=1 if married)	0.5826 (0.1853) [0.00440]	-0.3904 (0.1630) [-0.01385]	0.04100 (0.8761) [0.00150]	-0.2468 (0.1874) [-0.01883]	0.05785 (0.7556) [0.00503]
NUMDP (number of dependents)	-0.3036 (0.1872) [-0.00230]	0.1008 (0.3252) [0.00358]	0.03842 (0.6862) [0.00141]	0.02620 (0.6773) [0.00200]	0.09237 (0.0821) [0.00803]
SEARN (spouse earnings)	-0.0974 (0.1375) [-0.00074]	-0.04211 (0.1503) [-0.00149]	-0.04413 (0.0688) [-0.00162]	-0.02777 (0.0378) [-0.00212]	-0.009173 (0.3926) [-0.00080]
ASSET (assets)	0.0288 (0.0002) [0.00022]	0.006015 (0.0173) [0.00021]	0.007811 (0.0007) [0.00029]	0.004358 (0.0001) [0.00033]	-0.0006345 (0.0323) [-0.00006]
N (observations)	1391	2111	2346	2627	2572
Sample Probability	0.032	0.050	0.053	0.103	0.121

Notes: Entries are estimated logit coefficients. Figures in parentheses are *p*-values for significance of estimates. Marginal effects of each variable (evaluated at the sample mean) are shown in brackets.

TABLE 10: CROSS-SECTIONAL LOGIT ESTIMATES OF PROBABILITY OF SELF-EMPLOYMENT: GIRLS

	1970	1971	1972	1977	1982	1987
Constant	-35.51 (0.0209) [-0.52918]	-11.31 (0.2598) [-0.21741]	-11.98 (0.2216) [-0.29375]	-16.74 (0.0827) [-0.62625]	7.546 (0.4567) [0.41414]	-0.01033 (0.9993) [-0.00072]
AGE (age)	2.986 (0.0356) [0.04450]	0.7214 (0.4240) [0.01387]	0.6360 (0.4508) [0.01559]	0.9785 (0.1546) [0.03661]	-0.6976 (0.2581) [-0.03829]	-0.1798 (0.7641) [-0.01248]
AGE2 (age squared)	-0.07021 (0.0314) [-0.00105]	-0.01533 (0.4452) [-0.00029]	-0.01273 (0.4777) [-0.00031]	-0.01703 (0.1615) [-0.00064]	0.01113 (0.2321) [0.00061]	0.002900 (0.7122) [0.00020]
LTHS (=1 if less than high school)	0.2065 (0.6586) [0.00308]	0.4644 (0.2480) [0.00893]	-0.1223 (0.7772) [-0.00300]	-0.1268 (0.6979) [-0.00474]	-0.4067 (0.1780) [-0.02232]	0.08722 (0.6988) [0.00605]
SOCO (=1 if some college)	-0.1686 (0.7724) [-0.00251]	-0.9903 (0.1131) [-0.01904]	-0.1386 (0.7414) [-0.00340]	0.0609 (0.8156) [0.00228]	0.4317 (0.0410) [0.02369]	0.05861 (0.7522) [0.00407]
COLG (=1 if college graduate)	0.5590 (0.4085) [0.00833]	-0.6308 (0.4075) [-0.01213]	-0.7358 (0.3315) [-0.01804]	-0.3745 (0.3518) [-0.01401]	0.5186 (0.0488) [0.02846]	0.1686 (0.4343) [0.01170]
POST (=1 if post-graduate education)	1.408 (0.0946) [0.02099]	-0.1558 (0.8838) [-0.00300]	0.5371 (0.3620) [0.01317]	-0.02912 (0.9378) [-0.00109]	0.5384 (0.0432) [0.02955]	0.06943 (0.7538) [0.00482]
BLACK (=1 if Black)	-1.884 (0.0103) [-0.02808]	-1.419 (0.0341) [-0.02728]	-1.520 (0.0056) [-0.03726]	-1.647 (0.0004) [-0.06164]	-1.484 (0.0001) [-0.08142]	-1.269 (0.0001) [-0.08808]
NUMSIBS (number of siblings)	-0.03324 (0.6924) [-0.00050]	-0.1569 (0.0469) [-0.00302]	0.02177 (0.7369) [0.00053]	-0.06357 (0.2051) [-0.00238]	0.007729 (0.8413) [0.00042]	-0.01231 (0.7035) [-0.00085]
SMSAN (=1 if SMSA, non-central city)	-0.3612 (0.3877) [-0.00538]	-0.3058 (0.4113) [-0.00588]	0.07900 (0.8233) [0.00193]	-0.4608 (0.0503) [-0.01724]	-0.008178 (0.6822) [-0.00449]	0.03660 (0.8227) [0.00254]
SMSAC (=1, if SMSA, central city)	-0.6100 (0.1839) [-0.00909]	-0.6927 (0.1163) [-0.01332]	0.01458 (0.9702) [0.00036]	-0.5708 (0.0473) [-0.02136]	0.1075 (0.6264) [0.00590]	-0.002264 (0.9906) [-0.00016]
SOUTH (=1 if in south)	0.08216 (0.8262) [0.00122]	-0.5133 (0.1630) [-0.00987]	0.2768 (0.3680) [0.00679]	-0.1635 (0.4577) [-0.00612]	-0.08727 (0.6225) [-0.00479]	0.03154 (0.8283) [0.00219]

TABLE 10 (CONTINUED)

	1970	1971	1972	1977	1982	1987
MARST (=1 if married)	1.698 (0.0047) [0.02531]	0.5653 (0.2926) [0.01087]	0.8462 (0.0779) [0.02075]	0.9596 (0.0063) [0.03590]	0.8166 (0.0013) [0.04482]	0.7217 (0.0004) [0.05008]
NUMDP (number of dependents)	0.4191 (0.0051) [0.00625]	0.3173 (0.0293) [0.00610]	0.2494 (0.0347) [0.00611]	0.1780 (0.0314) [0.00666]	0.1912 (0.0009) [0.01049]	na
SEARN (spouse earnings)	-0.02433 (0.2968) [-0.00036]	0.01433 (0.5010) [0.00028]	0.0101 (0.4507) [0.00025]	-0.008035 (0.4050) [-0.00030]	-0.01219 (0.0888) [-0.00067]	-0.008581 (0.0811) [-0.00060]
ASSET (assets)	-0.01127 (0.0761) [-0.00017]	-0.006468 (0.4490) [-0.00012]	-0.001481 (0.7224) [-0.00004]	0.001881 (0.1749) [0.00007]	0.0009653 (0.3399) [0.00005]	0.001176 (0.0647) [0.00008]
N (observations)	1196	1329	1407	1790	2234	2759
Sample Probability	0.043	0.033	0.037	0.061	0.076	0.089

Notes: Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates.
Marginal effects of each variable (evaluated at the sample mean) are shown in brackets.

TABLE 11: POOLED LOGIT ESTIMATE OF PROBABILITY OF SELF-EMPLOYMENT

	Contemporaneous Assets		Lagged Assets	
	Boys	Girls	Boys	Girls
Constant	-7.1850 (0.0001) [-0.366]	-6.5723 (0.0001) [-0.235]	-6.6125 (0.0001) [-0.371]	-6.3823 (0.0001) [-0.310]
AGE (age)	0.2962 (0.0001) [0.015]	0.1089 (0.0864) [0.004]	0.2722 (0.0004) [0.015]	0.1278 (0.0808) [0.006]
AGE2 (age squared)	-0.0038 (0.0005) [0.000]	-0.0010 (0.3099) [0.000]	-0.0038 (0.0029) [0.000]	-0.0012 (0.2659) [0.000]
LTHS (=1 if less than high school)	-0.2598 (0.0037) [-0.013]	-0.0913 (0.3498) [0.003]	-0.2255 (0.0322) [-0.013]	-0.1348 (0.2292) [-0.007]
SOCO (=1 if some college)	0.2000 (0.0063) [0.010]	0.0678 (0.3993) [0.002]	0.1612 (0.0522) [0.009]	0.0208 (0.8175) [0.001]
COLG (=1 if college graduate)	-0.0312 (0.7241) [-0.002]	0.1494 (0.1327) [0.005]	-0.1325 (0.1817) [-0.007]	0.0993 (0.3674) [0.005]
POST (=1 if post-graduate education)	0.0780 (0.3844) [0.004]	0.2119 (0.0412) [0.008]	0.0126 (0.8988) [0.001]	0.1960 (0.0882) [0.010]
BLACK (=1 if Black)	-1.3907 (0.0001) [-0.071]	-1.4957 (0.0001) [-0.054]	-1.3332 (0.0001) [-0.075]	-1.5744 (0.0001) [-0.077]
NUMSIBS (number of siblings)	0.0062 (0.6206) [0.000]	-0.0345 (0.0158) [0.001]	0.0214 (0.1290) [0.001]	-0.0369 (0.0224) [-0.002]
SMSAN (=1 if SMSA, non-central city)	-0.7127 (0.0001) [-0.036]	-0.1562 (0.0272) [-0.006]	-0.6915 (0.0001) [-0.039]	-0.0978 (0.2150) [-0.005]
SMSAC (=1 if SMSA, central city)	-0.8259 (0.0001) [-0.042]	-0.0876 (0.2762) [-0.003]	-0.7804 (0.0001) [-0.044]	-0.0724 (0.4269) [-0.004]
SOUTH (=1 if in south)	-0.0480 (0.4316) [-0.002]	-0.0415 (0.5189) [-0.001]	-0.0537 (0.4451) [-0.003]	-0.0092 (0.8988) [0.000]

TABLE 11 (CONTINUED)

	Contemporaneous Assets		Lagged Assets	
	Boys	**Girls**	**Boys**	**Girls**
MARST (=1 if married)	0.0379 (0.6450) [0.002]	0.8929 (0.0001) [0.032]	-0.0058 (0.9524) [0.000]	0.8556 (0.001) [0.042]
NUMDP (number of dependents)	0.0359 (0.1554) [0.002]	0.2534 (0.0001) [0.009]	0.0347 (0.2286) [0.002]	0.2667 (0.0001) [0.013]
SEARN (spouse earnings)	-0.0216 (0.0001) [-0.001]	-0.0091 (0.0002) [0.000]	-0.0167 (0.0066) [-0.001]	-0.0093 (0.0009) [0.000]
ASSET (assets)	0.00193 (0.0001) [0.00010]	0.00029 (0.1253) [0.0001]	0.00608 (0.0001) [0.00034]	0.00003 (0.9155) [0.00000]
N (observations)	19080	21970	14193	16904
Sample Probability	0.083	0.058	0.089	0.060

Notes: Entries are logit coefficient estimates. *p*-values for significance levels are shown in parentheses. Entries in brackets are marginal effects for each variable evaluated at the sample means. "Contemporaneous Asset" uses assets in survey year; "Lagged Assets" uses assets from previous survey year. See text for details.

TABLE 12: PARENTS' FINANCIAL CAPITAL, PARENTS' HUMAN CAPITAL AND THE PROBABILITY OF SELF-EMPLOYMENT: SONS

	(1)	(2)	(3)	(4)	(5)	(6)
ASSETS (lagged assets)	0.0015 (0.3390) [0.00007]	0.0011 (0.5042) [0.00004]	0.0006 (0.7510) [0.00003]	0.0016 (0.3040) [0.00006]	0.0014 (0.3827) [0.00005]	0.0010 0.5655 [0.00005]
NPASSET (parents' non-business assets)		0.0010 (0.0229) [0.00004]			0.0005 (0.2700) [0.00002]	
TPASSET (parents' total assets)			0.0020 (0.0001) [0.00011]			0.0014 (0.0001) [0.00007]
PANYSE (parents self-employed)				1.256 (0.0001) [0.05072]	1.235 (0.0001) [0.04518]	1.036 (0.0001) [0.04831]
N (observations)	2702	2702	2702	2702	2702	2702
Sample Probability	0.078	0.078	0.078	0.078	0.078	0.078

Note: Each equation also includes year-specific intercepts, age, age squared, number of siblings, number of dependents, spouse's earnings, and indicator variables for educational attainment, race, region, SMSA residence, and marital status. Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.

TABLE 13: PARENTS' FINANCIAL CAPITAL, PARENTS' HUMAN CAPITAL
AND THE PROBABILITY OF SELF-EMPLOYMENT: DAUGHTERS

	(1)	(2)	(3)	(4)	(5)	(6)
ASSETS (lagged assets)	-0.0036 (0.3696) [-0.00011]	-0.0036 (0.3780) [-0.00006]	-0.0036 (0.3708) [-0.00006]	-0.0055 (0.1391) [-0.00010]	-0.0055 (0.1511) [-0.00006]	-0.0054 (0.1491) [-0.00006]
NPASSET (parents' non-business assets)		-0.0004 (0.7436) [-0.00001]			-0.0006 (0.5845) [-0.00001]	
TPASSET (parents' total assets)			-0.0000 (0.8436) [-0.00000]			-0.0005 (0.5142) [-0.00001]
PANYSE (parents self-employed)				1.042 (0.0001) [0.01824]	1.049 (0.0001) [0.01149]	1.092 (0.0001) [0.01218]
N (observations)	2463	2463	2463	2463	2463	2463
Sample Probability	0.028	0.028	0.028	0.028	0.028	0.028

Note: Each equation also includes year-specific intercepts, age, age squared, number of siblings, number of dependents, spouse's earnings, and indicator variables for educational attainment, race, region, SMSA residence, and marital status. Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.

TABLE 14: LOGIT ESTIMATES OF PROBABILITY OF TRANSITION TO SELF-EMPLOYMENT

	Boys	Girls
CONSTANT	-5.7027 (0.0003) [-0.230]	-9.0879 (0.0001) [-0.124]
AGE (age)	0.1545 (0.1975) [0.006]	0.3129 (0.0138) [0.004]
AGE2 (age squared)	-0.0029 (0.1827) [-0.000]	-0.0047 (0.0233) [-0.000]
SMSAN (=1 if SMSA, non-central city)	-0.1727 (0.1267) [-0.007]	0.1241 (0.3362) [0.002]
SMSAC (=1 if SMSA, central city)	-0.4657 (0.0002) [-0.019]	-0.1718 (0.2345) [-0.002]
SOUTH (=1 if in south)	-0.3603 (0.0007) [-0.015]	-0.3887 (0.0007) [-0.005]
MARST (= 1 if married)	-0.2477 (0.0759) [-0.010]	0.9811 (0.0001) [0.013]
NUMDP (number of dependents)	0.0439 (0.3135) [0.002]	0.1528 (0.0001) [0.002]
SEARN (spouse earnings)	0.0189 (0.0329) [0.008]	-0.0081 (0.1122) [-0.000]
ASSET (assets)	0.00530 (0.0001) [0.00021]	-0.00019 (0.7357) [-0.00000]
N (observations)	14060	15404
Sample Probability	0.034	0.024

Notes: Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at the sample mean) are shown in brackets.

TABLE 15: PARENTS' FINANCIAL CAPITAL, PARENTS' HUMAN CAPITAL
AND THE TRANSITION TO SELF-EMPLOYMENT: SONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASSETS (lagged assets)	0.0076 (0.0058) [0.00014]	0.0073 (0.0059) [0.00012]	0.0070 (0.0083) [0.00016]	0.0095 (0.0094) [0.00015]	0.0078 (0.0484) [0.00008]	0.0072 (0.0079) [0.00009]	0.0094 (0.0097) [0.00016]	0.0084 (0.0274) [0.00013]
NPASSET (parents' non-business assets)		0.0007 (0.3299) [0.00001]		0.0005 (0.6833) [0.00001]			-0.0007 (0.6788) [-0.0001]	
TPASSET (parents' total assets)			0.0011 (0.0048) [0.00002]		0.0023 (0.0041) [0.00002]			0.0011 (0.2365) [0.00002]
PANYSE (parents self-employed)						1.220 (0.0001) [0.01453]	1.225 (0.0001) [0.02023]	1.076 (0.0002) [0.01682]
N (observations)	2860	2860	2860	2509	2509	2860	2508	2509
Sample Probability	0.032	0.032	0.032	0.030	0.030	0.032	0.030	0.030

Note: Each equation also includes year-specific intercepts, age, age squared, number of dependents, and indicator variables for region, SMSA residence, and marital status. Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.

In columns (4) through (8), parents' assets and self-employment experience are measured in 1966 (the start of the sample period).

TABLE 16: PARENTS' FINANCIAL CAPITAL, PARENTS' HUMAN CAPITAL
AND THE TRANSITION TO SELF-EMPLOYMENT: DAUGHTERS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASSETS (lagged assets)	-0.0004 (0.8843) [-0.00000]	-0.0005 (0.8748) [-0.00000]	-0.0004 (0.8842) [-0.00000]	-0.0009 (0.7298) [-0.00000]	-0.0008 (0.7614) [-0.00000]	-0.0013 (0-5645) [-0.00000]	-0.0016 (0.4602) [-0.00000]	-0.0015 (0.5012) [-0.00000]
NPASSET (parents' non-business assets)		0.0006 (0.6659) [0.00000]		0.00230 (0.0383) [0.00000]			0.00131 (0.2896) [0.00000]	
TPASSET (parents' total assets)			0.000001 (0.9782) [0.00000]		0.00169 (0.0137) [0.00000]			0.00122 (0.1605) [0.00000]
PANYSE (parents self-employed)						1.411 (0.0001) [0.00029]	1.505 (0.0004) [0.00027]	1.451 (0.0006) [0.00037]
N (observations)	2473	2473	2473	2112	2112	2469	2108	2108
Sample Probability	0.015	0.015	0.015	0.014	0.014	0.010	0.014	0.014

Note: Each equation also includes year-specific intercepts, age, age squared, number of dependents, and indicator variables for region, SMSA residence, and marital status. Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.
In columns (4) through(8), parents' assets and self-employment experience are measured in 1966 (the start of the sample period).

TABLE 17: EFFECTS OF PARENT'S GENDER ON SELF-EMPLOYMENT: SONS

	on Probability				on Transition			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASSETS (lagged assets)	0.0014 (0.3827) [0.00005]	0.0020 (0.2175) [0.00010]	0.0010 (0.5461) [0.00005]	0.0021 (0.1578) [0.00009]	0.0094 (0.0097) [0.00016]	0.0105 (0.0044) [0.00017]	0.0099 (0.0079) [0.00013]	0.0100 (0.0059) [0.0017]
NPASSET (parents' non-business assets)	0.0005 (0.2700) [0.00002]	0.0005 (0.2960) [0.00003]	0.0005 (0.2841) [0.00002]	0.0007 (0.1543) [0.00003]	-0.0007 (0.6788) [-0.00001]	-0.0005 (0.7262) [-0.00001]	-0.0007 (0.6692) [-0.00001]	0.0007 (0.5766) [0.00001]
PANYSE (parents self-employed)	1.235 (0.0001) [0.04518]				1.225 (0.0001) [0.02023]			
DADANYSE		0.9131 (0.0001) [0.04965]	1.262 (0.0001) [0.05590]			1.258 (0.0001) [0.01990]	1.139 (0.0001) [0.01476]	
MOMANYSE		0.5959 (0.0048) [0.03241]		0.7705 (0.0001) [0.03238]		1.230 (0.1152) [0.01945]		1.092 (0.1593) [0.01812]
N (observations)	2702	2029	2481	2250	2508	2088	2146	2450
Sample Probability	0.078	0.087	0.083	0.080	0.030	0.033	0.033	0.030

Note: Each equation also includes year-specific intercepts, age, age squared, number of dependents, spouses' earnings and indicators for region, SMSA residence, and marital status. The specifications in columns (1) through (4) also include indicators for race, number of siblings, and educational attainment. Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.

In columns (5) through(8), parents' assets and self-employment experience are measured in 1966 (the start of the sample period).

TABLE 18: EFFECTS OF PARENT'S GENDER ON SELF-EMPLOYMENT: DAUGHTERS

	on Probability				on Transition			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ASSETS (lagged assets)	-0.0055 (0.1511) [-0.00006]	-0.0048 (0.4142) [-0.00010]	-0.0050 (0.2177) [-0.00009]	-0.0037 (0.5180) [-0.00000]	-0.0016 (0.4602) [-0.00000]	-0.0013 (0.5535) [-0.00000]	-0.0013 (0.5701) [-0.00000]	-0.0010 (0.6981) [-0.00000]
NPASSET (parents' non-business assets)	-0.0006 (0.5845) [-0.00001]	-0.0003 (0.8198) [-0.00001]	-0.0006 (0.5862) [-0.00001]	-0.0001 (0.9223) [-0.00000]	0.0013 (0.2896) [0.00000]	0.0014 (0.2585) [0.00000]	0.0013 (0.2994) [0.00000]	0.0024 (0.0322) [0.00000]
PANYSE (parents self-employed)	1.049 (0.0001) [0.01149]				1.505 (0.0004) [0.00027]			
DADANYSE		0.4049 (0.1863) [0.00826]	0.6570 (0.0128) [0.01129]			1.041 (0.0193) [0.00035]	1.083 (0.0141) [0.00034]	
MOMANYSE		0.9647 (0.0046) [0.01969]		1.066 (0.0012) [0.01924]		1.329 (0.1180) [0.00044]		1.646 (0.0467) [0.00037]
N (observations)	2463	1950	2261	2152	2108	1733	1733	2108
Sample Probability	0.028	0.028	0.030	0.026	0.014	0.017	0.017	0.014

Note: Each equation also includes year-specific intercepts, age, age squared, number of dependents, spouses' earnings and indicators for region, SMSA residence, and marital status. The specifications in columns (1) through (4) also include indicators for race, number of siblings, and educational attainment.

Entries are estimated logit coefficients. Figures in parentheses are p-values for significance of estimates. Marginal effects of each variable (evaluated at sample mean) are shown in brackets.

In columns (5) through(8), parents' assets and self-employment experience are measured in 1966 (the start of the sample period).

National Longitudinal Surveys (NLS)
Discussion Paper Series

Number	Author	Title
92-01	Michael R. Pergamit	How the Federal Government Uses Data from the National Longitudinal Surveys
92-02	Norman M. Bradburn Martin R. Frankel Reginald P. Baker Michael R. Pergamit	A Comparision of Computer-Assisted Personal Interviews (CAPI) with Paper-and Pencil Interviews (PAPI) in the National Longitudinal Survey of Youth
92-03	Saul Schwartz Robert Hutchens George Jakubson	Dynamic Models of the Joint Determination of Labor Supply and Family Structure
92-04	A. Colin Cameron R. Mark Gritz Thomas MaCurdy	The effects of Unemployment Compensation on the Unemployment of Youth
92-05	Henry S. Farber	Evaluating Competing Theories of Worker Mobility
92-06	Frank L. Mott Paula Baker	Evaluation of the 1989 Child-care Supplement in the National Longitudinal Survey of Youth
92-07	Audrey Light Manuelita Ureta	Gender Differences in the Quit Behavior of Young Workers
92-08	Lisa M. Lynch	The Impact of Private Sector Training on Race and Gender Wage Differentials and the Career Patterns of Young Workers
92-09	Evangelos M. Falaris H. Elizabeth Peters	Responses of Female Labor Supply and Fertility to the Demographic Cycle
92-10	Anne Hill June E. O'Neill	A Study of Intercohort Change in Women's Work Patterns and Earnings
92-11	Arleen Leibowitz Jacob Alex Klerman Linda Waite	Women's Employment During Pregnancy and Following Birth
92-12	Lee A. Lillard	Work Experience, Job Tenure, Job Separation, and Wage Growth
92-13	Joseph G. Altonji Thomas A. Dunn	Family Background and Labor Market Outcomes

92-14	George J. Borjas Stephen G. Bronars Stephen J. Trejo	Self-Selection and Internal Migration in the United States
92-15	James J. Heckman Stephen V. Cameron Peter Z. Schochet	The Determinants and Consequences of Public Sector and Private Sector Training
93-16	R. Mark Gritz Thomas MaCurdy	Participation in Low-Wage Labor Markets by Young Men
94-17	Alan L. Gustman Thomas L. Steinmeier	Retirement in a Family Context: A Structural Model for Husbands and Wives
94-18	Audrey Light	Transitions from School to Work: A Survey of Research Using the National Longitudinal Surveys
94-19	Christopher J. Ruhm	High School Employment: Consumption or Investment
95-20	Mark Lowenstein James Spletzer	Informal Training: A Review of Existing Data and Some New Evidence
95-21	Jacob Alex Klerman	Characterizing Leave for Maternity: Modeling the NLSY Data
95-22	Jacob Alex Klerman Arleen Leibowitz	Employment Continuity Among New Mothers
95-23	Stephen G. Bronars Carol Moore	Incentive Pay, Information, and Earnings: Evidence from the National Longitudinal Survey of Youth
95-24	Donald O. Parsons	The Evolving Structures of Female Work Activities: Evidence from the National Longitudinal Surveys of Mature Women Survey, 1967-1989
95-25	Donald O. Parsons	Poverty Dynamics Among Mature Women: Evidence from the National Longitudinal Surveys, 1967-1989
95-26	Ann Bartel Nachum Sicherman	Technological Change and the Skill Acquisition of Young Workers
95-27	Audrey Light	High School Employment
95-28	Laura Branden R. Mark Gritz Michael R. Pergamit	The Effect of Interview Length on Attrition in the National Longitudinal Survey of Youth
95-29	Thomas Dunn Douglas Holtz-Eakin	Capital Market Constraints, Parental Wealth and the Transition to self-Employment among Men and Women