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Michael Hout
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ABSTRACT

The offspring of self-employed fathers are more likely than others to become self-employed. Thus the historically low rates of self-employment among African-Americans and Latinos may contribute to their low contemporary rates. National data show that African-Americans and Latinos whose fathers were self-employed have lower rates of self-employment than other men whose fathers were not self-employed. Other aspects of family background explain only a small portion of the self-employment gap between African-Americans and native-born white ancestry groups. Male immigrants who have self-employed fathers overseas are no more likely to be self-employed than other immigrants are.

I. Introduction

Self-employment rates vary a great deal across American ancestry groups. In 1990, for example, 24 percent of Koreans and 4 percent of African-Americans were self-employed; the economy-wide rate was 10.8 percent (Fairlie and Meyer 1996). Understanding group differences in self-employment rates is important for several reasons. From the point of view of the economy as a whole, the entrepreneurship associated with self-employment may be linked to the creation of

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new jobs and the development of new technologies.¹ It has been suggested that this “job creation” aspect of self-employment is particularly instrumental in creating opportunity in ethnic enclaves (see, for example, Wilson and Portes 1980; Waldinger 1986; Logan et al. 1997). More generally, from the point of view of the individual or his or her ancestry group, self-employment has traditionally been viewed as a means of getting ahead in life, socially and politically as well as economically. As Glazer and Moynihan (1970, 30–31) argue in their classic work on immigration in the United States,

As against the worker, each businessman had the possibility, slim though it was, of achieving influence and perhaps wealth. The small businessman generally had access to that special world of credit which may give him for a while greater resources than a job. He learns about credit and finance and develops skills that are of value in a complex economy. He learns too about the world of local politics.

Some theories of self-employment view differences in attitudes toward risk as being the primary factor. Self-employment is inherently more risky than wage-earning (Hamilton 1995), so the risk-averse avoid self-employment (Kihlstrom and Laffont 1979). Other theories focus on differences in managerial skill across individuals—some people have a comparative advantage in running an enterprise, and they are the ones who are inclined to go into self-employment in the first place or survive longer once the business is launched (Jovanovic 1982). A third set of theories puts financial constraints at the center of the story (Evans and Jovanovic 1989). The idea here is that running and maintaining a business require access to capital, but for various reasons, some individuals have access to capital markets and others do not.²

The various theories are not mutually exclusive, nor is there any reason to think that one cause predominates. In a way, all of these theories merely push back the question—why do people differ in their attitudes toward risk or their abilities to run a business or in the constraints they face? This is where ethnicity and ancestry enter the story. People’s ethnic ancestry may expose them to a variety of cultural and psychological factors that affect risk-taking and management skills. Ancestry may be correlated with the constraints they face as well. For example, even after the end of slavery, African-Americans faced severe institutional constraints on their self-employment. Jim Crow legislation restricted the size and revenues of black-owned businesses in the states of the former Confederacy, Maryland, Delaware, and Missouri from the 1890s to the 1930s (Woodward 1955). Race riots in Wilmington, Delaware (in 1898), and Tulsa, Oklahoma (in 1921), wiped out thriving districts of black-owned businesses (Oliver and Shapiro 1995). Even today, there is some evidence that blacks are subject to discrimination in capital markets (Browne and Toottell 1995).

This focus on ethnicity and race is particularly relevant in light of an important fact: not only is the rate of self-employment among African-Americans low relative to the rate among whites, but it has been that way for decades (Fairlie and Meyer

1. See Davis, Haltiwanger, and Schuh (1993) for a critical discussion of the job creation issue.

2. See Holtz-Eakin, Joulfaian, and Rosen (1994) for evidence that access to capital increases the probability that an individual will make a transition from wage-earning to self-employment.

1997). The low self-employment rate among blacks has long been viewed as a puzzle by both sociologists and economists: “Negro business did not develop, despite the fact that business is in America the most effective form of social mobility for those who meet prejudice” (Glazer and Moynihan 1970, 36).³ Glazer and Moynihan attribute this phenomenon to a legacy of slavery: “Negroes emerging from slavery had no experience with money, and had no occasion to develop the skill in planning and foresight that even the smallest businessman must have” (36).

The legacy-of-slavery argument would be of little relevance today were it not for the strong intergenerational component in self-employment. Parents pass on self-employment to their offspring (Blau and Duncan 1967; Hout 1984), but if members of some group have historically been excluded from self-employment (or have chosen to exclude themselves) then the intergenerational chain from self-employed father to self-employed offspring never starts.⁴ Several mechanisms can transmit the propensity to be self-employed across generations. Self-employed parents may endow their children with human capital that is specific to running an enterprise (Lentz and Laband 1990). They may provide role models and adopt child-rearing practices that facilitate self-employment as well (Kerckhoff 1972). Previous work has in fact documented that children of the self-employed are more likely to be self-employed themselves (Blau and Duncan 1967; Hout 1984, 1988; Lentz and Laband 1990; Fairlie 1996; and Dunn and Holtz-Eakin 1996). One can imagine that other attributes of family background could matter as well, but these have not received a great deal of attention, presumably because of data limitations.⁵

In a model that focuses on the transmission of self-employment from parents to offspring, the length of time required to “compensate” for a low initial self-employment rate depends on what we will call the *intergenerational pick-up rate* with respect to self-employment—in other words, the probability that the child of a self-employed parent will become self-employed him- or herself.⁶ Intergenerational

3. See Meyer (1990) for an econometric analysis of the differences in black and white self-employment rates, and Fairlie (1996) for a study of racial differences in transition rates between wage-earning and self-employment.

4. While in principle either parent can contribute to the offspring’s propensity to be self-employed, we focus on the role of fathers because we have only limited data on mother’s self-employment. In this context it may be useful to note Dunn and Holtz-Eakin’s (1996) result that the presence of a self-employed mother has no statistically discernable effect on a son’s probability of becoming self-employed (net of father’s self-employment status), but it does matter for daughters.

5. Fairlie (1996) considers the education of the father; Dunn and Holtz-Eakin (1996) include the assets of the parents in their analysis. Glazer and Moynihan (1970) speculate that the prevalence of female-headed households among African-American families might lower rates of self-employment (as well as other forms of occupational achievement).

6. To be more precise, the intergenerational pick-up rate is the probability of self-employment among those adults whose fathers were self-employed. This retrospective definition has several advantages over a prospective one that defines the pick-up rate as the probability that a self-employed person will have self-employed offspring. Most importantly, the retrospective definition can be combined with the corresponding conditional probability for those whose father was not self-employed to arrive at the cross-sectional proportion self-employed at any time (Fairlie and Meyer 1996). The retrospective definition also avoids the difficulty that prospective definitions have adjusting for the fact that some people have no children and that parents differ in the number of children that they have. Everyone has just one father. Some complexity arises because that father may have more than one job or may not live with all of his children all the time while they are growing up. Retrospective and prospective definitions share the family-related complexities, but the retrospective definition at least solves the initial matching problem.

pick-up rates are no more likely to be the same across ancestry groups than overall self-employment rates are. For example, to the extent that the nature of intrafamily interaction differs across ancestry groups (some fathers are “involved” with their children and others may not be), then the father’s self-employment status will differentially affect his offspring’s status. Alternatively, we posit that the likelihood that a person succeeds in self-employment depends in part on the human capital he or she receives from a self-employed father, and the amount of that human capital may differ from one ancestry group to another. For example, fathers in groups that have long traditions of self-employment might have more useful lore to pass on. As far as we know, however, there are no estimates of how much ancestry groups differ in this crucial parameter.

More generally, in the sociological and economic literatures (not to mention literatures in fields like developmental psychology) there is evidence suggesting that family structure affects educational and occupational outcomes (see Butcher and Case 1994). In this paper we use a data source that is rich in information about individuals’ family backgrounds to investigate how they affect the probability of self-employment. In particular, we document how African-Americans and Latinos stand out from persons of other ancestries not only in their low rates of self-employment but also in their low intergenerational pick-up rates. We also present data on the roles of immigration, family size, and family structure in self-employment.

Section II describes in detail our data set, the General Social Survey, and provides some suggestive tabulations relating to the variation in pick-up rates across ancestry groups. The multivariate analysis in Section III confirms one of the key findings of these tabulations: The intergenerational pick-up rate is lowest for African-Americans and Latinos, intensifying the low prevalence within these two groups of self-employment among fathers. We also find that while family background differences explain some of the racial gap in self-employment rates, much of the gap is evident within family-type categories. Section IV speculates a bit further on the sources of racial differences in self-employment rates, and Section V concludes with a brief summary.

II. The Data

A. General Description

Our data come from the General Social Survey (GSS), which consists of face-to-face interviews with a (changing) representative sample of about 1,500 English-speaking adults (18 years old and older) living in the United States. The GSS was conducted by the National Opinion Research Center (NORC) at the University of Chicago with only a few changes in format almost every winter and spring from 1972 to 1993 (1979, 1981, and 1992 were skipped due to insufficient funding); in 1994 the GSS shifted to a survey of approximately 3,000 persons in even-numbered years only (see Davis and Smith 1996 for details). The GSS has an average response rate of 77 percent, higher than most social and political surveys achieve. We use data from the 1973 through 1996 surveys. Blacks were oversampled in 1982 and 1987. We employ sampling weights to adjust for oversampling in calculating descriptive statistics and simulations but not for the logistic regression analysis.

An attractive feature of the GSS for our purposes is its relatively detailed characterization of family background, particularly father's employment. The Current Population Survey and the Census, in contrast, tell us nothing about family background. The Panel Study of Income Dynamics provides family background information on the *children* of the members of the original sample from the late 1960s, but these individuals are not a random sample of the working population in any year.⁷ Similar limitations apply to the various National Longitudinal Surveys, which are characterized by age-censoring. In contrast, the GSS includes father's occupation, the family's religion, ethnic ancestry, and family structure when the individual was growing up, *inter alia*. These variables can be correlated with the individual's self-employment status and his or her father's self-employment status. Including them in a multivariate analysis of the propensity to be self-employed will improve our ability to obtain consistent estimates of the determinants of the intergenerational pick-up rate.

B. Sample Restrictions and Measurement of Key Variables

We begin our analysis with information on men and women between the ages of 25 and 64 for the calendar years 1973 through 1996 who had a nonfarm job at which they worked at least 15 hours the week before the interview.⁸ The age and hours restrictions are imposed to limit attention to persons who have a significant attachment to the labor force. We classify each individual as a wage earner or self-employed from the answer to the direct question, "Are you self-employed or do you work for someone else?"⁹ We leave farmers in the descriptive calculations but delete them from logistic regression analyses because the selection into self-employment may be significantly different for farming than for other occupations.

A corresponding battery of questions asks, "What kind of work did your father (or father-substitute) normally do while you were growing up? Was he self-employed or did he work for someone else?" There is clearly some ambiguity associated with these questions because many fathers will have changed jobs and some will have moved in and out of self-employment. Interviewers were instructed to resolve those ambiguities by saying, "Tell me about what kind of work he was doing when you were 16 years old," if the person being interviewed mentioned that her or his father had more than one job or was self-employed at times but not always. Thus the self-employed fathers we observe were self-employed when the individual who is the

7. Furthermore, even in the initial PSID sample, there was not much information about family background. For example, questions about family structure and father's occupation are not very detailed.

8. Some variables are not available every year or for some subsamples in some years. The 1972 GSS did not ask about hours worked, so we cannot use it. The immigration questions were not asked until 1977, so analyses that include immigration variables use data from 1977 to 1996.

9. This question is part of a battery that asks about employment, occupation, and industry. For persons with more than one job (we do not know how many but we assume that there are few), the interviewer asked for information about the main job, in other words, the one at which the respondent worked more hours. The GSS question conforms to the self-employment questions on the long forms of the 1970, 1980, and 1990 Censuses and on the Current Population Surveys up to 1992. Recent changes in CPS procedures probably produce slightly lower estimates of the incidence of self-employment than the Census and GSS questions.

subject of this study was facing important educational decisions and forming ideas about possible careers.¹⁰ For about 12 percent of the sample, father's self-employment status was missing because the father did not live with the subject of this study when that person was 16 years old. Individuals who did not live with their fathers are retained in the analysis and treated as not having a self-employed father. We use detailed data on family structure to examine the difference between the impact of absent fathers and fathers who were present but doing wage and salary work.

The GSS includes ancestry and race questions that allow us to replicate the classifications used in the CPS and Census. We begin with a question similar to the Census's ancestry question, in other words, "From what countries or part of the world did your ancestors come?" The GSS codes up to three countries of origin (7 percent of whites do not know enough about their ancestry to name a country). Persons are asked to choose the one "you feel closest to" (slightly less than half of those who name more than one can choose the one they feel closest to). We use the single responses and the "closest" country to code 82 percent of persons; the remainder are put in a residual category—"not elsewhere classified." The GSS data file identifies 42 countries of origin. For some countries of origin we had enough cases to assign unique one-nation categories (for example, Ireland and Italy). We followed two strategies to accommodate other, mostly smaller countries: (1) we combined small countries with large ones to form cultural affinity groups (for example, we combined Wales with England, we added Austria and Switzerland to Germany to form a "German" category, and we combined France and French Canada); (2) we combined nearby countries to form geographically proximate groups (for example, the Netherlands and Belgium); and (3) we treated the special cases of English-speaking Canada and "America" as a separate category (see Lieberman 1985; see Lieberman and Waters 1993 on the subject of these "un-hyphenated whites").

Of special note are the "African-American," "Latino," and "East Asian" categories, as these are often considered "racial" distinctions. African-Americans are all persons coded "black" (or equivalent) on the race item, regardless of the countries they named on the ancestry question. Latinos are persons who made any mention of Mexico, Puerto Rico, or the countries that NORC grouped together as "other Hispanic" as their country of origin, even if it was not the country mentioned as "closest." We did this to get a Latino category that comes as close as possible to the Census Bureau's concept of "Hispanic origin." Likewise East Asians are persons who made any mention of China, Japan, the Philippines, or "other Asia" on the ancestry question, even if it was not the country mentioned as "closest." We ended up with 17 ancestry categories, details on their composition are included in Table A1.

The GSS also includes questions about religion—both current religion (if any) and the religion the person was raised in (if any). In combination with data on race and ancestry, the religion data allow us to construct a more refined measure of ances-

10. Although it is reasonable to think that retrospective data have more error than contemporary measures, Bielby, Hauser, and Featherman (1977) found that men under the age of 65 made no greater errors in reporting their father's occupational characteristics than they made in reporting their own occupational characteristics. The details of response patterns differ for African-American and other men, but the errors in retrospective reports are no greater than for contemporary reports for either group.

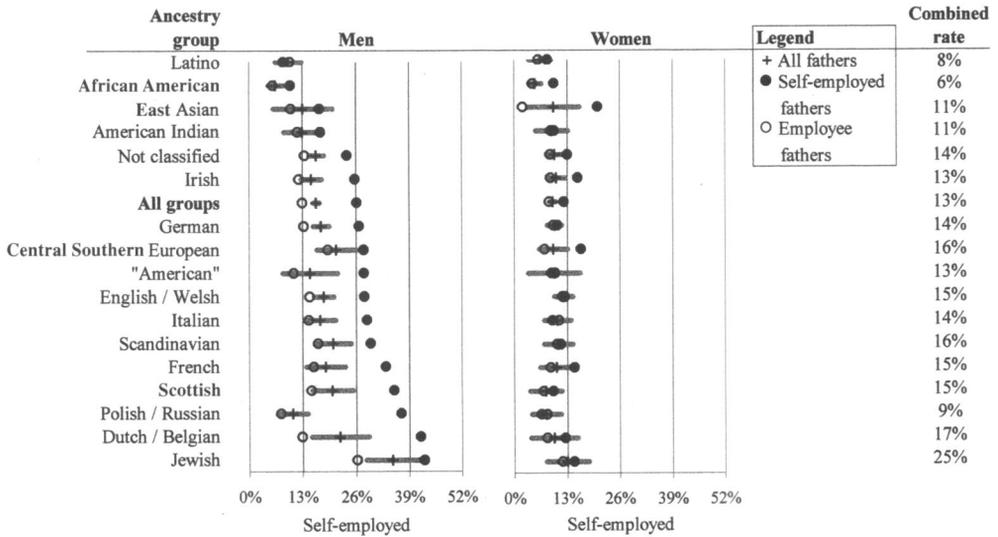


Figure 1
Rate of Self-Employment by Father's Self-Employment, Gender, and Ancestry: Employed Persons Who Work 15 or More Hours per Week, 25–64 Years Old, United States, 1974–96

Note: The overall rate of self-employment is 13 percent. The vertical lines show multiples of that overall rate. Horizontal gray lines show the 95 percent confidence interval for the series depicting all men and all women. Source: General Social Survey, 1974–96

try than other commonly used data sources provide. In particular, the answer to the question “In what religion were you raised?” allows us to distinguish a “Jewish” ancestry. Persons of Jewish ancestry may have named any country of origin.¹¹ This eliminates the ambiguity that arises for ethnic ancestry groupings that preclude religious categories (for example, Lieberman and Waters 1988). We experimented with a number of treatments of this information and found that the ability to identify people who were raised in the Jewish religion was the single significant piece of information on religion for the purposes of studying self-employment.¹²

C. Pick-up Rates by Ancestry and Gender

The probability that a man is self-employed as an adult varies according to whether his father was self-employed and his ancestry group (see Figure 1). The probability

11. There are not enough observations to study differences among Jews from different countries.
 12. Adding other religious distinctions to the final model we present below yielded no significant improvement of fit and did not appreciably change any of the coefficients we present. To the extent to which actual religious affiliation reflects the orientation to saving and investment known as “the Protestant Ethic,” we find no evidence that it encourages entrepreneurship.

that a woman is self-employed as an adult also varies by father's self-employment and ancestry, but not as much. For each combination of ancestry group and gender, a solid black circle shows the intergenerational pick-up rate, in other words, the rate of self-employment among individuals whose fathers were self-employed; an open circle shows the rate of self-employment among individuals whose fathers were not self-employed (or absent). The plus sign (+) between the solid black and open circles shows the gender-specific self-employment rate for all persons, regardless of their father's self-employment status. The overall rate in our sample is 13 percent; the vertical lines in the figure mark off the multiples of this average.¹³ We show the 95 percent confidence intervals around the rate for all persons in each ancestry group with gray bars that branch out to the left and right from the plus sign. For each ancestry group, the self-employment rate for men and women combined is printed in a column along the right-hand side of the figure. Ancestry groups are sorted according to the intergenerational pick-up rate among men; the groups at the top of the chart have the lowest male intergenerational pick-up rates while the groups at the bottom of the chart have the highest rates.

With few exceptions, ancestry groups with higher intergenerational pick-up rates among men have higher self-employment rates overall. The correlation between a group's male intergenerational pick-up rate and its overall self-employment rate is 0.71; the slope relating the male intergenerational pick-up rate to the overall self-employment rate for an ancestry group is almost unity ($b = 0.97$). The rates of self-employment among men whose fathers were not self-employed vary much less from group to group than the male intergenerational pick-up rates do. Indeed, for most ancestry groups self-employment among men whose fathers were not self-employed departs only slightly from the average rate for all ancestry groups. Exceptions to this generalization are the very low rates of self-employment among Africans, East Asians, and Latinos, and the above-average rate of self-employment among Jewish and Southern or Central European men whose fathers were not self-employed.

Women are substantially less likely than men to be self-employed, as previous studies have repeatedly shown. We find that 16 percent of men and 9 percent of women are self-employed; this seven-point difference is statistically significant at all conventional levels. Women's self-employment rates vary relatively little from group to group. However, two important regularities that we noted for men also occur among women. The daughters of self-employed fathers are more likely to be self-employed than are other women from the same ancestry group, and the women's intergenerational pick-up rate is as closely correlated with overall self-employment as men's rates are ($r = 0.71$, the same figure as for men). On the other hand, because women's intergenerational pick-up rates vary over a relatively narrow range, the slope relating the intergenerational pick-up rate to the overall self-employment rate is only 0.63 for women. Trying to explain the narrow range of variation in women's intergenerational pick-up rates is not likely to be fruitful, so we choose to focus on men in the rest of this analysis.

13. The 95 percent confidence interval around this average in a sample of 15,820 is just ± 0.8 percentage points.

III. Multivariate Analyses

A. Definition of Variables

Figure 1 focuses on father's self-employment status, ancestry, and gender as variables related to an individual's self-employment status. But previous research suggests that other aspects of family background may be involved. We now turn to a statistical analysis that allows us to consider education, immigration experience, and age along the lines suggested by, for example, Fairlie and Meyer (1996). We also consider the individual's family structure while he was growing up, his contemporary family structure (marriage and children), and his ability to speak English (Section IIID).

The GSS provides a number of useful variables. Respondents are asked, "Were you living with your own mother and father around the time you were 16?" If the response is "No," she/he is asked, "With whom were you living around that time?" Eight specific family configurations and a residual "other" category are recorded. They are listed in Table 1, which shows the categories we use for all variables and the proportional distribution of cases across those categories. About three-fourths of respondents grew up living with their own mother and father; most of the other one-fourth were with "mother only" or "mother and stepfather." For the father-absent categories, we do not know father's self-employment status, so it is important to control for family type in order to interpret the results for father's self-employment correctly.

Beginning in 1977 the GSS asked respondents whether they were born in the United States or some other country. It also asks whether one or both parents are U.S. born and how many grandparents were born in the United States. The survey also asks where the respondent was living when he or she was 16 years old. From this information we classify respondents to the 1977-96 GSSs as immigrants (foreign born, living abroad at age 16, and at least one foreign-born parent),¹⁴ second generation (U.S.-born with at least one foreign-born parent or foreign born but living in the United States at age 16), third generation (two U.S.-born parents but one or more foreign-born grandparents), and fourth generation (two U.S.-born parents and no foreign-born grandparents).

Completing the roster of family background variables are the number of siblings and father's occupation. The number of siblings includes all brothers and sisters, stepsiblings, and half siblings.¹⁵ Father's occupation is coded according to U.S. Census Bureau standards (1970 codes were used through 1988 and 1980 codes since). We recoded the detailed occupation into seven categories: professional, business related (in other words, managerial and nonretail sales occupations), clerical and retail, skilled blue collar (foremen and crafts workers), semiskilled blue collar (operatives), unskilled blue collar (laborers, including farm laborers), and farmers. One-eighth of respondents were living in a family with no male present when they were

14. The few cases of foreign-born respondents whose parents were both born in the United States are coded as third or fourth generation, depending on their grandparents' nativity.

15. One man claims to have 68 siblings. This response has been verified by NORC as the answer that the respondent intended, but we delete the case anyway because we suspect it might have undue leverage over the logistic regression results.

Table 1

Percentage Distributions of Categorical Variables and Means and Standard Deviations of Continuous Variables for Full Sample and Subsample Used in Logistic Regression Analyses: Persons 25–64 Years Old, Who Worked 15 or More Hours at Their Main Job

Variable Name	Full Sample 1974–96	Men with All Covariates Present 1977–96	
		All	African American
Self-employed	12.4%	15.4%	5.7%
Father self-employed	24.2%	24.1%	15.5%
Male	53.0%	100.0%	100.0%
Ethnicity			
English/Welsh ^a	11.3%	11.9%	—
Irish	9.8%	9.2%	—
Scottish (or Scots-Irish)	2.8%	3.0%	—
French (or French Canadian)	2.9%	2.9%	—
Italian	4.7%	4.6%	—
Southern or Central European	3.6%	3.4%	—
Dutch/Belgian	1.5%	1.6%	—
Scandinavian	4.0%	3.9%	—
German (or German-speaking country)	16.0%	16.8%	—
Polish, Russian, or former Soviet Union	3.1%	3.1%	—
Jewish ^b	2.4%	2.6%	—
East Asian	1.0%	1.0%	—
Latino	3.5%	3.7%	—
Native American Indian	2.7%	2.8%	—
African American ^c	11.0%	9.1%	100.0%
“American”	1.2%	1.2%	—
Not elsewhere classified ^d	18.4%	19.3%	—
Family structure at age 16			
Father & mother ^a		78.0%	58.8%
Father & stepmother		1.7%	1.3%
Mother & stepfather		3.9%	5.1%
Father only		1.9%	2.9%
Mother only		11.0%	22.4%
Male relative		0.3%	0.4%
Female relative		1.0%	4.4%
Male & female relatives		1.9%	4.2%
Other arrangement		0.2%	0.5%
Age		40.49	39.87
(Standard deviation)		10.32	10.46
Siblings		3.60	5.15
(Standard deviation)		2.94	3.68
Father’s occupation			
Professional ^a		9.9%	3.4%
Business related		17.9%	6.6%
Clerical & retail		4.5%	1.7%
Skilled blue collar		24.5%	16.2%
Semiskilled blue collar		15.4%	18.1%
Unskilled blue collar		6.9%	15.1%
Farm		9.1%	11.6%
Father absent		11.8%	27.2%

Table 1 (continued)

Variable Name	Full Sample 1974–96	Men with All Covariates Present 1977–96	
		All	African American
Highest degree			
Less than high school diploma ^a		13.8%	22.0%
High school diploma		50.3%	56.3%
Junior college degree		6.0%	7.6%
Four-year college degree		18.9%	10.3%
Advanced degree		11.0%	3.8%
Region			
Mid-Atlantic (NJ, NY, PA) ^a		15.0%	14.7%
New England (CT, MA, ME, NH, RI, VT)		5.4%	1.2%
Eastern Midwest (IL, IN, MI, OH, WI)		18.8%	16.3%
Western Midwest (IA, KS, MN, MO, NB, ND, SD)		7.8%	4.8%
South Atlantic (DC, DE, FL, GA, MD, NC, SC, VA, WV)		17.4%	30.7%
Eastern South Central (AL, KY, MS, TN)		6.6%	11.9%
Western South Central (AR, LA, OK, TX)		9.2%	9.2%
Mountain (AZ, CO, ID, MT, NM, NV, UT, WY)		5.8%	1.3%
Pacific (AK, CA, HA, OR, WA)		14.1%	9.8%
City size			
12 largest SMSAs, central city		7.3%	20.0%
SMSAs 13–100, central city		13.1%	23.8%
12 largest SMSAs, suburb		12.8%	10.1%
SMSAs 13–100, suburb		17.3%	13.2%
Urban, not in 100 largest SMSAs		38.1%	25.9%
Rural, not in 100 largest SMSAs ^a		11.3%	7.0%
Generations since immigration			
Immigrant		6.7%	7.6%
At least one parent was immigrant		9.6%	2.1%
At least one grandparent was immigrant		26.6%	3.8%
Grandparents were born in the United States ^a		57.1%	86.5%
Observations	15,800	6,379	578

Source: General Social Survey (full sample, 1974–96; subsample, 1977–96).

^a Reference category in the logistic regression analysis.

^b The “Jewish” category is coded from the question about religious origins. Persons classified as Jewish could have given any country—or no country—in response to the ancestry question.

^c The “African American” category is coded from the question about racial identity. Persons classified as African American could have given any country—or no country—in response to the ancestry question.

^d Responses included to the “not elsewhere classified” category are of three types: the names of countries that did not fit into any of the categories listed here, for example, “India” (all small countries combined add up to 8 percent of this category); multiple responses that could not be resolved by the followup question, “Which of these countries do you feel closer to?” (55 percent); and nonresponse because the respondent did not know much about his or her ancestry (37 percent).

16 years old; father’s occupation is missing for them but we include them in the analysis, coding them as “father absent.” We also make use of several standard demographic variables that might be related to both self-employment and ancestry: age (and age squared), education (five categories), region (the nine U.S. Census Bureau regions), and type of place of residence (six categories).

Table 1 shows the percentage distribution of each categorical variable and the mean and standard deviation for age and the number of siblings. The first column shows the distributions of self-employment, father’s self-employment, gender, and ancestry for the full sample ($n = 15,820$). The second column shows the descriptive statistics for all variables we use in our multivariate analysis of men’s self-employment ($n = 6,379$). The third column shows descriptive statistics for the 578 African-American men included in the multivariate analysis; we use these distributions to help interpret the results.

B. Statistical Strategy and Results

We have two goals for our multivariate analysis. One is to determine whether the relationship between the intergenerational pick-up rate and overall self-employment for most ancestry groups suggested by Figure 1 stands up to formal analysis. The second is to assess whether the observed differences among ancestry groups might actually reflect the more direct influences of other factors, correlated with ancestry, on self-employment probabilities.

Our modeling strategy is informed by a tendency revealed in Figure 1: for men whose fathers were wage earners, self-employment rates generally do not differ very much across ancestry groups, but ancestry-group differences are important for men whose fathers were self-employed. We begin with a simple model that expresses this notion in its strictest form. We specify the probability that a man i from ancestry group k is self-employed in year t (p_{ikt}) as a function of ancestry-group membership (X_{ik}) if his father was self-employed while he was growing up ($S_i = 1$) but not if his father was a wage earner or absent ($S_i = 0$). Because the data span 24 years, we also include time effects ($T_{it} = 1$ if observation i is from year t and 0 otherwise):

$$(1) \quad p_{ikt} = \frac{e^{y_{ikt}}}{1 + e^{y_{ikt}}}$$

where

$$(2) \quad y_{ikt} = \beta_0 + \beta_1(1 - S_i) + \beta_k X_{ik} S_i + \gamma_t T_{it}$$

where X_{i1} (England and Wales) is set as the reference ancestry group, T_{i77} (1977) is set as the reference year, and the β s and γ s are parameters. We choose the logistic function for convenience, but the curvilinear pattern that characterizes this distribution is evident in the observed data. As already suggested, Equations (1) and (2) impose the constraint that the expected probability of self-employment for a man whose father was not self-employed is the same for all ancestry groups.¹⁶

The maximum likelihood estimates of the β parameters are shown in the first column of Table 2; their standard errors are in Column 2. The β s vary considerably;

16. That expected probability is given by: $\exp(\beta_0 + \beta_1)/(1 + \exp(\beta_0 + \beta_1))$.

Table 2
Logit Analysis of Self-Employment Pick-Up Rates: Men, 25-64 Years Old Who Work 15 or More Hours in Nonfarm Occupations: United States

Variable Name	Model 1 1974-96 (n = 8,174)		Model 2 1974-96 (n = 8,174)		Model 2 1977-96 (n = 6,383)		Model 3 1977-96 (n = 6,383)	
	β	Standard Error						
Ancestry \times pick-up rate								
Latino	-1.233*	0.447	-1.234*	0.447	-1.013*	0.458	-0.737	0.486
African American	-1.185*	0.361	-1.186*	0.361	-0.973*	0.389	-0.620	0.400
East Asian	-0.850	0.556	-0.850	0.556	-0.603	0.570	-0.569	0.603
Native American Indian	-0.403	0.411	-0.404	0.411	-0.221	0.424	0.000	0.435
Not elsewhere classified	-0.318	0.195	-0.318	0.195	-0.255	0.219	-0.119	0.226
German	-0.297	0.196	-0.297	0.196	-0.302	0.222	-0.073	0.230
Scandinavian	-0.196	0.303	-0.198	0.303	-0.305	0.348	-0.178	0.361
Irish	-0.122	0.243	-0.124	0.243	-0.016	0.279	0.089	0.287
"American"	-0.076	0.532	-0.074	0.533	-0.717	0.784	-0.753	0.792
English/Welsh	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
French	0.045	0.400	0.044	0.400	0.318	0.420	0.548	0.438
Southern/Central European	0.078	0.321	0.075	0.321	-0.133	0.370	0.050	0.389
Italian	0.209	0.296	0.210	0.296	0.489	0.328	0.561	0.348
Dutch/Belgian	0.290	0.409	0.289	0.409	0.241	0.481	0.492	0.497
Scottish	0.394	0.316	0.393	0.316	0.515	0.372	0.544	0.381
Polish/Russian	0.462	0.449	0.464	0.449	0.693	0.533	0.930	0.551
Jewish	0.824*	0.246	0.826*	0.246	1.061*	0.277	0.774*	0.297

Father not self-employed	-0.848*	0.155	-0.787*	0.156	-0.752	0.177	-0.592*	0.190
Group-specific effects								
African American			-0.968*	0.182	-1.169*	0.220	-1.056*	0.229
Latino			-0.299	0.216	-0.288	0.233	-0.403	0.253
Polish/Russian			-0.598*	0.247	-0.607*	0.279	-0.572*	0.284
Southern/Central European			0.420*	0.181	0.660*	0.192	0.575*	0.201
Jewish			0.931*	0.233	0.951*	0.256	0.717*	0.272
Age							0.045*	0.012
Age squared/1000							-0.185	0.125
Family structure at age 16								
Father & stepmother							-0.293	0.291
Mother & stepfather							-0.258	0.214
Father only							0.156	0.252
Mother only							-0.154	0.164
Male relative							-0.065	0.664
Female relative							-0.568	0.499
Male & female relatives							-0.715*	0.336
Other							0.371	0.711
Siblings							-0.040*	0.015
Father's occupation								
Business related							0.053	0.131
Clerical & retail							-0.215	0.213
Skilled blue collar							-0.269*	0.135
Semiskilled blue collar							-0.348*	0.154
Unskilled blue collar							-0.243	0.193
Farm							-0.458*	0.178
Highest degree								
High school diploma							-0.092	0.120
Junior college degree							-0.384	0.206
Four-year college degree							0.032	0.140
Advanced degree							-0.036	0.156

Table 2 (continued)

Variable Name	Model 1 1974-96 (n = 8,174)		Model 2 1974-96 (n = 8,174)		Model 2 1977-96 (n = 6,383)		Model 3 1977-96 (n = 6,383)	
	β	Standard Error						
Region								
New England							0.204	0.189
Midwest (Eastern)							0.088	0.138
Midwest (Western)							0.130	0.175
South Atlantic							0.298*	0.140
South Central (Eastern)							0.524*	0.177
South Central (Western)							0.511*	0.158
Mountain							0.421*	0.183
Pacific							0.606*	0.135
City size								
12 largest SMSAs, central city							-0.209	0.182
SMSAs 13-100, central city							-0.156	0.149
12 largest SMSAs, suburb							-0.170	0.147
SMSAs 13-100, suburb							-0.336*	0.141
Urban, not in 100 largest SMSAs							-0.343*	0.121
Generation								
Son of immigrant							-0.192	0.199
Grandson of immigrant							-0.500*	0.183
Grandson of native							-0.441*	0.181
Immigrant*Father employee							-0.521	0.308
Constant	-1.321	0.214	-1.312	0.215	-1.454	0.236	-2.430	0.504
-2 initial log likelihood	6.851		6.851		5.488		5.488	
-2 log likelihood	6.659		6.593		5.256		5.087	
(residual degrees of freedom)	(8,137)		(8,132)		(6,346)		(6,308)	
Pseudo R ²	0.028		0.038		0.042		0.073	

Note: Each equation is estimated with time effects. The initial log likelihood includes the time effects.

* Significant at the 0.05 level (two-tailed test).

a likelihood ratio test strongly rejects the null hypothesis of no ancestry differences in pick-up rates ($L^2 = 193$ with 16 degrees of freedom).

Our inspection of Figure 1 suggests that African-Americans, Latinos, and Eastern Europeans whose fathers were not self-employment have lower self-employment than other groups, while Jewish men and men from Southern or Central Europe have higher self-employment rates than others. We add dichotomous variables for these five groups to the model, thus relaxing the preliminary model's assumption that individuals with wage-earning (or absent) fathers have the same self-employment probabilities regardless of ancestry group. Doing so improves the fit significantly ($L^2 = 66$ with 5 degrees of freedom). The estimates of the relevant parameters under this augmented model—Model 2—and their standard errors are shown in the third and fourth columns of Table 2.

As noted earlier, ancestry groups differ in a number of ways that may be correlated with self-employment. Age, father's occupation, features of the subject's family of origin (for example, the number of siblings and the presence or absence of one or both biological parents), education, region, city size, and immigration experience are correlated with both ancestry and self-employment. Therefore, while the parameter estimates in the augmented model are suggestive, they may be biased. Model 3 in Table 2 controls for all of these potentially confounding covariates. Missing data on the covariates reduce the number of cases available for analysis by almost 2,000 (immigration status was not asked until 1977), so to reassure ourselves that the deleted observations do not contain unique information, we reestimate Model 2 using the smaller sample. As indicated in the fifth column of Table 2, the only change that would lead to a difference in the expected self-employment rate of as much as five percentage points is the change of 0.6 for "Americans"—the second smallest group.¹⁷

We enter most of the covariates as simple additive effects with one exception: an interaction between the immigration variable and father's self-employment status. This allows for the possibility that the impact of the father's self-employment experience may differ when the experience took place abroad.

The covariates improve the fit of the model, as shown by the likelihood ratio statistic ($L^2 = 169$ with 38 degrees of freedom). However, the coefficients of the fuller model suggest that the ancestry effects estimated from the simpler Model 2 are not, for the most part, affected by the exclusion of several significant factors. Eyeballing the estimated β_k 's from the two models reveals no differences large enough to be substantively interesting. Somewhat more systematically, we note that the range of the estimated β_k 's from Model 3 is 90 percent as great as the range of the estimated β_k 's from Model 2. Thus, while the exclusion of covariates does not affect the rank order of ancestry groups much, it does lead to an overstatement of the variation among groups.

An alternative modeling strategy would begin with a full set of dichotomous variables for ancestry and then augment the equation with interaction effects as needed. Adding the 11 main effects that would be part of such a specification to Model 2 results in a likelihood ratio test statistic of just 5.75 with 11 degrees of freedom; the corresponding calculation for Model 3 results in a likelihood ratio test statistic of

17. This is the β -hat with the largest standard error.

5.32 with 11 degrees of freedom. Thus parsimony favors our model over this alternative one.¹⁸

C. Interpretation

Father's self-employment is a major factor affecting who becomes self-employed. Previous research has shown a strong intergenerational continuity in self-employment (for example, Blau and Duncan 1967). To this we have added evidence that the gap between the offspring of self-employment fathers and employee fathers varies considerably among major ancestry groups. Indeed we have shown that, with some exceptions (notably Jewish and African-Americans), ethnic variation in the pick-up rate accounts for ethnic differences in overall self-employment because the self-employment of men whose fathers were employees or absent varies little across ancestry groups.

Self-employment is lowest among African-Americans, Latinos, and Asians. These three ancestry groups have very low levels of self-employment among the sons of employees and absent fathers—far below the average for whites—and exceptionally low pick-up rates. On the other hand, intergenerational persistence is high enough among men of Scottish, Polish, Russian, and Jewish ancestries that we might think in terms of family traditions.

Our results reveal the triple disadvantage of Latino and African-American men with respect to the pursuit of self-employment: (1) The men from these two groups are less likely to have fathers who were self-employed, putting them at an initial disadvantage. (2) Among men whose fathers were not self-employed, men from these groups are the least likely to become self-employed (on their own as it were). (3) Among men whose fathers were self-employed, blacks and Latinos are significantly less likely to follow their father into self-employment. This third factor is particularly telling. The self-employment rate among African-Americans and Latinos whose fathers were self-employed is below that of the average man from a European ancestry whose father was not self-employed.

Immigrants are another group of people who are of special interest. So far, our focus has been on the pick-up rates for native sons (and immigrants who came to the United States before their sixteenth birthday). The results for Model 3 (Table 2) indicate that a father's self-employment in a foreign country has no effect on the likelihood of his son being self-employed. The coefficient for the interaction between immigrating after age 16 and father's self-employment is almost exactly as large as the main effect of father's self-employment but opposite in sign, thereby canceling out the main effect. Immigration weakens the link between fathers' and sons' self-employment probabilities, so it is hard to ascribe the difference in ethnic self-employment rates that we observe to "tradition." With respect to the main effects of immigration, we find that immigrants and the sons of immigrants are more likely than third- and fourth-generation Americans to be self-employed.

18. Of course, approaching the model-building process in this way would not result in a model that looks exactly like Models 2 and 3. Entering the main effects of ancestry and then selectively adding interaction effects may lead some researchers to choose a model that has more main effects and fewer effects for the interaction between father's self-employment and ancestry than we have in Models 2 and 3. The advantage of our specification is that it allows us to focus on differences in pick-up rates across ancestry groups.

We have focused on the interaction of ancestry, father's self-employment, and a person's own self-employment, but Model 3 also contains results concerning several covariates that are also of interest. Father's occupational category significantly affects the likelihood of self-employment for his son. Men from clerical, retail, and manual origins have significantly lower self-employment rates than do men whose fathers held professional, business, and farm occupations. Family composition has little net effect on self-employment. Men who grew up in households that contained neither parent are less likely to be self-employed than other men, but origins in mother-headed households of various types do not impede the pursuit of self-employment when compared with two-parent and father-headed households. Family size, on the other hand, is significant; men from large families are 14 percent less likely than only children to be self-employed.

D. Alternative Specifications

Immigration is the only variable in Model 3 that interacts with father's self-employment. Other demographic factors might also condition the pick-up rate. For example, it might be reasonable to expect that one of the advantages of having a self-employed father includes the possibility of entering self-employment at a younger age. While Model 3 implies that the sons of self-employed fathers are more likely than other men to be self-employed at each age, the advantage may well be bigger at younger ages than later in the life cycle. However, the data show no evidence of such a "quick start" effect—interaction terms for age and age squared with father's self-employment result in a likelihood ratio test of 2.31 with 2 degrees of freedom, which is only significant at the 0.32 level. Thus, we cannot reject the hypothesis that the life-cycle pattern of self-employment is the same for the sons of self-employed and other fathers.

Marriage is a major decision in any man's life. It is likely to have far-reaching effects on other choices, including the decision to seek employment or to start one's own business. Fully aware of this, we nonetheless left marital status out of the canonical specification because the decision to become self-employed may be made jointly with the decision about marriage; we cannot treat marital status as exogenous with any confidence. Still it seemed worthwhile to see what would happen if we added marital status to Model 3. We found that single men have the lowest self-employment rates, all else being equal. Men who are now married or have been in the past, regardless of their current marital status, are significantly more likely than never-married men to pursue self-employment (the likelihood ratio test is 4.49 with 4 degrees of freedom for all marital status contrasts; 4.39 with 1 degree of freedom for the contrast between never married and all other marital statuses).

In the same spirit, we checked to see whether the presence of children affects the propensity to choose self-employment. Fathers are not more likely to be self-employed than other men. The number of children entered in several functional forms, and a dichotomous distinction between fathers and other men yielded no significant results.

Finally, we address the role of language skills in self-employment. Some have argued that immigrants fall back on self-employment because their lack of facility with English reduces their value as employees. Fairlie and Meyer (1996) investigated

this issue by including in their model a dichotomous variable indicating whether or not the individual reported that he had a problem speaking English; they found that men with a language problem are less likely than other men to be self-employed. A potential criticism of this surprising result is the way that the CPS collects language data—it asks respondents to report for themselves. The GSS provides a more objective measure—a ten-word vocabulary test.¹⁹ With this better test, we unfortunately neither replicate Fairlie and Meyer's result nor reverse it. Added to our model (which already includes educational credentials), score on the vocabulary test has no effect on self-employment.

IV. More on the Impact of Race

We have shown that African-Americans come from circumstances that diminish all black men's self-employment prospects. Researchers since Glazer and Moynihan in the early 1960s have speculated as to whether those disadvantages account for the deficit in blacks' self-employment. We find that they do so only to a modest extent. The prevalence of family disruption and fathers' low rates of self-employment hold down self-employment for today's African-American men. However, adjusting for the effects of these additional factors accounts for at most 15 percent of the gap between African-American men and whites of a variety of ancestries. Our most important observation concerns the self-employment of the sons of self-employed African-Americans: they are less likely to be self-employed than the average American man of European ancestry whose father was not self-employed.

Psychological factors, particularly attitudes toward risk, are often cited to explain individual differences in the pursuit of self-employment. Although a careful examination of such theories is beyond the scope of this paper, they do not seem to be a promising way to explain differences in self-employment between African-Americans and other groups. Ethnographic evidence points to the widespread use of risky entrepreneurial strategies by African-American high-school students who are motivated to escape the poverty of their parents' and grandparents' circumstances (Sánchez-Jankowski 1999).

Lack of access to capital also affects individuals but fails to account for group differences. It is well documented that an increase in an individual's wealth raises the probability that he or she will become self-employed, *ceteris paribus* (for example, Evans and Jovanovic 1989 and Holtz-Eakin, Joulfaian, and Rosen 1994). As African-Americans have less wealth, on average, than whites do, this accounts for some of the gap in their self-employment rates. Nevertheless, the racial gap between wealth levels is not large enough to explain the differences in self-employment rates (Meyer 1990). In short, neither risk preferences nor opportunity sets seem to provide a complete explanation for racial differences in self-employment.

19. The test was part of the GSS in 1978, 1982, 1984, and 1987–96. Beginning in 1988 only two-thirds of respondents were given the test.

V. Conclusion

The primary family factor affecting an individual's self-employment is the self-employment status of his or her father. Ancestry and immigration also affect self-employment. Furthermore, they can alter the link between one generation's self-employment and next generation's. These results confirm with direct observations the conjectures of several recent studies of self-employment and extend the range of variables that have been considered. However, even after taking into account a rich set of variables relating to family background, we cannot fully "explain" differences in self-employment rates among ancestry groups. In particular the unexplained difference between African-Americans and most other Americans is large. The residual differences among ancestry groups are a puzzle that continues to challenge both sociology and economics.

Appendix

Table A1

Countries or Parts of the World Cited by Persons in Each Ancestry Group

<i>Irish</i>	<i>French</i>	<i>Italian</i>
Ireland	France	Italy
<i>Scottish</i>	Quebec/French Canada	<i>Southern/Central European</i>
Scotland	<i>Latino</i> ^b	Greece
<i>English/Welsh</i>	Mexico	Spain
England and Wales	Puerto Rico	Portugal
<i>Dutch/Belgium</i>	“Other Spanish-speaking”	Czechoslovakia
The Netherlands	“American”	Hungary
Belgium	“America”	Bulgaria
<i>Scandinavian</i>	Canada (except Quebec)	Romania
Denmark	<i>Native American</i>	Yugoslavia (and constituents)
Norway	American Indian	“Other European”
Sweden	Specific tribe	<i>Polish/Russian</i>
Finland	<i>Jewish</i> ^c	Poland
<i>German</i>	Any country	Russia
Germany	<i>African-American</i> ^d	Soviet Union
Austria	Any country	Estonia
Switzerland	<i>Not Elsewhere Classified</i>	Lithuania
Japan	Arabic nation	<i>East Asian</i> ^a
Philippines	Africa	China
“Other East Asian”	India	
	“Other”	

Note: Country of origin is the only country listed for roughly half of respondents. The remainder listed more than one but chose one as the country they felt “closest to,” or we chose the first country listed, except where noted.

^a Respondents who chose at least one of these countries first, second, or third were coded as “East Asian.”

^b Respondents who chose at least one of these countries first, second, or third were coded as “Latino” regardless of the other countries listed. Of the 557 Latino cases, 358 listed Mexico first or “closest” and 98 listed Puerto Rico first or “closest.” The other 101 made other choices (including Spain).

^c Persons who said that they were raised Jewish or were Jewish at age 16 were coded “Jewish” regardless of the country of ancestral origin. Of the 255 Jewish cases, 115 listed Russia first or “closest” and 41 listed Poland as first or “closest.”

^d Persons coded “black” on the race item were coded “African-American” regardless of country of ancestral origin. Of the 1,312 African-American cases, 943 listed Africa first or “closest,” 150 listed “America” first or “closest,” 78 listed West Indies as first or “closest,” and 72 listed “American Indian or Native American” first or “closest.”

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