The Absence of the African-American Owned Business:
An Analysis of the Dynamics of Self-Employment

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Abstract

Estimates from the Panel Study of Income Dynamics (PSID) indicate that African-American men are one-third as likely to be self-employed as white men. The large discrepancy is due to a black transition rate into self-employment that is approximately one half the white rate and a black transition rate out of self-employment that is twice the white rate. Using a new variation of the Blinder-Oaxaca decomposition technique, I find that racial differences in asset levels and probabilities of having self-employed fathers explain a large part of the black/white gap in the entry rate, but almost none of the gap in the exit rate.

I. Introduction

The difference between the percent of African-Americans and whites who are self-employed in the United States is striking. Approximately, 11.6 percent of white workers are self-employed, whereas only 3.8 percent of black workers are self-employed (U.S. Bureau of the Census 1993). The 3 to 1 ratio in the self-employment rate holds for both men and women and, for men, has remained roughly constant over the past 80 years (Fairlie and Meyer 1997). Apparently, Booker T. Washington's plea to black Americans near the turn of the century that "every member of the race should strive to be successful in business, however humble that business might be" has not been realized (Washington 1907, p. 270).

The relative absence of African-American owned businesses in the United States is a major concern among policymakers.[1] The growing tensions between Koreans and African-Americans in cities, such as Los Angeles, Chicago and New York, are inextricably linked to the relative success of Koreans and the failure of blacks to establish and maintain businesses in many communities of these cities.[2] In addition, Lieberson and Silverman (1971) provide evidence suggesting that racial business patterns contributed to past ghetto riots in the United States. Another reason for concern among policymakers is that business ownership is viewed as

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1. Self-employment as defined in this study is similar to the definition of business ownership used in the Census Bureau's Survey of Minority-Owned Business Enterprises. The two main differences are that self-employment as defined here includes all incorporated business owners and excludes small or "casual" businesses owned by wage/salary workers. See U.S. Bureau of the Census (1996) and Bates (1990a).

2. See In-Jin Yoon (1991) for a description of the causes and character of the racial tensions between Koreans and African-Americans in Chicago.

a potential source of economic advancement for disadvantaged groups.[3] Currently, there exist a

number of government programs aimed at promoting minority business ownership.[4]

The potential benefits from promoting African-American self-employment are numerous.

However, the first step in addressing this issue, identifying the causes of the low black self-

employment rate in the U.S., has been taken in only a few studies. In this paper, I contribute to

this scant literature by examining racial patterns in transitions between self-employment and

wage/salary work among prime-age men.[5] Past research on self-employment typically analyzes

either the determinants of who becomes self-employed or the determinants of who exits from

self-employment. Furthermore, these studies generally do not focus on racial patterns in these

processes.

Using 22 years of data from the Panel Study of Income Dynamics (PSID), I examine the

causes of racial differences in both the transition rate into self-employment and the transition rate

out of self-employment. The causes of racial differences in these two transition rates ultimately

create the large disparity between the black and white self-employment rates. One natural place

to search for explanations is in differences between blacks and whites in characteristics that are

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3.Glazer and Moynihan (1970, p. 36) argue that "business is in America the most effective form of social mobility for those who meet prejudice."

4.See Balkin (1989) for a description of many of the programs promoting self-employment among low-income people. Also, see Guy, Doolittle, and Fink (1991) for a description of a program linked to AFDC, and see Benus, et al. (1992) for a program linked to Unemployment Insurance.

5.I do not include women in this analysis because several important questions were not asked of married women during the first eight years of the PSID.

important determinants of self-employment transitions. Previous research, both theoretical and empirical, suggests a few characteristics that may important. Specifically, I examine the extent to which racial differences in education, asset levels, parental financial resources, and parental self-employment contribute to the black/white gap in the entry rate, exit rate, and self-employment rate.[6]

To answer these questions, I estimate logit regressions for both types of transitions using separate samples of black and white men. The estimates from these regressions allow me to identify important racial differences in the processes of entry into and exit from self-employment. I also use the estimated coefficients from these regressions along with the black and white samples to decompose the racial gaps in both types of transition rates into two parts. These are the part due to racial differences in the transition process and the part due to racial differences in the distribution of characteristics affecting the transition decision. I use a novel procedure to calculate the contribution of specific variables to the racial gaps because of the nonlinearity of the equation predicting transition probabilities.

Estimates from the PSID indicate that the black self-employment rate is slightly less than one third the white rate. The discrepancy is created by a black transition rate into self-employment that is approximately one half the white rate and a black transition rate out of self-employment that is more than twice the white rate. Lower levels of assets and lower

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6.These factors are not intended to represent a comprehensive list of the potential causes of the low black self-employment rate. Other potentially important causes, such as consumer discrimination, lending discrimination, and lack of access to co-ethnic resources, cannot be analyzed using data from the PSID and are beyond the scope of this paper.

probabilities of having a self-employed father contribute to the lower average probability of entering self-employment for black men than white men. Through their effect on the entry rate, these factors also contribute to the current underrepresentation of blacks in self-employment. Racial differences in these and other variables, however, do not appear to explain a substantial amount of the black/white gap in the exit rate.

II. Past Research

The literature on self-employment has grown fairly rapidly in the last few years. Currently, there exist a number of theoretical and empirical studies that examine the potential determinants of self-employment.[7] In this section, I summarize the major results and findings from these studies. I later use these results to create the self-employment transition equations that are discussed in Section IV.

There are several theoretical models of self-employment in the economics literature. Each of these models emphasizes a different aspect of the individual's choice between self-employment and wage/salary work. Lucas (1978) assumes that there exists a distribution of managerial talent across individuals in the work force. Those who become entrepreneurs are the ones with the most managerial ability. Kihlstrom and Laffont (1979) model the entrepreneurial decision as one in which an individual's aversion to risk plays a prominent role. The decision to become an entrepreneur is based on a comparison of the risky return of self-employment to the less risky return of wage/salary work. Evans and Jovanovic (1989) create a static model of the

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7.See Aronson (1991) for a review.

individual's decision to enter self-employment or remain in wage/salary work. The individual

chooses the work sector that provides the highest expected net income.[8] In addition, they assume

that the individual faces a potentially binding liquidity constraint in which the level of capital

that he/she can invest in the new business is less than or equal to a proportion of his/her initial

level of assets. Finally, Jovanovic (1982) creates a dynamic model of firm growth and survival.

In this model, firms learn about their efficiency over time. Firms discovering that they are

efficient survive and expand output, while firms discovering that they are not efficient fail.

There also exist a number of empirical studies of self-employment. Many of these

studies estimate equations of the self-employment decision that are based on the theoretical

models presented above. Blau (1987) identifies changes in tax laws and technology as two major

causes of the rise in non-agricultural self-employment over the 1970's. Borjas (1986), Borjas

and Bronars (1989), Evans and Leighton (1989), Meyer (1990), and Fairlie and Meyer (1996,

1997) use U.S. microdata, while Rees and Shah (1986) and Blanchflower and Oswald (1990) use

British microdata to identify the characteristics of individuals who are self-employed in a cross

section. These studies generally find that the self-employed are more likely to be male, of white

race, older, more educated, married, have children, and have higher levels of assets than

wage/salary workers.

8.Wage/salary income is a function of education, past wage/salary work experience, and asset levels, and self-employment income is a function of entrepreneurial ability, the level of invested capital, and asset levels.

Several studies, including Fuchs (1982), Evans and Jovanovic (1989), Evans and Leighton (1989), Meyer (1990), Holtz-Eakin, Joulfaian, and Rosen (1994a), and Dunn and Holtz-Eakin (1996) examine the characteristics of individuals who switch into self-employment from wage/salary work over a fixed period of time. A major advantage of analyzing transitions into self-employment is that the independent variables are measured prior to the time of the decision. This is an important issue when estimating the effect of potentially endogenous variables, such as asset levels, on the transition probability.[9] The studies that examine the effect of assets find that they are significant and positive in determining who transits into self-employment.[10] One exception is Meyer (1990) who finds that assets play only a small role in predicting who becomes self-employed.

Theoretically, we might expect that there is a strong intergenerational link in self-employment due the transmission of informal business or managerial experience, the inheritance of family businesses, and/or the correlation among family members in preferences for entrepreneurial activities. Past empirical research supports this conjecture. Lentz and Laband (1990) find that 53 percent of a sample of self-employed proprietors from the National Federation of Independent Businesses had self-employed parents. Dunn and Holtz-Eakin (1996)

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9. In a cross-sectional study, discovering a correlation between assets and self-employment may simply represent the ability of self-employed workers to accumulate more assets than wage/salary workers through operating and owning their own businesses.

10. Blanchflower and Oswald (1990) use cross-sectional data and find that young workers who have received inheritances are more likely to be self-employed. They assume that their measure of assets is exogenous because of the unanticipated nature of inheritances. Holtz-Eakin, Joulfaian, and Rosen (1994a) also use inheritances as their measure of assets.

examine the effect of parental self-employment and asset levels on the probability of a transition into self-employment. They find a strong positive effect for parental self-employment, but only a weak positive effect for parental wealth. Parental wealth is included in the transition equation because it potentially improves the individual's access to start-up capital.

A few studies exist that analyze the characteristics of individuals who leave self-employment. Bates (1990), Meyer (1990), and Holtz-Eakin, Joulfaian, and Rosen (1994a) identify the causes of transitions out of self-employment. In general, the findings from these studies suggest that more educated business owners are less likely to fail over a specified period of time. The findings for the effects of other variables on the probability of a transition out of self-employment are mixed. Meyer (1990) finds that net worth has an insignificant effect on determining who leaves self-employment among individuals who recently became self-employed. Bates (1990) discovers that firms with large amounts of financial start-up capital have higher probabilities of surviving. Finally, Holtz-Eakin, Joulfaian, and Rosen (1994a) find that self-employed individuals who receive inheritances over a four-year period are more likely to remain self-employed than comparable individuals who do not receive inheritances over this period.

In addition to these studies of the determinants of self-employment, a few studies exist that specifically examine the causes of racial patterns in self-employment. Using microdata from the 1980 Census, Borjas and Bronars (1989) provide evidence that the large observed variance in self-employment rates across racial groups (Asians, blacks, Hispanics, and whites) is partly due to consumer discrimination. In contrast, Meyer (1990) does not find evidence supporting the consumer discrimination hypothesis. Using data from the 1987 Characteristics of Business

Owners (CBO), he finds that black businesses are relatively more common in industries in which white customers more frequently patronize black businesses.

A few studies examine the role that racial differences in personal characteristics, such as education and asset levels, play in explaining racial patterns in self-employment.[11] Using data from the 1990 Census, Fairlie and Meyer (1996) find that controlling for group differences in age, education, year of immigration, and other demographic variables reduces only a small portion of the large gap between black ethnic groups and the U.S. rate. Bates (1989) estimates that black, nonminority, and Asian male-owned businesses have failure rates between 1982 and 1986 of 29.6 percent, 26.0 percent and 21.7 percent, respectively.[12] He argues that these racial patterns in failure rates are partly due to the fact that Asian owners tend to be more educated, whereas black owners have less education.

Meyer (1990) examines whether low black asset levels explain much of the racial gap in self-employment. Using the 1984 Wave of Survey of Income and Program Participation (SIPP), he finds that net worth is insubstantial in explaining transitions into self-employment from wage/salary work. Therefore, he argues that differences in net worth between blacks and whites cannot explain a considerable part of the difference in self-employment rates between the two

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11.Older studies such as Frazier (1957) point to the absence of the African-American tradition in the field of business enterprise as a main cause of the lack of self-employment among this group.

12.It is likely that the difference between the failure rate of black-owned businesses and white-owned businesses is understated. This is because Bates excludes smaller and older firms. If blacks are overrepresented in smaller firms and underrepresented in older firms then the failure rate of all black-owned businesses is higher than his reported estimates.

groups. In comparison, Bates (1989) finds that racial differences in levels of financial capital partly explain racial patterns in business failure rates and Fairlie and Meyer (1996) find that ethnic/racial groups with higher levels of unearned income have higher levels of self-employment.

The theoretical and empirical studies reviewed in this section identify several variables that are potentially important in the individual's decision between self-employment and wage/salary work. Large racial differences in many of these variables including education, asset levels, parental financial resources and parental self-employment may contribute to the black/white differences in the entry, exit, and self-employment rates. Furthermore, the findings from the literature suggest that the explanatory power of racial differences in some of these variables may differ markedly by the type of transition.

The other main causes of racial differences in transition rates are differences between blacks and whites in the entry and exit processes. Factors such as lending and consumer discrimination against blacks decrease the return to working in self-employment relative to the return in wage/salary work.[13] In addition, labor market discrimination against blacks alters the returns to wage/salary work relative to self-employment.[14] These factors cannot be measured

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13.Another factor that may decrease the relative returns to self-employment for blacks is crowding out due to immigration. Although self-employment rates are high among immigrants, Fairlie and Meyer (1998) do not find evidence of a large negative effect of immigration on the probability of self-employment among blacks.

14.Light (1972) argues that labor market discrimination pushes minorities into self-employment. However, Coate and Tennyson (1993) argue that labor market discrimination can reduce the incentive for minorities to enter self-employment

directly, but suggest that other variables such as assets and personal characteristics may have different effects on the probability of a transition into or out of self-employment for blacks and whites.[15] The contributions from racial differences in measurable characteristics and racial differences in the transition processes to the black/white gaps in the transition rate into and out of self-employment are analyzed in Section IV.

III. Data

This paper uses 22 years of data on male heads of family units from the 1968 through 1989 waves of the Panel Study of Income Dynamics (PSID). I include respondents from both the Survey of Economic Opportunity (SEO) and the Survey Research Center (SRC) subsamples.[16] The SEO subsample contains a disproportionate number of blacks because of its inclusion of low-income households. The total sample is representative of the U.S. population when sample weights provided by the PSID are used.

Self-employed workers are defined as individuals who identify themselves as being self-employed only or as working for both someone else and self. Wage/salary workers are defined

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15.For example, the relationship between assets and the probability of entering self-employment for blacks is likely to be different than for whites if blacks face lending discrimination. The existence of lending discrimination, however, does not necessarily imply that the effect of assets is stronger for blacks. This is because there are two forces at work. First, blacks have a higher probability of facing a liquidity constraint because of lending discrimination. This increases the strength of the relationship between assets and the probability of choosing self-employment for blacks relative to whites. However, because blacks face lending discrimination, small increases in their asset levels cannot be utilized to borrow substantially more money for start-up capital. This effect decreases the strength of the relationship between asset levels and the probability of choosing self-employment for blacks relative to whites.

16.See Hill (1992) for a more detailed description of the PSID.

as those individuals who identify themselves as working for someone else only.[17] I remove all

workers who do not report working at least 1 week last year and at least 1 hour on average per

week last year. In addition, workers who have an agricultural occupation or who are not between

the ages of 16 to 54 are removed from the sample for the year in question. Older workers are

excluded from the analysis to avoid the potential problem of counting self-employment

transitions that are actually partial retirement decisions. The restrictions stated above create a

sample of 6417 employed men who have an average of 8.2 years of data.

IV. Results

Racial Self-Employment Patterns

17.I check many of the results reported below classifying those working for both someone else and self as
wage/salary workers.

There exist large differences between black and white self-employment rates, transition rates into self-employment, and transition rates out of self-employment in the United States. Table 1 reports estimates of self-employment rates and one-year transition rates by race from the PSID. Only observations in which individuals are classified as workers (self-employed or wage/salary) in both years of a consecutive two-year period are included in the sample. Therefore, transitions into self-employment from other work statuses and transitions out of self-employment to other work statuses are removed from the sample.[18] The self-employment rate is defined as the number of self-employed workers divided by the total number of self-employed and wage/salary workers. The estimates reported in this table suggest that black men have a substantially lower self-employment rate than white men. The white self-employment rate is 15.23 percent, whereas the black self-employment rate is only 4.61 percent: a ratio of more than 3 to 1. Estimates of black and black male self-employment rates using Census data are slightly lower, but imply a similar black/white ratio.[19]

The self-employment rate at a given point in time is created by two dynamic processes: entry into and exit from self-employment. Therefore, racial differences in the transition rates

18. This is the standard approach taken in the self-employment literature and effectively separates the work sector decision from the work decision. Furthermore, the bulk of transitions into or out of self-employment are from or to wage/salary work. Estimates from the PSID indicate that 84.4 percent of black men and 88.9 percent of white men who enter self-employment are from wage/salary work and 79.3 percent of black men and 88.3 percent of white men who exit from self-employment switch into wage/salary work.

19. Using data from the 1980 Census, Fairlie and Meyer (1996) report rates of 3.5 and 11.1 percent for black and white men, respectively. Estimates from the PSID are higher mainly because only heads of family units are included in the PSID sample. Therefore, the PSID sample excludes many younger men who are likely to have low probabilities of being self-employed.

into and out of self-employment are the underlying causes of the large black/white gap in the

self-employment rate. Estimates from the PSID indicate that transition rates differ substantially

by race. Black men enter self-employment from wage/salary work at a much lower rate than

white men (2.02 percent compared to 3.95 percent). In addition, black men exit from self-

employment at a much higher rate than white men (36.64 percent compared to 18.51 percent).[20]

The estimates indicate that blacks are approximately one half as likely to enter self-employment

as whites and are twice as likely to exit from self-employment.[21] By assuming a steady state

equilibrium in which entry and exit rates are constant over time, it is easy to show that these

racial differences in transition rates contribute equally to creating the self-employment rate gap.[22]

Therefore, factors that contribute to the racial difference in either of the transition rates

ultimately create the black/white gap in the self-employment rate.

Racial Differences in the Entry Decision

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20. The one-year transition rates for white men are similar to estimates reported in Evans and Leighton (1989). They estimate entry rates of 4.0 and 2.5 percent and exit rates of 13.8 and 21.6 percent using data from the NLS and CPS, respectively.

21. The black/white ratios in the self-employment rate, entry rate and exit rate are similar when classifying those working for both someone else and self as wage/salary workers.

22. In steady state, the predicted self-employment rate is equal to $E_j / (E_j + X_j)$, where E_j is the entry rate and X_j is the exit rate for race j. For both races, I find that the substitution of either E_g or X_g, where g_j, results in approximately the same change in the predicted self-employment rate.

To identify the determinants of entry into and exit from self-employment, I estimate several logit regressions for the probability of a work sector transition. Specifically, I estimate separate regressions for each race and each type of transition. The coefficient estimates from these logit regressions are used to determine whether there are racial differences in the processes generating self-employment transitions and to calculate the contribution of racial differences in individual characteristics to the racial gaps in the transition rates.

The logit regressions estimated in this section represent reduced forms of the self-employment transition decision functions. The dependent variable is equal to one if the individual makes a transition from wage/salary work (self-employment) to self-employment (wage/salary work) and is equal to zero otherwise. The theoretical models reviewed above suggest a number of independent variables to include in the logit regressions.[23] These include measures of the individual's managerial or entrepreneurial ability, risk aversion, education, and asset levels (if the individual faces a liquidity constraint). Past empirical studies indicate that measures of parental self-employment and wealth should also be included. In addition to these variables, a large number of demographic controls commonly used in the literature are included in the regressions (see Appendix A.1 for a complete list). Some of these variables may serve as proxies for unmeasurable variables such as entrepreneurial ability and/or risk aversion.

23.These variables are measured prior to the point in time when the work sector decision is made. This approach follows previous studies of self-employment transitions and removes the problem of endogeneity for many variables.

I first present the findings for estimating the probability of a transition from wage/salary work into self-employment (reported in Table 2).[24] Specifications 1 and 2 are estimated with the black and white samples, respectively. Mean values of all included variables are listed in Appendix A.1. I focus on the results for the variables of interest to this analysis.[25] Education enters the regressions in the form of three dummy variables indicating each of the main levels of educational attainment (the left-out category is attended high school). For whites, graduating from college relative to dropping out of high school increases the probability of entry, whereas it decreases the probability for blacks. In comparison, college graduation increases the probability relative to high school graduation for both races. Overall, the size of the coefficient estimates and the their statistical insignificance suggests that the relationship between education and entry into self-employment is weak for both races.

In the absence of a measure of parental wealth, I include the education level of the individual's father as a crude proxy. The relationship between father's education and the transition probability appears to be somewhat stronger than the relationship for the individual's education level. The coefficients suggest that the probability of entry into self-employment increases with each level of father's education, although they are imprecisely measured. This result is consistent with the finding in Dunn and Holtz-Eakin (1996) of a positive effect of parental wealth on the transition probability.

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24. Coefficient estimates are similar when classifying those working for both someone else and self as wage/salary workers.

25. The coefficient estimates for other variables generally have expected signs.

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Whether an individual had a self-employed father while growing up is important in determining who is likely to switch into self-employment. The coefficients on the dummy variable indicating whether the individual's father was self-employed are large and statistically significant for both races. Having a self-employed father increases the sample transition probability by 0.0275 for blacks and 0.0199 for whites.[26] The finding of a large effect for both races is similar to that of Lentz and Laband (1990) and Dunn and Holtz-Eakin (1996). Although the increases in probability are large for both races, the percentage increase for blacks (126 percent) is substantially larger than for whites (51 percent). The intergenerational link in self-employment appears to be stronger for blacks than for whites.

The role of assets in the self-employment decision has taken center stage in the literature, however, racial differences in the effect of assets have not been studied extensively. I include two different measures of assets in the logit regressions determining transition probabilities. Interest income is defined as total income from dividends, interest, trust funds, royalties and rent, and lump sum cash payments is defined as the average amount of cash received from insurance settlements and inheritances over the past two years. Both variables enter the regressions in a quadratic form.[27] Assets have a positive effect on the transition probability for both races, however, the size of the effect differs notably by race. The coefficient on interest income in the

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26. The effect of a one unit increase in each independent variable (average derivative) on the transition probability can be calculated by multiplying its coefficient by the adjustment factor reported at the bottom of Table 2. The adjustment factor is equal to the sample average of $e^{X\beta} / (1 + e^{X\beta})^2$.

27. The theoretical model posited by Evans and Jovanovic (1989) implicitly assumes that the probability of a transition into self-employment is a concave function of asset levels.

black regression is much larger than the coefficient in the white regression. An increase of $1,000 in interest income for blacks (mean = $193) increases the average transition probability by 0.0122. (All amounts reported in this paper are in 1988 dollars). The same increase for whites (mean = $845) increases the average transition probability by 0.0018.[28] In addition, the coefficient estimates imply that a $1000 increase in cash payments increases the transition probability by 0.0037 for blacks and 0.0012 for whites (evaluated at mean values).[29]

The positive coefficients reported above provide evidence that both black and white men face liquidity constraints (Evans and Leighton 1989). In addition, the relationship between assets and entry into self-employment appears to be much stronger for blacks than for whites. As mentioned in Section III, this racial difference may be due to lending discrimination against blacks.

The coefficient estimates reported in Table 2 identify a number of characteristics that are important in the process generating transitions into self-employment. In addition, the comparisons between the black and white coefficients indicate that there are both similarities and dissimilarities between the two processes. A likelihood ratio test rejects the null hypothesis that the two specifications are the same providing some evidence that racial differences in the overall entry process exist. These racial differences may account for part of the gap in the transition rate

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28.The elasticity evaluated at the average is approximately three times larger for blacks than for whites.

29.There remains the possibility that interest income is partly endogenous in the transition equation due to personal saving in preparation for entry into self-employment. However, cash payments should not suffer from this problem as they are typically unanticipated.

into self-employment. The remaining part of the gap is due to racial differences in the distributions of variables important to the entry decision.

Estimates from the PSID indicate that black and white men have different distributions of many of the variables included in the logit regressions reported in Table 2 (see Appendix A.1). The variables with the most striking racial differences are graduating from college, having a self-employed father, and the two included measures of assets. The percent of blacks who graduated from college is roughly one-third the percent of whites. In addition, blacks are one-sixth as likely to have a self-employed father when they were growing up. Finally, black asset levels are slightly less than 25 percent of white asset levels. In the following section, I estimate the contribution of these differences to the racial gap in the transition rate into self-employment.

Decomposing the Racial Gap in the Transition Rate into Self-Employment

The large gap between the black and the white transition rate into self-employment reported in Table 1 can be decomposed into two parts. One part of the black/white gap is due to racial differences in the distributions of individual characteristics, and the other part is due to racial differences in the processes generating transitions into self-employment. Racial differences in the processes include both racial differences in the importance of certain variables in determining transition probabilities and the racial difference that is unexplained because of the inability to include unmeasurable variables. In this section, I use a novel procedure to decompose the racial gap into these two parts because of the nonlinearity of the equation that predicts the probability of a transition into self-employment.

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For a linear regression, the standard Blinder-Oaxaca decomposition of the black/white gap in the average value of the dependent variable, Y, can be expressed as:

$$\bar{Y}^W - \bar{Y}^B = \left[(\bar{X}^W - \bar{X}^B) \beta^B \right] + \left[\bar{X}^W (\beta^W - \beta^B) \right],$$

(5.1)

where $\bar{X}^j$ is a row vector of average values of the independent variables and β is a vector of coefficient estimates for race j.[30] For a nonlinear equation, such as $Y = F(X\beta)$, the decomposition can be written as:

$$\bar{Y}^W - \bar{Y}^B = \left[\sum_{i=1}^{N^W} \frac{F(X_i^W \beta^B)}{N^W} - \sum_{i=1}^{N^B} \frac{F(X_i^B \beta^B)}{N^B} \right] + \left[\sum_{i=1}^{N^W} \frac{F(X_i^W \beta^W)}{N^W} - \sum_{i=1}^{N^W} \frac{F(X_i^W \beta^B)}{N^W} \right],$$

(5.2)

where N^j is the sample size for race j. This alternative expression for the decomposition is used because $\bar{Y}$ does not necessarily equal $F(\bar{X}\beta)$. In both (5.1) and (5.2), the first term in brackets represents the part of the racial gap that is due to group differences in distributions of X, and the second term represents the part due to differences in the group processes determining levels of Y. To calculate the decomposition, I substitute the average probability of a transition into self-employment for $\bar{Y}$, the logistic function for F, and the coefficient estimates reported in Table 2 for β.[31]

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30. The racial gap can also be written as: $\bar{Y}^W - \bar{Y}^B = (\bar{X}^W - \bar{X}^B)\beta^W + \bar{X}^B(\beta^W - \beta^B)$. These two methods of calculating the decomposition are equally valid and typically provide different estimates of the contribution of each component to the racial gap.

31. A useful property of the logit regression that includes a constant term, is that the average of the predicted probabilities must equal the proportion of ones in the sample. In contrast, the predicted probability evaluated at the means of the independent variables is not necessarily equal to the proportion of ones, and in the sample used here it is likely to be smaller because the logit function is convex for values less than 0.5.

The first term in (5.2) provides an estimate of the contribution of racial differences in the entire set of independent variables to the racial gap. An additional calculation, however, is needed to identify the contribution of racial differences in specific variables to the gap.[32] For example, assume that X includes two variables, X_1 and X_2.[33] I can then express the independent contribution of X_1 to the racial gap as:

$$\frac{1}{N^B} \sum_{i=1}^{N^B} F(X_{1i}^W \beta_1^B + X_{2i}^B \beta_2^B) - F(X_{1i}^B \beta_1^B + X_{2i}^B \beta_2^B),$$

(5.3)

Similarly, the contribution of X_2 can be expressed as:

$$\frac{1}{N^B} \sum_{i=1}^{N^B} F(X_{1i}^W \beta_1^B + X_{2i}^W \beta_2^B) - F(X_{1i}^W \beta_1^B + X_{2i}^B \beta_2^B).$$

(5.4)

The contribution of each variable to the gap is thus equal to the change in the average predicted probability from replacing the black distribution with the white distribution of that variable while holding the distribution of the other variable constant.[34] The calculation of (5.3) and (5.4), however, is not possible without first matching the white distribution of X_1 and the black distribution of X_2.

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32. I present the process for the racial decomposition that uses coefficients estimated with the black sample. The process for the racial decomposition using the white coefficients is similar.

33. The calculation of the independent contributions is similar when there are more than two variables in X.

34. Unlike in the linear case, the independent contributions of X_1 and X_2 depend on the value of the other variable. This implies that the choice of a variable as X_1 or X_2 (or the order of switching the distributions) is potentially important in calculating its contribution to the racial gap.

One possible procedure for matching these distributions is as follows. First, I estimate a logit regression using the black sample. Using these coefficient estimates, I then calculate predicted probabilities for all observations in the black sample and all observations in a random subsample of whites with a sample size equal to N_B. I rank each member of the two samples by the value of this predicted probability and match them by their respective ranks. This procedure assigns low transition probability blacks the same characteristics as low transition probability whites.

The decomposition estimates obtained from this procedure depend on the randomly chosen subsample of whites. Therefore, to obtain estimates that use the entire white sample, I draw a large number of random white subsamples with replacement. I then calculate the mean value of estimates from all of these samples. In the decompositions reported below, I use 1000 random subsamples of whites to calculate these means.

Table 3 reports estimates from this procedure for decomposing the black/white gap in the transition rate into self-employment. The black coefficients from Table 2 are used in Specification 1 and the white coefficients are used in Specification 2. Row 6 of Specification 1 provides an estimate of the reduction in the black/white transition rate gap resulting from giving blacks the same distribution of all included variables as whites. The contribution estimate indicates that racial differences in all included variables account for nearly 30 percent of the gap. The estimate of the total contribution using the white coefficients is smaller (14.2 percent). This estimate represents the reduction in the racial gap caused by giving whites the black distributions of all variables.

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Table 3 also reports estimates of the contributions of racial differences in specific subsets of variables to the transition rate gap.[35] The negative estimates reported in Row 1 indicate that racial differences in the controls (all independent variables not listed in other rows of the table) actually reduce the black/white gap in the transition rate. The controls include year dummies and variables that have a small effect on the transition probability or have small racial differences in distributions.

The large difference between blacks and whites in education levels explains only a small part of the gap in Specification 2 and virtually none of the gap in Specification 1. The lack of explanatory power is mainly due to the weak relationship between education and the entry probability. In contrast, the notable disparity between black and white asset levels explains a substantial portion of the gap. Differences in asset levels explain 15.2 percent of the gap in Specification 1 and 13.9 percent in Specification 2. In contrast to the finding in Meyer (1990), these results suggest that racial differences in asset levels play an important role in explaining the racial gap in the entry rate.

The two measures of the characteristics of the individual's father provide different results. Racial differences in the distribution of the education level of the individual's father do not explain much of the gap, whereas racial differences in the probability of having a self-employed father explain a large portion of the gap. This is especially true if the coefficients from the black regression are used to perform the racial decomposition. The positive contribution estimates for

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35.The estimates of contributions of specific subsets of variables to the gap do not appear to be overly sensitive to their ordering in the procedure of switching black and white distributions.

this variable suggest that the lack of self-employment among previous generations of blacks is partly responsible for the low entry rate among the current generation of blacks. This finding is consistent with the lack of traditions in business ownership argument (see Frazier 1959).

The results from the decompositions indicate that estimates of the contributions from racial differences in specific variables are somewhat sensitive to the use of black or white coefficients. This is inevitable as the processes determining transitions into self-employment differ by race. Oaxaca and Ransom (1994) suggest an alternative set of coefficients to use in the decompositions. These are the coefficients estimated from a pooled sample of blacks and whites. As a sensitivity check, I perform the decompositions using these coefficients and find contribution estimates that are very similar to those reported in Specification 2.

The results from this section demonstrate that differences in the distributions of characteristics between blacks and whites explain part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. The remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks, and/or the omission of important unmeasurable factors such as risk aversion.

Racial Differences in the Exit Decision

I now analyze the determinants of the probability of a transition out of self-employment. Several logit regressions are estimated in which the dependent variable is equal to 1 if the

individual switches into wage/salary work from self-employment or equal to 0 if the individual

remains in self-employment. I report the estimates for these regressions in Table 4.[36] In general,

comparisons between the black and white coefficient estimates are difficult to make because

many of the black coefficients are imprecisely measured.

The relationship between education and the exit probability is not monotonic for either

race. Graduating from college decreases the transition probability relative to not finishing high

school for both races. However, graduating from high school increases the probability relative to

not finishing high school for blacks, and graduating from college increases the probability

relative to graduating from high school for whites. Overall, the results indicate a weak negative

relationship. This result is somewhat consistent with past studies of self-employment which find

that more educated business owners are less likely to leave self-employment. Father's education

appears to be negatively correlated with the exit probability for whites. Among blacks the

relationship is less clear.

Having a self-employed father decreases the average probability of a transition by 0.0535

for whites. In comparison, the black coefficient is large and positive suggesting that blacks with

self-employed fathers are more likely to exit from self-employment, all else equal. Interestingly,

these findings are different than the findings for the entry regressions. In those regressions, the

effects of having a self-employed father on the transition probability were the same sign, with the

effect being much larger for blacks. These results suggest that the intergenerational link in self-

---

36.The coefficient estimates when classifying those working for both someone else and self as
wage/salary workers are similar for whites, but differ somewhat for blacks.

employment is important for entry into self-employment among blacks, but not for exit from self-employment. However, some caution is warranted as this result is based on an imprecisely measured coefficient estimate in the black regression.

There exist important racial differences in the effect of assets on the exit decision. First, the effect of interest income on the probability of a transition is much stronger in the black regression than the white regression. An increase of $1,000 in interest income for blacks (mean = $520) decreases the average transition probability from 0.3595 to 0.3221. The same increase for whites (mean = $3,778) decreases the average probability of a transition from 0.1803 to 0.1765. The negative effect of interest income on the exit probability for both races is consistent with the finding in Bates (1990). Second, cash payments have a negative effect on the transition probability for blacks, but have a positive effect for whites. The result for whites is surprising and differs from previous findings of a negative relationship between receiving inheritances and leaving self-employment (see Holtz-Eakin, Joulfaian, and Rosen 1994b).

Similar to the results for the entry regressions, I find important similarities and dissimilarities between the black and white processes determining exits from self-employment. Using a likelihood ratio test, I reject the null hypothesis that the black and white logit regressions are the same suggesting that racial differences in the processes contribute to the gap in the transition rate out of self-employment. The large racial differences in characteristics for this sample, however, may also contribute to the gap (see Appendix A.2).

Decomposing the Racial Gap in the Transition Rate out of Self-Employment

In this section, I perform a decomposition of the black/white gap in the transition rate out of self-employment. I use the same procedure described above to identify the contribution of several subsets of variables to the racial gap. The results for this decomposition are reported in Table 5. Using the white coefficients, 26.1 percent of the gap is explained by racial differences in all of the included variables. Controlling for racial differences actually widens the gap when the black coefficients are used.

Racial differences in education explain a small part of the gap in both specifications. The racial difference in education levels and the weak negative relationship between education and the exit probability are responsible for these findings. The estimates reported in Row 3 indicate that racial differences in asset levels explain a large part of the gap in Specification 1, but only a small part in Specification 2. The combination of the importance of assets in the black exit regression and the large racial difference in asset levels explains the result in Specification 1. The contribution estimate using the white coefficients is smaller because of the partly offsetting effects of the negative effect of interest income and the positive effect of cash payments in Specification 2 of Table 4. Interestingly, racial differences in asset levels explain much less of the exit rate gap than the entry rate gap. This is mainly due to the stronger effect of assets on the probability of transitions into self-employment. Apparently, low black levels of assets restrict entry into self-employment among blacks relative to whites, but do not substantially increase the probability of blacks leaving self-employment relative to whites. Overall, the findings for racial differences in education and assets are weakly consistent with those in Bates (1989).

Racial differences in the education level of the individual's father provide a negative contribution to the gap in Specification 1 and a very small positive contribution in Specification

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2. The findings for the contributions of racial differences in the probability of having a self-employed father are very similar. In contrast to the result reported in Table 4, the large racial difference in parental self-employment does not explain a significant portion of the gap in the transition rate out of self-employment. The low probability of having a self-employed father may hurt blacks in the entry process, but not necessarily in the exit process.

The results reported in Table 5 indicate that the decomposition estimates are sensitive to the coefficients used. Part of the discrepancy is due to actual differences between blacks and whites in the processes generating transitions out of self-employment, however, another part is simply due to the imprecision of many of the coefficient estimates in the black regressions. Unfortunately there is no solution to this problem. The black sample sizes in these regressions are small because of the low overall black self-employment rate. As a sensitivity check, however, I calculate the decompositions using coefficients from a pooled sample of blacks and whites. The contribution estimates from this decomposition are very similar to those from the decomposition using the white coefficients.

The results presented in Table 5 suggest that racial differences in the distributions of all included variables explain part of the gap in the transition rate out of self-employment in Specification 2, but actually reduce the gap in Specification 1. In contrast to their effect on the racial gap in the entry rate, racial differences in assets and father's self-employment status do not provide large contributions to the exit rate gap. Again, the part of the gap due to racial differences in the coefficients is large.

Decomposing the Racial Gap in the Self-Employment Rate

Using estimates of the contributions of racial differences in specific variables to the racial gaps in the entry and exit rates, I estimate the contribution of these variables to the self-employment rate gap. Assuming a steady state equilibrium, I calculate the predicted black/white self-employment rate gap and estimate the contributions of racial differences in variables to this gap. These results are reported in Table 6.

Racial differences in all of the variables included in the transition regressions explain 6.7 percent of the gap using the black coefficients and 31.5 percent of the gap using the white coefficients. The small contribution estimate using the black coefficients is mainly due to the negative contribution reported in Row 6 of Table 5. The magnitudes of individual contributions of variables to the self-employment rate gap reported in Table 6 generally reflect the magnitudes of their average contributions to the gaps in the transition rate into self-employment and the transition rate out of self-employment.

Racial differences in education levels explain part of the black/white self-employment rate gap in Specification 2 due to their positive contributions to the racial gaps in both the entry rate and the exit rate. In both specifications, racial differences in asset levels explain an important part of the gap. This is mainly due to the large contribution of asset levels to the racial gap in the transition rate into self-employment. The positive, but small effect for education and the positive and large effect for assets is consistent with cross sectional findings in Fairlie and Meyer (1996). Racial differences in the probability of having a self-employed father make a small contribution to the racial gap in the self-employment rate primarily through their contribution to the gap in the entry rate.

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V. Conclusion

African-American men are one-third as likely to be self-employed as white men in the United States. Estimates from the PSID indicate that this large discrepancy is due to a black transition rate into self-employment that is approximately one half the white rate and a black transition rate out of self-employment that is twice the white rate. A better understanding of the causes of racial differences in both types of transition rates is needed to design or modify existing policies that promote minority business ownership.

Estimates from the PSID also indicate that there exist considerable differences between black and white men in levels of education, levels of assets and probabilities of having a self-employed father. Using a new variation of the Blinder-Oaxaca decomposition technique, I find that racial differences in the distributions of these variables and other measurable demographic and personal characteristics explain part of the black/white gap in the transition rate into self-employment. Specifically, lower levels of assets and lower probabilities of having a self-employed father provide important contributions to the lower average probability of entering self-employment for black men than white men. Through their effect on the entry rate, racial differences in these variables also explain part of the racial gap in the self-employment rate. Racial differences in these variables and others, however, do not appear to contribute substantially to the gap in the transition rate out of self-employment.

Past research finds that blacks have substantially lower levels of wealth than whites in the United States (see Blau and Graham 1990 for example). The results of this study support this conclusion and demonstrate that racial differences in asset levels provide an important contribution to the black/white gap in the entry rate into self-employment. This finding suggests

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that increasing funding for programs intended to assist potential minority business owners in acquiring start-up capital may reduce the racial disparity in self-employment.[37] The amount of this reduction given realistic changes in the funding for these programs, however, is likely to be small. The estimate presented here imply that quadrupling current black asset levels would result in only a 15 percent reduction in the racial gap in the entry rate. The policy implications of the findings for racial differences in parental self-employment are less obvious. Certainly, they imply that improvements in self-employment among the current generation of blacks will result in increases in self-employment among future generations of African-Americans.

37.See Bates (1981) for an assessment of the Small Business Administration's efforts to promote minority business development through loan and procurement programs.

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```
                                Table 1
               Self-Employment and One-Year Transition Rates by Race
                            PSID (1968 to 1989)


                                                    White/Black
                             Black        White      Difference
         ---------------------------------------------------------------------
         Self-Employment Rate     4.61%       15.23%       10.62%
                                 (0.39)       (0.22)       (0.45)
                                 14,781       37,613


         Transition Rate into     2.02%        3.95%        1.93%
            Self-Employment      (0.27)       (0.13)       (0.30)
                                 14,093       32,365


         Transition Rate out of  36.64%       18.51%      -18.13%
            Self-Employment      (3.99)       (0.66)       (4.04)
                                    688        5,248
         ---------------------------------------------------------------------
```

Notes: (1) The sample consists of male non-agricultural workers (ages 16 to 54)
who are heads of family units. (2) All rates are calculated using sample
weights provided by the PSID. (3) The self-employment rate is the percentage
of all those working who are self-employed. (4) The transition rate into (out of)
self-employment is the percentage of wage/salary workers (self-employed) who switch
into self-employment (wage/salary work). (5) Standard errors and sample sizes are
reported below estimates.

```
                                Table 2
             Logit Equations for Transitions into Self-Employment by Race
                            PSID (1968 to 1989)

                                            Specification

                                    (1)                      (2)
                   ------------------------------------------------------------------
Race                                Black                    White

Graduated from                    -0.36825                 -0.04813
high school                       (0.25469)                (0.12845)

Attended college                  -0.07532                 -0.02516
                                  (0.25120)                (0.12144)

Graduated from                    -0.11386                  0.10997
college                           (0.37509)                (0.13537)

Age                                0.25617                  0.10166
                                  (0.07680)                (0.03982)

Age squared / 100                 -0.31151                 -0.14262
                                  (0.10217)                (0.05407)

Number of                          0.02677                 -0.01015
children                          (0.04848)                (0.03140)

Disability                         0.03579                  0.08088
                                  (0.29109)                (0.14237)

Currently                         -0.77629                 -0.16050
married                           (0.30743)                (0.15796)

Previously                        -0.69683                 -0.07069
married                           (0.38367)                (0.20427)

Military                          -0.04310                 -0.16459
veteran                           (0.18621)                (0.09287)

Years in current                  -0.06768                 -0.04886
position                          (0.02078)                (0.01203)

Years in current                   0.00095                  0.00095
position squared                  (0.00044)                (0.00038)

Father graduated                   0.08358                  0.04339
from high school                  (0.23446)                (0.09770)

Father attended or                 0.61311                  0.19146
grad. from college                (0.46113)                (0.14958)

Father self-employed               1.30284                  0.53340
                                  (0.49826)                (0.16171)

Interest income / 1000             0.60413                  0.04845
                                  (0.17482)                (0.01140)

Interest income / 1000            -0.06140                 -0.00028
squared                           (0.02563)                (0.00012)

Cash payments                      0.18353                  0.03330
received / 1000                   (0.20018)                (0.01721)

Cash payments                     -0.03081                 -0.00043
received / 1000 squared           (0.02924)                (0.00048)

Sample transition                  0.0219                   0.0392
rate

Average derivative                 0.0211                   0.0374
adjustment factor

Sample size                        9,868                    26,113

Log likelihood                    -989.68                  -4226.55
                   ------------------------------------------------------------------
Notes:  (1) The sample consists of male non-agricultural workers (ages 16 to
65) who are heads of family units.  (2) The dependent variable is equal to 1
```

if the individual switches from wage/salary work to self-employment.
(3) Standard errors are in parentheses below coefficient estimates and
are corrected for the posibility of including multiple observations per
individual. (4) All equations include a constant, the county unemployment
rate, and year, region and urban dummies. (5) All asset and income variables
are in 1988 dollars. (6) Cash payments received include inheritances and
insurance settlements (2-year average). (7) Interest income includes income
from dividends, interest, trust funds, royalties, and rent. (8) The average
derivative is equal to the adjustment factor multiplied by the coefficient.

```
                                    Table 3
        Decomposition of Difference between White and Black Transition Rates into Self-Employment
                              PSID (1968 to 1989)


                                                        Specification

                                                   (1)              (2)
--------------------------------------------------------------------------------
Sample used to estimate coefficients and transition rates    Black           White

Transition rate (gap = 0.0201)                     0.0193           0.0394

Contribution to the gap from racial differences
  in the following variables:

  1) Controls                                     -0.0010          -0.0034
                                                   -5.0%            -17.1%

  2) Education level                               0.0001           0.0012
                                                    0.5%             5.8%

  3) Asset levels                                  0.0031           0.0028
                                                   15.2%            13.9%

  4) Father's education level                      0.0010           0.0008
                                                    4.8%             4.2%

  5) Father's self-employment status              0.0027           0.0015
                                                   13.6%             7.5%

  6) All variables                                 0.0058           0.0029
                                                   29.1%            14.2%
--------------------------------------------------------------------------------
Notes:  (1) The sample consists of male non-agricultural workers (ages 16 to 65) who are heads
of family units.  (2) Contribution estimates are mean values of the decomposition using 1000
random subsamples of whites. (3) Sample weights provided by the PSID are used in all calculations.
(4) Controls include all variables included in the logit regressions, but not listed separately in
this table.
```

```
                               Table 4
           Logit Equations for Transitions out of Self-Employment by Race
                           PSID (1968 to 1989)

                                  Specification

                          (1)                    (2)
                 ---------------------------------------------------------------
Race                      Black                  White

Graduated from            0.42618                -0.31333
high school              (0.34773)               (0.17145)

Attended college          0.24667                -0.24089
                         (0.35752)               (0.15792)

Graduated from           -0.26775                -0.18047
college                  (0.48120)               (0.16867)

Age                      -0.06767                -0.27597
                         (0.15561)               (0.05982)

Age squared / 100         0.01886                 0.30990
                         (0.20352)               (0.07865)

Number of                -0.17669                 0.01016
children                 (0.09224)               (0.04435)

Disability                0.69356                -0.08149
                         (0.43138)               (0.19257)

Currently                 0.94082                -0.20091
married                  (0.50648)               (0.23275)

Previously                0.26442                -0.01290
married                  (0.61293)               (0.28794)

Military                 -0.38333                 0.24983
veteran                  (0.33394)               (0.12140)

Years in current         -0.00260                -0.06472
position                 (0.05211)               (0.01642)

Years in current         -0.00050                 0.00093
position squared         (0.00209)               (0.00055)

Father graduated          0.66572                -0.12459
from high school         (0.36578)               (0.12621)

Father attended or       -0.35684                -0.27281
grad. from college       (0.53647)               (0.18973)

Father self-employed      0.86983                -0.39247
                         (0.91054)               (0.18897)

Interest income / 1000   -0.20180                -0.02853
                         (0.13268)               (0.01119)

Interest income / 1000    0.00740                 0.00007
squared                  (0.00744)               (0.00004)

Cash payments            -0.31618                 0.02538
received / 1000          (0.31887)               (0.01475)

Cash payments             0.02006                -0.00022
received / 1000 squared. (0.03194)               (0.00019)

Sample transition         0.3595                  0.1803
rate
```

Average derivative adjustment factor	0.1928	0.1363
Sample size	484	4,447
Log likelihood	-274.51	-1932.89

Notes: (1) The sample consists of male non-agricultural workers (ages 16 to 65) who are heads of family units. (2) The dependent variable is equal to 1 if the individual switches from self-employment to wage/salary work. (3) Standard errors are in parentheses below coefficient estimates and are corrected for the possibility of including multiple observations per individual. (4) All equations include a constant, the county unemployment rate, and year, region and urban dummies. (5) All asset and income variables are in 1988 dollars. (6) Cash payments received include inheritances and insurance settlements (2-year average. (7) Interest income includes income from dividends, interest, trust funds, royalties, and rent. (8) The average derivative is equal to the adjustment factor multiplied by the coefficient.

```
                                  Table 5
    Decomposition of Difference between Black and White Transition Rates out of Self-Employment
                             PSID (1968 to 1989)


                                                         Specification

                                                      (1)              (2)
----------------------------------------------------------------------------------
Sample used to estimate coefficients and transition rates   Black         White

Transition rate (gap = 0.1583)                        0.3317           0.1734

Contribution to the gap from racial differences
  in the following variables:

  1) Controls                                        -0.0151           0.0196
                                                      -9.5%             12.4%

  2) Education level                                  0.0036           0.0087
                                                       2.3%             5.5%

  3) Asset levels                                     0.0176           0.0028
                                                      11.1%             1.8%

  4) Father's education level                        -0.0262           0.0057
                                                     -16.5%             3.6%

  5) Father's self-employment status                 -0.0117           0.0046
                                                      -7.4%             2.9%

  6) All variables                                   -0.0317           0.0414
                                                     -20.1%            26.1%
----------------------------------------------------------------------------------
Notes:  (1) The sample consists of male non-agricultural workers (ages 16 to 65) who are heads
of family units.  (2) Contributions estimates are mean values of the decomposition using 1000
random subsamples of whites. (3) Sample weights provided by the PSID are used in all calculations.
(4) Controls include all variables used in the logit regressions, but not listed in this table.
```

```
                                   Table 6
       Decomposition of Difference between White and Black Predicted Self-Employment Rates
                              PSID (1968 to 1989)


                                                           Specification

                                                        (1)              (2)
--------------------------------------------------------------------------------------
Sample used to estimate coefficients and transition rates   Black            White

Predicted self-employment rate (gap = 0.1302)           0.0551           0.1853

Contribution to the gap from racial differences
  in the following variables:

  1) Controls                                           -0.0054          0.0039
                                                         -4.2%            3.0%

  2) Education level                                     0.0009          0.0107
                                                          0.7%            8.2%

  3) Asset levels                                        0.0117          0.0117
                                                          9.0%            9.0%

  4) Father's education level                           -0.0028          0.0067
                                                         -2.2%            5.1%

  5) Father's self-employment status                     0.0045          0.0081
                                                          3.5%            6.2%

  6) All Variables                                       0.0088          0.0410
                                                          6.7%           31.5%
--------------------------------------------------------------------------------------
Notes:  (1) The sample consists of male non-agricultural workers (ages 16 to 65) who are heads of
family units.  (2) The predicted self-employment rate is equal to E/(E+X), where E is the transition
rate into self-employment and X is the transition rate out of self-employment.  (3) Contribution
estimates are mean values of the decomposition using 1000 random subsamples of whites.
(4) Sample weights provided by the PSID are used in all calculations.  (5) Controls include all
variables used in the logit regressions, but not listed in this table.
```

Appendix A.1
Means of Analysis Variables in Samples Used to Estimate
Logit Equations for Transitions into Self-Employment

		Black Men				White Men		
Variable	N	Weighted Mean	Sample Mean	Standard Deviation	N	Weighted Mean	Sample Mean	Standard Deviation
Transition into self-empl.	14093	0.020	0.022	0.147	32365	0.040	0.039	0.195
Graduated from high school	13958	0.292	0.269	0.443	32140	0.202	0.219	0.413
Attended college	13958	0.287	0.269	0.443	32140	0.355	0.356	0.479
Graduated from college	13958	0.081	0.056	0.229	32140	0.246	0.225	0.418
Age	14093	35.106	33.401	8.886	32365	35.523	34.211	9.025
Number of children	14093	1.385	1.759	1.788	32365	1.345	1.364	1.365
Disability	13566	0.078	0.063	0.243	31214	0.076	0.072	0.258
Currently married	14093	0.721	0.805	0.396	32364	0.838	0.879	0.326
Previously married	14093	0.121	0.086	0.281	32364	0.069	0.051	0.220
SMSA	14047	0.761	0.728	0.445	32148	0.643	0.630	0.483
North East	14090	0.152	0.074	0.261	32357	0.229	0.203	0.402
North Central	14090	0.217	0.143	0.351	32357	0.311	0.292	0.455
South	14090	0.561	0.708	0.455	32357	0.276	0.315	0.464
Military veteran	13792	0.313	0.301	0.459	31959	0.411	0.392	0.488
County unemployment rate	14093	6.390	6.392	2.604	32365	6.270	6.274	2.789
Years in current position	13486	6.359	5.385	6.005	31151	5.835	5.275	6.158
Father / H.S. graduate	12499	0.199	0.160	0.366	31229	0.320	0.347	0.476
Father / college	12499	0.034	0.026	0.159	31229	0.093	0.094	0.292
Father / self-employed	14071	0.008	0.010	0.098	32339	0.050	0.049	0.215
Interest income / 1000	14091	0.193	0.109	0.797	32297	0.845	0.753	3.250
Cash payments / 1000	11391	0.155	0.129	0.953	27686	0.630	0.598	3.355

Notes: (1) The sample consists of non-agricultural workers (ages 16 to 65) who are heads of family units.

Appendix A.2
Means of Analysis Variables in Samples Used to Estimate
Logit Equations for Transitions out of Self-Employment

		Black Men				White Men		
Variable	N	Weighted Mean	Sample Mean	Standard Deviation	N	Weighted Mean	Sample Mean	Standard Deviation
Transition out of self-empl.	688	0.366	0.368	0.483	5248	0.185	0.193	0.395
Graduated from high school	688	0.147	0.145	0.353	5239	0.176	0.183	0.387
Attended college	688	0.245	0.283	0.451	5239	0.345	0.337	0.473
Graduated from college	688	0.242	0.097	0.297	5239	0.329	0.310	0.463
Age	688	38.797	37.996	8.912	5248	38.591	37.300	8.208
Number of children	688	2.024	1.879	1.821	5248	1.536	1.504	1.335
Disability	659	0.103	0.085	0.279	5073	0.075	0.075	0.264
Currently married	688	0.813	0.834	0.372	5248	0.875	0.906	0.292
Previously married	688	0.112	0.094	0.293	5248	0.071	0.050	0.219
SMSA	688	0.755	0.725	0.447	5232	0.630	0.599	0.490
North East	688	0.209	0.060	0.237	5247	0.263	0.232	0.422
North Central	688	0.150	0.119	0.324	5247	0.253	0.251	0.434
South	688	0.579	0.747	0.435	5247	0.276	0.315	0.465
Military veteran	665	0.350	0.367	0.482	5198	0.408	0.387	0.487
County unemployment rate	688	6.330	6.379	2.559	5248	6.250	6.307	2.798
Years in current position	652	5.669	6.531	6.946	5051	7.807	7.049	7.182
Father / H.S. graduate	624	0.119	0.144	0.352	5107	0.332	0.348	0.476
Father / college	624	0.244	0.059	0.236	5107	0.105	0.128	0.334
Father / self-employed	685	0.013	0.016	0.126	5242	0.121	0.103	0.303
Interest income / 1000	687	0.520	0.586	2.553	5223	3.778	3.239	12.046
Cash payments / 1000	569	0.144	0.176	0.881	4665	1.012	1.363	13.809

Notes: (1) The sample consists of non-agricultural workers (ages 16 to 65) who are heads of family units.