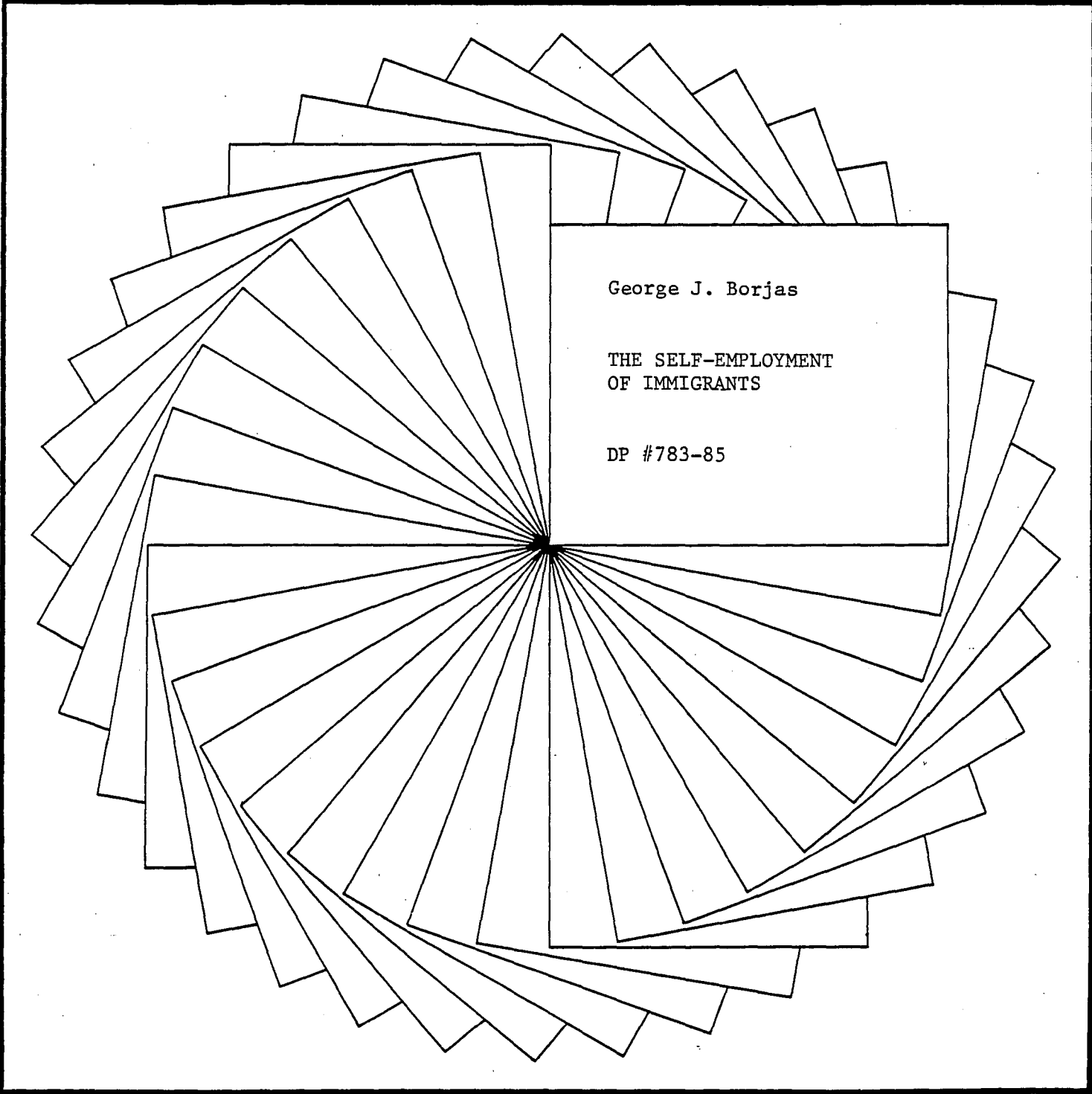# IRP Discussion Papers

George J. Borjas

THE SELF-EMPLOYMENT
OF IMMIGRANTS

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The Self-Employment of Immigrants

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ABSTRACT

Self-employment represents an important component of the immigrant experience in the U.S. labor market. Among large immigrant groups self-employment rates exceed 15 percent of the labor force. This paper begins the study of the immigrant self-employment experience by analyzing self-employment rates and incomes of 18 immigrant cohorts using the 1970 and 1980 U.S. Census. The major findings are these:

1. Assimilation has a sizable impact on self-employment probabilities: The longer the immigrant resides in the United States, the higher the probability of self-employment.

2. There has been a rapid increase in the self-employment rates experienced by recent immigrant cohorts as compared to earlier cohorts. These across-cohort changes have been caused by the relative decline of opportunities faced by immigrants in the salaried sector over the last decades.

3. Immigrants are more likely to be self-employed than similarly skilled native-born workers. A major reason for this differential is that geographic enclaves of immigrants increase self-employment opportunities, particularly for immigrants who share the same national background as the residents of the enclave.

The Self-Employment of Immigrants

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I.    Introduction

The question of how immigrants do in the labor market has been studied
intensively in the last decade.  Beginning with the work of Chiswick (1978)
this literature has demonstrated that earlier waves of immigrants have higher
earnings than more recent waves and that, in addition, the earnings of im-
migrants who have been in the U.S. for 10-15 years (or longer) exceed the
earnings of the native-born.   Recent work by Borjas (1985) questions the
validity of the inference often made from cross-section studies that im-
migrants "assimilate" rapidly in the U.S. labor market.   In fact, by fol-
lowing immigrant cohorts over a decade Borjas shows that the cross-section
studies confound secular changes in cohort quality with the assimilation
process and that most of the earnings growth captured by cross-section
regressions is due to a sizable decline in the quality of immigrants admitted
to the United States in the postwar period.

Despite the important insights provided by these studies of how im-
migrants do in the labor market, a potentially significant aspect of this
issue has been ignored.  In particular, it is not uncommon in the socio-
logical literature to assert that a major channel for immigrant assimilation
has been the ample availability of self-employment opportunities for immi-
grants (see, for example, Bonacich and Modell, 1980; Cummings, 1980; and Pyong,
1984).  These studies argue that many immigrants begin their climb up the
ladder of economic success by becoming self-employed and catering to customers
from the "old country," i.e., consumers who have similar national backgrounds

and who demand products where immigrants have a comparative advantage in the production process (due perhaps to language barriers or to the familiarity with ethnic preferences). Since all studies in the earnings determination literature discussed earlier ignore the self-employment option and/or explicitly focus on the earnings of salaried workers it is possible that these studies have provided an incomplete picture of how immigrants assimilate in the labor market.

It must be noted, however, that the disinterest in the question of self-employment among labor market participants is not restricted solely to the immigration literature. In fact, the related questions of who are the self-employed and how they do in the labor market have received only the most tangential attention in labor economics.[1] This disinterest could be justified if self-employment was a numerically unimportant component of the labor market. The summary statistics in Table 1, however, should quickly dispel this myth. This table presents the self-employment propensities and incomes observed in the 1980 Census for men aged 18-64 in each of 12 major racial/ethnic/nativity groups. Among white male labor force participants, the probability of self-employment is 11.7 percent for the native-born and rises to 16.5 percent for the foreign-born. These probabilities remain above the 10 percent level for both Asian and Cuban immigrants and fall to about 8 percent for "other" Hispanics. The self-employment probabilities are lowest, both among the native- and foreign-born, in the black and Mexican samples, where they lie in the 4-5 percent range. Table 1 also shows differentials by nativity status and ethnic groups in the annual incomes received by self-employed and salaried workers. These differences indicate that self-employed workers have higher annual incomes than salaried workers (although part of these differences may be due to returns on the physical capital owned by self-employed workers).

## TABLE 1*

### SUMMARY STATISTICS

| GROUP | Self-Employment Probability | Mean Annual Income of Salaried Workers | Mean Annual Income of Self-Employed Workers |
|---|---|---|---|
| White: Immigrant | .165 | 19594.7 | 24707.7 |
| Native-Born | .117 | 18014.2 | 23995.4 |
| Black: Immigrant | .053 | 12192.7 | 16469.9 |
| Native-Born | .037 | 12756.7 | 15036.8 |
| Asian: Immigrant | .126 | 16350.3 | 25454.5 |
| Native-Born | .121 | 17613.4 | 24149.6 |
| Mexican: Immigrant | .042 | 10158.8 | 13981.8 |
| Native-Born | .056 | 12932.2 | 17189.2 |
| Cuban: Immigrant | .156 | 14090.2 | 20670.3 |
| Native-Born | .109 | 13762.7 | 21249.1 |
| Other Hispanic: Immigrant | .080 | 12382.4 | 22598.6 |
| Native-Born | .083 | 14867.5 | 21338.9 |

*Source:   1980 U.S. Census.

The statistics in Table 1, therefore, show that self-employment is a significant activity among immigrant (and native-born) men in the labor market and that it deserves careful study. This paper provides an initial attempt at documenting the differences in self-employment propensities between the native-born and the foreign-born and at analyzing the impact of assimilation and changes in cohort quality on the self-employment experience of the immigrant population. Section II of the paper presents the framework that will guide the empirical analysis. Section III analyzes the self-employment propensities of immigrants and native-born workers using the 1970 and 1980 U.S. Censuses, while Section IV shows that the "enclave" effect is a major factor in the creation of a gap in self-employment propensities between the foreign-born and the native-born. Section V summarizes the results of the study.

## II. Framework

In deciding whether or not to become self-employed immigrant i compares the market wage he would earn as a salaried worker, $w_i$, with the expected net income from self-employment, $y_i$ . Define the index function:

$$I_i = y_i - w_i = Z_i \pi + v_i \tag{1}$$

where $Z_i$ is the vector of observable socioeconomic characteristics which affects $y_i$ and/or $w_i$ . If $I_i$ is positive the immigrant becomes self-employed and is a salaried worker otherwise. The probability of self-employment is then given by:

$$P_i = \Pr[I_i > 0] = \Pr[v_i > -Z_i \pi], \tag{2}$$

and the parameter vector $\pi$ can be estimated (up to a factor of proportionality) once the stochastic nature of the disturbance $v_i$ is specified.

Suppose the vector $Z_i$ contains a variable, $t_i$, indicating the number of years that have elapsed since the individual migrated to the U.S. The impact of this variable on self-employment propensities is difficult to assess for two reasons. First, the number of years-since-migration (like other socioeconomic characteristics) is likely to affect both the market wage rate and self-employment income. Its net impact on $I_i$, therefore, cannot be ascertained unless the relative strength of its effect on the two income variables is known. In addition, even the net impact estimated by equation (2) cannot be interpreted as a measure of the effect of assimilation on the probability of self-employment unless it is also assumed that the "quality" of immigrant cohorts (in terms of the underlying variables $w_i$ and $y_i$) has remained stationary over the last few decades. The evidence in Borjas (1985), however, has shown that the stationarity assumption is, in fact, invalid in terms of the market wage rate. In particular, the quality of immigrants admitted to the U.S. has declined in the sense that more recent immigrants have lower wage rates than earlier immigrants had at comparable stages of the assimilation experience. Thus cross-section estimates of the effect of $t_i$ on the self-employment probability confound the true assimilation impact with quality differentials among immigrant cohorts.[2]

To derive a general framework that allows the identification of these separate effects, consider the group of immigrants aged 18-54 in 1970. Using the 1970 Census, it is convenient to partition this group into four cohorts: arrivals in 1965-1969, arrivals in 1960-1964, arrivals in 1950-1959, and immigrants who arrived prior to 1950. Consider next the group of immigrants aged 28-64 in the 1980 Census. The 1980 Census data allows the partitioning

of this group of immigrants into six cohorts: arrivals in 1975-1979, arrivals in 1970-1974, arrivals in 1965-1969, arrivals in 1960-1964, arrivals in 1950-1959, and immigrants who arrived prior to 1950. Note that the last four cohorts defined in the 1980 group exactly match the definitions of the cohorts from the 1970 Census.[3] Given these data, and assuming that the disturbance $v_i$ follows a logistic distribution, two cross-section regressions can be estimated by maximum likelihood:

$$\ln\left(\frac{P_{70}}{1-P_{70}}\right) = X\gamma_{70} + \alpha_{65}D_{65} + \alpha_{60}D_{60} + \alpha_{50}D_{50} + \alpha_{40}D_{40} + \eta_{70} \tag{3}$$

$$\ln\left(\frac{P_{80}}{1-P_{80}}\right) = X\gamma_{80} + \beta_{75}D_{75} + \beta_{70}D_{70} + \beta_{65}D_{65} + \beta_{60}D_{60} + \beta_{50}D_{50}$$
$$+ \beta_{40}D_{40} + \eta_{80} \ , \tag{4}$$

where $P_t$ is the probability of self-employment in Census year $t$, $X$ is a vector of socioeconomic characteristics, and the dummy variables indexing years-since-immigration/cohort are defined by: $D_{75}=1$ if immigrated in 1975-1979; $D_{70}=1$ if immigrated in 1970-1974; $D_{65}=1$ if immigrated in 1965-1969; $D_{60}=1$ if immigrated in 1960-1964; $D_{50}=1$ if immigrated in 1950-1959; and $D_{40}=1$ if immigrated prior to 1950. By definition, the vector $X$ in (3) and (4) does not contain a constant term.

Consider cohort $k$, where $D_k=1$ ($k=40,50,60,65$). Let $\bar{X}$ give the mean values of the socioeconomic characteristics for the immigrant group as of 1980. Define:

$$\hat{P}_{70,k} = \{1+\exp[-(\bar{X}\hat{\gamma}_{70}+\hat{\alpha}_k)]\}^{-1} \ , \tag{5}$$

$$\hat{P}_{80,k} = \{1+\exp[-(\bar{X}\hat{\gamma}_{80}+\hat{\beta}_k)]\}^{-1} \ , \tag{6}$$

$$\hat{P}_{80,k+10} = \{1+\exp[-(\bar{X}\hat{\gamma}_{80}+\hat{\beta}_{k+10})]\}^{-1} \ , \tag{7}$$

Equations (5) and (6) give the predicted probability of self-employment
(evaluated at $\bar{X}$) for the representative member of cohort  k  in 1970 and 1980,
respectively.  Equation (7) gives the predicted self-employment probability
in 1980 for the cohort who arrived 10 years after cohort  k .  Note that
the comparison of cohort  k  in 1970 and cohort k+10 in 1980 holds constant
the number of years since immigration across Censuses.

Using the definitions in (5)-(7), the 1980 regression can be used to
estimate the cross-section change in the probability of self-employment over
a 10 year period (net of aging).  The cross-section change in the probability
is, of course, given by $\hat{P}_{80,k}$ - $\hat{P}_{80,k+10}$ .  Note, however, that this term
can be rewritten as:

$$\hat{P}_{80,k} - \hat{P}_{80,k+10} = (\hat{P}_{80,k} - \hat{P}_{70,k}) + (\hat{P}_{70,k} - \hat{P}_{80,k+10}) \, . \tag{8}$$

Equation (8) decomposes the cross-section change in the self-employment
probability into two parts.  The first term in (8) gives the change in
the probability experienced by cohort  k  over the 1970-1980 decade, and
will be called the "within-cohort" change in the self-employment probability.
It is worth stressing that this within-cohort change measures the true impact
of the assimilation process on self-employment propensities.  The second
term in (8) estimates the difference in $P_i$ which occurred over the decade
for immigrants with a given number of years since immigration.  Thus it
compares different cohorts at the same point of their U.S. life cycle and
will be called the "across-cohort" change in self-employment propensities.
If, for example, the quality decline experienced by immigrant cohorts has
affected mainly the level of market earnings, the "across-cohort" effect
would be negative since more recent cohorts would find self-employment more
profitable than earlier cohorts found it at comparable stages of the as-

similation experience. The existence of quality differences among immigrant cohorts, therefore, implies that the cross-section regression provides a biased measure of the impact of assimilation on self-employment propensities.

It should be noted, however, that the within-cohort change defined in equation (8) can also be a biased measure of the impact of assimilation if aggregate labor market conditions changed sufficiently between 1970 and 1980. For instance, if economic changes over the decade led to a relative decline in the earnings of salaried workers, the probability of self-employment will have experienced a secular increase during the period. This macro shift in the probability will bias upwards the within-cohort change and, due to the decomposition in (8), will impart a downward bias on the across-cohort change. One possible solution to this problem is simply to analyze the behavior of the self-employment probability of immigrants net of the changes which occurred in the native-born population. Suppose the logit equations determining self-employment propensities for the native-born are given by:

$$\ln\left(\frac{P_{70}}{1-P_{70}}\right) = X\delta_{70} + \alpha_n + u_{70} , \tag{9}$$

$$\ln\left(\frac{P_{80}}{1-P_{80}}\right) = X\delta_{80} + \beta_n + u_{80} , \tag{10}$$

where the subscript "n" indicates native-born status. Define the self-employment probability of a native-born worker statistically similar to the average immigrant by:

$$\hat{P}_{70,n} = \{1 + \exp[-(\bar{X}\hat{\delta}_{70} + \hat{\alpha}_n)]\}^{-1} . \tag{11}$$

$$\hat{P}_{80,n} = \{1 + \exp[-(\bar{X}\hat{\delta}_{80} + \hat{\beta}_n)]\}^{-1} . \tag{12}$$

The decomposition of the cross-section change in the probability of self-employment net of the secular changes occurring in the native-born population can be written as:

$$\hat{P}_{80,k} - \hat{P}_{80,k+10} = [(\hat{P}_{80,k} - \hat{P}_{70,k}) - (\hat{P}_{80,n} - \hat{P}_{70,n})]$$
$$+ [(\hat{P}_{70,k} - \hat{P}_{80,k+10}) - (\hat{P}_{70,n} - \hat{P}_{80,n})] \ . \tag{13}$$

The first bracketed term in (13) gives the difference between the within-cohort change in the self-employment probability of immigrants and the change in that probability which occurred among native-born workers. Thus it gives the change in self-employment propensities experienced by a specific immigrant cohort net of the change experienced by similar native-born workers. Likewise, the second bracketed term in (13) gives the across-cohort effect net of the economy-wide changes experienced by native-born workers during the 1970-1980 period.

III. Assimilation and Self-Employment

The data used in the analysis are drawn from the 1970 1/100 Public Use Sample from the U.S. Census (5 percent SMSA and County Group file), and the 1980 A Sample from the U.S. Census (a 5 percent random sample of the population). Due to the very large sample sizes in these data sets, random samples were drawn for some of the larger groups (e.g., white natives in both 1970 and 1980, black natives in 1980, etc.).[4]

The analysis is restricted to male persons aged 18-54 in 1970 and 28-64 in 1980. The five sample selection rules used in both Censuses are: (1) the individual is not in the Armed Forces; (2) the individual does not reside in group quarters; (3) the individual is not enrolled in school; (4) the individual worked at some point during 1969 or 1979; and (5) the

individual resides in an SMSA. This last restriction prevents the analysis from being biased by the prevalence of self-employment in the farm sector and by the relative absence of immigrants in rural areas. Since previous research has shown that major differences in economic status exist within the male immigrant (and native-born) labor force, the study will be conducted separately for each of six major immigrant groups: Mexican, Cuban, other Hispanic, Asian, white, and black, where the "white" and "black" immigrant samples contain the observations which are neither Hispanic nor Asian.[5] Finally, the definition of self-employment is drawn from the class of worker variables in the 1970 and 1980 Censuses. An individual is classified as self-employed if he is a self-employed worker (business not incorporated) or if he is an employee of his own corporation. Unpaid family workers are excluded from the analysis in this paper.

Before proceeding to the decomposition suggested by equations (8) and (13) it is useful to describe the 1980Census data in terms of a simple cross-section regression. In particular, pool the native-born and foreign-born samples in the 1980 Census and estimate the logit regression:

$$\ln \left(\frac{P_{80}}{1-P_{80}}\right) = Z_i \gamma + \varepsilon_i \qquad (14)$$

where the vector $Z_i$ includes both socioeconomic variables and the years-since-migration vector, and the native-born sample pooled with the immigrant samples is the immigrant's racial/ethnic counterpart in the native-born population. The maximum likelihood estimates of equation (14) are presented in Table 2. Although the impact of the socioeconomic variables like education and potential labor market experience are not the focus of the analysis, it

## TABLE 2

### Maximum Likelihood Logit Regressions on Probability of Self-Employment*

| | | | GROUP | | | |
|---|---|---|---|---|---|---|
| Variable** | White | Black | Asian | Mexican | Cuban | Other Hispanic |
| CONSTANT | -3.3575 (-17.51) | -4.3717 (-11.72) | -4.1438 (-31.48) | -4.6183 (-19.37) | -3.4602 (-21.54) | -4.3481 (-24.55) |
| EDUC | .0629 (7.53) | .0649 (3.72) | .0692 (12.69) | .0835 (8.76) | .0478 (7.23) | .1112 (15.93) |
| EXPER | .0353 (3.25) | .0223 (1.04) | .0520 (7.68) | .0544 (4.07) | .0468 (5.05) | .0347 (3.31) |
| EXPER$^2$ | -.0004 (-1.94) | .0000 (.00) | -.0003 (-2.61) | -.0006 (-2.45) | -.0007 (-4.14) | -.0003 (-1.59) |
| MAR | .1501 (2.08) | -.0541 (-.48) | .4519 (7.92) | .2829 (3.01) | .4311 (6.50) | .2016 (3.17) |
| HLTH | -.0208 (-.17) | .5741 (3.05) | .2902 (2.91) | .2700 (1.97) | .0232 (.22) | .1834 (1.60) |
| D40 | .4194 (3.99) | .5914 (2.22) | .2117 (2.35) | .2707 (1.73) | .5809 (3.35) | -.0294 (-.20) |
| D50 | .2706 (2.96) | .8109 (3.12) | .1794 (2.34) | .2132 (1.90) | .4544 (5.28) | .1706 (1.77) |
| D60 | .3983 (2.89) | .6985 (2.84) | .2512 (3.25) | -1306 (-.83) | .3867 (6.60) | .1829 (2.24) |
| D65 | .1980 (1.38) | -.0539 (-.22) | .0765 (1.31) | .0864 (.20) | .1107 (1.54) | .1471 (2.05) |
| D70 | .2453 (1.44) | .2785 (1.44) | .2065 (4.01) | -.3678 (-2.55) | .2211 (2.59) | -.1419 (-1.78) |
| D75 | .1111 (.70) | .0421 (.17) | -.4101 (-7.34) | -.4693 (-2.72) | -.4545 (-2.01) | -.4188 (-4.24) |

*The z-ratios are given in parentheses.
**Key to Variables: EDUC = years of completed education; EXPIR = age-Educ-6;
MAR = 1 if married, spouse present, 0 otherwise; HLTH = 1 if health limits
work, 0 otherwise.

is worth noting that the effect of these variables closely resembles their impact in traditional human capital earnings functions. Of more concern to the present study is the impact of the variables in the years-since-migration vector, where the omitted dummy variable indicates if the individual is native-born. Two important findings are evident in the table. First, self-employment probabilities are almost always larger for immigrants than for the native-born. The exceptions to this result are usually found in the samples of immigrants who have resided in the U.S. fewer than 5 years. For immigrants who have resided in this country longer than 10 years, however, Table 2 shows that, without exception, the probability of self-employment is at least as large for immigrants as it is for the native-born. A second important finding evident in Table 2 is that the probability of self-employment is not monotonically increasing with years-since-migration. For example, in the white sample the logit coefficients of the years-since-migration dummies exhibit little variance (and, in fact, are insignificantly different from each other) during the 1950-1975 period. Roughly speaking, therefore, Table 2 suggests that, in the absence of quality differences among immigrant cohorts, most of the gap in self-employment propensities between the foreign-born and the native-born is created within 5-10 years after immigration. This result differs markedly from the conclusions reached in the cross-section regression on immigrant earnings where it is found that immigrant earnings are a monotonically increasing function of years-since-migration.

However, as equations (8) and (13) make clear the cross-section regressions in Table 2 say nothing about the assimilation process since they confound the true growth attributable to assimilation with quality differences among immigrant cohorts. These decompositions are presented in Table 3 for 18 immigrant cohorts. Two important points should be made about the

derivation of the statistics in Table 3. First, the vector of socioeconomic characteristics, X , held constant in the logit self-employment regressions includes the variables: years of completed schooling; years of labor market experience (defined by Age-Schooling-6); years of labor market experience squared; whether or not health limits work; and whether or not married spouse present. Secondly, to minimize the large number of parameters to be estimated by maximum likelihood, and due to the large number of observations, the coefficients of the socioeconomic variables $(\gamma_{70}, \gamma_{80}, \delta_{70}, \delta_{80})$ are constrained so that $\gamma_{70} = \gamma_{80} = \gamma$ and $\delta_{70} = \delta_{80} = \delta$ . Thus the socioeconomic variables are allowed to have a differential impact between the native- and foreign-born samples, but this impact remained constant over the decade.[6]

The results in Table 3 are best understood by illustrating their derivation through an example. Consider the group of white men who arrived in 1965-1969. According to the 1980 cross-section regression, the probability of self-employment for these men is -.0028 percentage points lower than that of similarly skilled immigrants who arrived 10 years later.[7] Thus the cross-section regression reveals little change in self-employment propensities over time. Using equation (8), however, this quantity can be decomposed into within- and across-cohort changes in self-employment probabilities. This decomposition reveals that as of 1980 this group of immigrants actually had a self-employment probability that was 9.8 percentage points higher than in 1970. Thus the cohort experienced a significant increase in self-employment propensities. Yet, at the same time, this cohort as of 1970 had a self-employment probability that was 10.1 percentage points lower than the 1980 self-employment probability of men who arrived in 1975-1979. Thus the secular changes in the quality mix of these immigrant cohorts have led to

TABLE 3

Decomposition of Changes in the Probability of Self-Employment*

| GROUP/ Year | Cross-Section Growth | Immigrants Only | | Relative to Natives | |
|---|---|---|---|---|---|
| | | Within-Cohort | Across-Cohort | Within-Cohort | Across-Cohort |
| **White** | | | | | |
| 1965-1969 | -.0028 (-.10) | .0982 (5.78) | -.1010 (-5.55) | .0806 (6.17) | -.0834 (-4.70) |
| 1960-1964 | .0228 (.72) | .0659 (3.05) | -.0431 (-1.82) | .0483 (2.57) | -.0255 (-1.09) |
| 1950-1959 | .0002 (.04) | .0319 (2.28) | -.0317 (-.95) | .0143 (.85) | -.0141 (-.23) |
| **Black** | | | | | |
| 1965-1969 | -.0028 (-.20) | .0130 (.64) | -.0158 (-.75) | .0179 (.72) | -.0207 (-.44) |
| 1960-1964 | .0281 (1.50) | .0245 (.58) | .0036 (.11) | .0294 (.67) | -.0013 (-.09) |
| 1950-1959 | .0369 (1.89) | -.0108 (-.25) | .0477 (1.27) | .0157 (.03) | .0428 (.79) |
| **Asian** | | | | | |
| 1965-1969 | .0525 (7.95) | .1062 (4.62) | -.0537 (-3.02) | .1331 (5.64) | -.0806 (-5.75) |
| 1960-1964 | .0088 (.83) | .1219 (3.51) | -.1131 (-3.39) | .1488 (2.21) | -.1400 (-1.76) |
| 1950-1959 | .0046 (.46) | -.0432 (-1.45) | .0478 (1.70) | -.0163 (-.62) | .0209 (1.03) |
| **Mexican** | | | | | |
| 1965-1969 | .0247 (2.66) | .0453 (2.71) | -.0206 (-1.64) | .0303 (2.65) | -.0056 (-1.35) |
| 1960-1964 | .0094 (1.09) | .0263 (1.80) | -.0169 (-.1.32) | .0113 (1.48) | -.0019 (-.87) |
| 1950-1959 | .0116 (1.40) | .0184 (1.41) | -.0068 (-.41) | .0034 (.43) | .0082 (.61) |

## TABLE 3 (Continued)

| GROUP/ Year | Cross-Section Growth | Immigrants Only | | Relative to Natives | |
|---|---|---|---|---|---|
| | | Within-Cohort | Across-Cohort | Within-Cohort | Across-Cohort |
| **Cuban** | | | | | |
| 1965-1969 | .0551 (2.34) | .1037 (4.95) | -.0486 (-2.41) | .0861 (5.05) | -.0310 (-2.14) |
| 1960-1964 | .0336 (2.48) | .1110 (5.18) | -.0774 (-3.79) | .0934 (5.39) | -.0598 (-3.63) |
| 1950-1959 | .0308 (2.43) | .0898 (2.70) | -.0590 (-1.23) | .0722 (2.38) | -.0414 (-.86) |
| **Other Hispanics** | | | | | |
| 1965-1969 | .0396 (5.13) | .0614 (3.80) | -0.218 (-1.75) | .0552 (5.34) | -.0156 (-2.22) |
| 1960-1964 | .0261 (3.19) | .0261 (1.45) | .0000 (.08) | .0199 (1.93) | .0062 (.56) |
| 1950-1959 | .0017 (.13) | .0298 (1.57) | -.0281 (-1.27) | .0236 (.21) | -.0219 (-1.51) |

*The z-ratios given in parentheses refer to the respective transformation of the logit coefficients.

an increase in self-employment propensities. In fact, the across-cohort change wipes out the within-cohort change so that in the cross-section it appears as if assimilation had no impact on the self-employment probability.

Of course, it may well be that these changes between 1970 and 1980 simply reflect economy-wide fluctuations in relative self-employment incomes. The decomposition in equation (13) controls for this problem by netting out the change in the self-employment probability achieved by the native-born group. It should be noted, however, that the choice of the native-born reference group is somewhat arbitrary since the immigrant population can be compared to a number of different racial/ethnic native-born men. In this paper, each immigrant group (except for the Cubans) is compared to its respective ethnic/racial native-born counterpart. In the Cuban case, due to the small sample size (and the even smaller number of self-employed Cuban "natives") the Cuban immigrants are compared to white native-born men.

The last two columns of Table 3 conduct the decomposition of the cross-section growth after netting out the change in the self-employment probabilities of the native-born. In the case of the 1965-1969 white immigrant cohort, the within-cohort change remains positive and significant and is approximately 8.1 percentage points. In other words, the self-employment probability of white immigrants who arrived in 1965-1969 increased 8.1 percentage points above the increased experienced by white native-born men over the 1970-1980 period. Similarly, the across-cohort change remains negative and significant even after netting out the white native-born change so that, indeed, more recent cohorts of immigrants are more likely to opt for self-employment than earlier immigrants.

The remaining rows of Table 3 replicate the analysis for all other co-
horts in the six immigrant groups. Perhaps the major finding obtained from
these results is that there are sizable differences in the within- and across-
cohort changes experienced by immigrants both within and across national groups.
In general, however, the within-cohort change in the probability of self-
employment is positive, while the across-cohort change is negative. For
instance, in the decomposition that nets out the change in $P_i$ for the native-
born, 17 out of 18 within-cohort effects are positive (and 11 of these effects
have a t-ratio exceeding unity), while 14 of the across-cohort effects are
negative (with 9 of these effects having t-ratios above 1.0 in absolute value).
These results, therefore, are consistent with the hypothesis that as immigrants
assimilate in the United States the relative gains from self-employment increase.
In addition, the results in Table 3 also show the existence of a secular shift
in the relative gains of self-employment for immigrants. In other words, more
recent immigrant cohorts perceive self-employment as a relatively better employment
alternative than earlier immigrant cohorts.


IV.  Enclaves and the Self-Employment of Immigrants

An important result in Section III was the finding that the probability
of self-employment of immigrants exceeds the probability of self-employment
of native-born men for practically all ethnic/racial groups. Although this
result can be explained in terms of the hypothesis that immigrants face
higher self-employment incomes (relative to the native-born), this explanation
does not really provide an understanding of why the nativity differences
exist. The sociological literature, however, has presented extensive anecdotal
evidence of how immigrants create enclaves by concentrating in specific
geographic areas, and of how these enclaves create and expand opportunities

for immigrants to become self-employed. These opportunities arise because immigrants from a particular national group are assumed to have a comparative advantage in serving the needs of consumers from that national group. The comparative advantage, of course, is created by informational asymmetries between the immigrants and the rest of the population, and these informational asymmetries may include such factors as better knowledge of consumer preferences and knowledge of the language spoken by the immigrant population.

This hypothesis can be easily tested by analyzing the self-employment propensities of the three Hispanic groups (i.e., Mexicans, Cubans, and other Hispanics) studied in the previous section. Since these three groups are much more homogeneous in culture and language than the three other groups analyzed earlier (namely, whites, blacks and Asians), it is likely that enclaves of Hispanics may have opened up self-employment opportunities for Hispanic immigrants. Formally, the enclave hypothesis can be tested by estimating the regression:

$$\ln(\frac{P}{1-P}) = Z\gamma + \lambda q_h + v_i \, , \tag{15}$$

where $Z_i$ is a vector of socioeconomic characteristics, and $q_h$ is the fraction of the SMSA's population that is Hispanic.[8] The enclave hypothesis implies that $\lambda$ is positive. In addition, if equation (15) is estimated separately in the foreign-born and native-born samples, and if immigrants are the main beneficiaries of the self-employment opportunities opened up by the enclave, one would expect that the impact of $q_h$ on the probability of self-employment is larger in the immigrant than in the native-born sample.

Table 4 presents the estimated impact $dp/dq_h = \beta p(1-p)$ for each of the six Hispanic groups under study, where the derivative is evaluated at the mean

## TABLE 4

### Impact of Enclave on Self-Employment Probabilities*

| GROUP | Immigrant | Native-Born | Difference |
|---|---|---|---|
| Mexican | .0869<br>(6.37) | .0344<br>(3.33) | .0525<br>(2.10) |
| Cuban | .1975<br>(5.04) | .1706<br>(1.77) | .0269<br>(1.32) |
| Other Hispanic | .0794<br>(3.64) | .0114<br>(.65) | .0680<br>(2.83) |
| White | .1751<br>(.83) | .1009<br>(.64) | .0661<br>(.38) |

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*(The "z-ratios" are given in parentheses, and refer to the corresponding logit coefficients.

self-employment probability of each group. For purposes of comparison the table also presents the impact of $q_h$ on the self-employment probability of non-Hispanic whites. Two important results are apparent. First, the coefficient $\lambda$ is indeed positive and significant in the Hispanic samples. That is, Hispanics are more likely to be self-employed in areas which have larger Hispanic populations. Moreover, note that the impact of $q_h$ in the non-Hispanic white samples is insignificantly different from zero; hence the results for Hispanics cannot be dismissed as reflecting some unknown area-specific effect. Second, the impact of $q_h$ on the self-employment probability is larger for immigrants than for the native-born, and this difference is significant in two of the three Hispanic samples. Thus the enclave is indeed an important mechanism in the creation of the gap in the self-employment propensities of the native-born and the foreign-born.[9]

## V. Summary

Self-employment represents an important component of the immigrant experience in the U.S. labor market. Its omission in earlier studies cannot be justified by the presumption that self-employed workers represent a numerically unimportant part of the immigrant labor force. In fact, among large immigrant groups self-employment rates exceed 15 percent of the labor force. This paper begins the study of the immigrant self-employment experience by analyzing the self-employment rates of 18 immigrant cohorts using the 1970 and 1980 U.S. Census. The major findings are:

1. Assimilation has a sizable impact on self-employment probabilities: The longer the immigrant resides in the United States, the higher the probability of self-employment.

2. There has been a rapid increase in the self-employment rates experienced by recent immigrant cohorts as compared to earlier cohorts. These across-cohort changes may have been caused by the relative decline of opportunities faced by immigrants in the salaried sector over the last decades.

3. Immigrants are more likely to be self-employed than similarly skilled native-born workers. A major reason for this differential is that geographic enclaves of immigrants increase self-employment opportunities particularly for immigrants who share the same national background as the residents of the enclave.

The prevalence of self-employment among immigrants (and native-born workers) in the labor market suggests that much additional work is needed in this area. The analysis in this paper makes clear that continued research of the self-employment option, and of self-employment incomes is likely to greatly enhance our understanding of the immigrant assimilation process.

Notes

[1]Recent studies by Lazear and Moore (1984) and Wolpin (1977) have been concerned with the question of why there exist smaller skill differentials among the self-employed than among salaried workers. Studies by Fuchs (1968, 1982) provide a descriptive analysis of the extent of self-employment among older workers and in the service sector.

[2]In addition, non-random emigration of the immigrant population biases the impact of $t_i$ on both market wage rates and self-employment incomes. See Borjas (1985) for a discussion of the biases introduced by the high emigration rates of the foreign-born.

[3]Of course, there are many reasons why, in actuality, the cohorts in the 1970 and 1980 Census data may not be perfectly matched. For instance, the presence of emigration will lead to secular trends in the size (and quality) of a specific immigrant cohort. Similarly, institutional changes in the Census enumeration procedures may lead to different counts of immigrants (and native-born persons) in particular cohorts across Censuses. Finally, there may be age (and/or cohort) related differences in labor supply and mortality rates which generate additional differences in the size of the cohort samples included in the regressions over time. Note, however, that all these problems will impart biases on both cross-section and cohort analyses so that, in a sense, the cohort study presented below nets out only one of the many sources of bias, that due to violations of the assumption of stationarity in the quality of immigrants at the time of entry.

[4]The sampling fractions for 1970 are: white native-born (.001 of the population), all other groups (.01). The 1980 sampling factors are: black natives (.00245), black immigrants (.01651), Mexican natives (.01652), Mexican immigrants (.01638), white natives (.00042), white immigrants

(.00249), all other groups (.05).

[5] The Hispanic samples do not include the group of Puerto Rican men since Puerto Ricans born in Puerto Rico are not asked the year they migrated to the U.S. by the Census.

[6] The t-ratios in Table 3 refer to the relevant transformations of the _logit_ coefficients and are estimated from the covariance matrix of the regression coefficients.

[7] Note that since the constraints $\gamma_{70} = \gamma_{80} = \gamma$ and $\delta_{70} = \delta_{80} = \delta$ have been imposed on the estimates, the cross-section regressions in Table 2 are not directly comparable to the cross-section estimates in Table 3. In particular, Table 2 constrains the socioeconomic variables to have the same impact for the foreign- and native-born in the 1980 Census year, while Table 3 allows a differential impact between the two groups but assumes this difference is invariant to calendar year.

[8] The analysis was also conducted with alternative definitions for the variable $q_h$. These specifications included such variables as percent Mexican, percent Cuban, etc. The model in equation (15) does as good a job in describing the enclave effect as the more detailed specification.

[9] It would be of interest, of course, to analyze – along similar lines – the relative levels of salaried and self-employment incomes. Unfortunately, this extension of the work introduces the difficult technical problem of correcting for sample selection biases both within and across immigrant cohorts. In addition, self-employment incomes, as reported in the Census, are an amalgam of returns to human and physical capital. A complete study of the income levels, therefore, will require much more detailed data on the source and types of income of the self-employed.

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