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Ethnicity, Employment  
and Migration

**by**

Franklin D. Wilson  
and Marta Tienda

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# ETHNICITY, EMPLOYMENT AND MIGRATION

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## INTRODUCTION

Accounts of the economic circumstances of various population subgroups since 1960 indicate increased inequality between majority and selected minority populations, and increased polarization within these minority populations (see Wilson 1987; Farley 1984; Allen and Farley 1986; Hirschman 1988; Hernandez 1983). Specifically, recent studies reveal that the Black-White gap in unemployment (in both absolute and relative terms) has increased, and levels of labor force nonparticipation rose, with the latter appearing to be almost entirely a minority phenomenon (Hirschman 1988; Allen and Farley 1986; Lichter 1988). This paper continues this line of research via analyses of trends in employment and an assessment of the effect of migration on employment among Blacks, Cubans, Mexicans, Puerto Ricans, and non-Hispanic White Americans. Specifically, the questions we wish to address are whether the level of employment of these groups changed since 1965 and whether migrating between 1975 and 1980 affected the likelihood of being employed in 1980.

In focusing on the association of employment with migration, our objective is to determine whether the opportunity enhancement function of migration apply equally to each of the ethnic groups included in the analysis. Results from previous works suggest that migration might possibly offer a solution to the chronic joblessness observed among some ethnic populations concentrated in the nation's largest cities. In the analysis presented below, this assertion is subjected to an empirical test.

## BACKGROUND

One explanation for the declining economic status of Blacks and Puerto Ricans is that employment opportunities for minority workers have been greatly reduced in those labor markets where they are disproportionately concentrated. Arguments linking the declining economic status of Black and Puerto Rican minorities with loosened labor market attachment are consistent with findings for Black youth (Freeman and Holzer 1986; Hirschman 1988; Cain 1987; Cain and Finnie 1987; Lichter 1988), Black adults (Allen and Farley 1986), Hispanic youth (Stephenson 1985; Hirschman 1988), and Puerto Rican women (Smith and Tienda 1988; Bean and Tienda 1988, Chapter 9).

While Blacks have made substantial educational advances since 1940 (particularly since 1960) (Welch and Smith 1986; Allen and Farley 1986), labor market returns for these gains accrue only to those who can secure jobs in the first place (Freeman and Holzer 1986; Tienda and Fielding 1987). In fact, several authors have noted that the socioeconomic gains experienced by one segment of the Black population is occurring at a time when another segment is marred in conditions of chronic labor force

nonparticipation and low incomes, family disruption, school failure, teenage pregnancy, and criminal activities: all of which are conditions that are used to characterize the underclass (see Wilson 1987; Allen and Farley 1986). Although less extensively documented, the employment and schooling situation for Puerto Rican and Mexican Americans are suggestive of the occurrence of a process of polarization (see Hirschman 1988; Bean and Tienda 1988).

Current discussions of the causes of chronic joblessness among Blacks, Puerto Ricans and Mexicans identify such factors as low skills and motivation, limited labor market experiences, the availability of alternative sources of income (e.g., welfare and the underground economy), and the concentration and isolation of these groups (particularly Blacks) in major cities where employment opportunities (particularly blue collar jobs) are declining (for reviews see Wilson 1987; Lichter 1988; Cain and Finnie 1987; Mead 1986; Kasarda 1985; Freeman and Holzer 1986). Wilson's (1987) explanation of high joblessness among Blacks suggest that these factors interact in ways which are mutually reinforcing. For example, since both Blacks and Puerto Ricans are residentially concentrated in large industrial cities that experienced substantial employment restructuring during the 1970's, it is highly likely that this trend promoted rising levels of joblessness, which was exacerbated by the low skill levels of these populations, coupled with limited opportunities for residential mobility.

Kasarda (1985) suggests that access to income via the underground economy and place-oriented public assistance programs (such as those for public housing, nutritional health care, and income maintenance) have substantially reduced employment related incentives for migrating from economically depressed areas. He suggests further that a people-to-jobs strategy involving initiatives -- such as partially underwriting the cost of job search and relocation expenses -- might possibly "facilitate the migration of the structurally unemployed to places where jobs appropriate to their skills are still expanding" (p. 66).

Kasarda's proposal is based on a conception of the role of migration as being an equilibrating mechanism, wherein area differences in the demand for labor leads to a reallocation of the labor supply (see Greenwood 1981; Ritchey 1976). Indeed, several micro-level studies report that the propensity to migrate is higher among persons changing status, including transitions between school, work, and the military, changes in occupation, and transition from work to retirement (Wilson 1981a and 1981b). Of particular interest to students of labor force migration is the linkage that exist between migration and prior labor force status. Studies focusing on this relationship indicate that the probability of migrating is greater for the unemployed, and greater still for the unemployed who live in areas of high unemployment and who have migrated previously. These results suggest that the market allocation process works, although not perhaps at an optimal level. The policy implications of these results is that individuals living in economically depressed areas might be induced to move if made aware of opportunities available elsewhere and/or are provided with relocation incentives.

Although the unemployed may be more inclined to move, it is not clear whether the move itself leads to employment. A more important question for this study is that of whether labor markets respond differently to migrants of different ethnic groups. For example, there is some evidence suggesting that labor markets are partly organized around ethnic lines, and hence one would expect that migrants of different ethnic backgrounds will not have access to the same job opportunities. We are aware of no study which has

attempted to address this question directly, but in light of current discussions on providing assistance to the chronically unemployed and those displaced because of plant closures and mergers, it would be of interest to know whether unemployed persons increase their chances for securing a job by moving to another location.

## DATA AND METHODS

The Public Use Microdata Sample tapes (PUMS) from the 1970 and 1980 decennial censuses are the primary sources of data for analysis. Information on origin/descent is used to identify separately Mexicans, Puerto Ricans, and Cubans (see Bean and Tienda 1988; Nelson and Tienda 1985). Samples of Blacks and Whites are also included in the analysis. Given the centrality of migration and labor force status in analyses presented, a few comments on their measurement are appropriate.

An individual is defined as a nonmigrant if his/her 1980 state of residence is different from his/her 1975 state of residence, and provided SMSA of residence remained unchanged (even if the person changed state of residence). Migrants are distinguished according to whether they are: (1) first-time migrants, (2) repeat migrants, or (3) return migrants. The definition of these migrant types are derived from Census information on state of birth, state of residence five years ago, and current state of residence.

First-time (recent) migrants are individuals who left their place of birth for the first-time during a five year interval prior to the census.

Return migrants are persons who left their area of birth prior to the five year interval, but returned sometime during the five year interval prior to the census.

Repeat migrants are individuals who left their place of birth prior to the five year interval, and moved to yet another place during the five year interval prior to the census.

This migration status classification is not exhaustive of migration types, nor is it free of conceptual and methodological problems associated with measuring the temporal and spatial dynamics of migration flows (see Miller 1977; Lieberman 1978; and Wilson 1985 for more detailed discussions of these issues). In fact, these categories are heterogeneous with respect to the timing of current and previous migration behavior. However, such limitations are inherent in the use of Census data to measure migration.

Although we are unaware of studies that have applied the proposed classification to the Hispanic population in a comparative and/or temporal perspective, results from several studies of non-Hispanic Whites indicate that there are important socioeconomic and demographic differences between first-time, return, and repeat migrants (Miller 1977; DaVanzo 1981; Wilson 1985; DaVanzo and Morrison 1981; Faber 1978; Kau and Sirmans 1976). The act of migrating may in itself constitute a learning experience, allowing individuals to accumulate knowledge about how to avoid pitfalls, capitalize on opportunities, and evaluate the advantages offered by alternative locations. This possibility is suggested by the work of DaVanzo and Morrison (1981), who maintain that migration is an adjustment process whose effectiveness in correcting imbalances is conditioned by length of residence at a new location and knowledge of opportunities available at alternative locations. Hence one would expect that experience and knowledge of opportunities available at alternative locations would generate occupational attainment differences not only between migrants and nonmigrants, but also among types of migrants.

For example, repeat migrants should be more favorably endowed and better able to capitalize on social and economic opportunities because of knowledge acquired in previous moves. New migrants, on the other hand, are less experienced and knowledgeable than repeat and return migrants and, although they may be favorably endowed, they are probably more likely to accept lower status rewards because most would have only recently begun their occupational careers (see Kau and Sirmans 1976). Return migrants have the advantage of prior investment as well as prior knowledge of the area to which they are returning. If prior investment -- whether in the form of material resources, social relations or capital -- is the primary consideration prompting a return, then socioeconomic gains (including labor force participation) may be lower than those received by either repeat or new migrants. The crucial question is whether migrant/nonmigrant differences in socioeconomic attainment can be partially or wholly accounted for by previous migration experiences.

The classification of the foreign born as nonmigrants, recent, repeat, or return migrant is not possible. The most relevant question that can be asked of the foreign born is whether, after entering the U.S., these individuals moved between 1975-80. This phenomenon, referred to as "secondary migration" in the immigration literature, is highly policy-relevant, for it can help in better understanding the economic impacts of immigrants on the labor market. These are the only categories of migrants in which it is possible to compare the native and foreign born Hispanics. Even so, we contend that such a comparison would be important in determining whether members of the two groups differ on a number of factors associated with the propensity to migrate, and others which affect the socioeconomic attainment of individuals at destination.

Beginning in 1970, respondents who completed a sample questionnaire in association with the decennial census were asked to provide information on their activity five years ago prior to the census -- such as whether they were in college, in the armed forces, or at work. This information, along with information on age, school attendance and activity status at the time of the census, is used to construct a labor force classification scheme in which it is possible to determine entrances to and exits from the labor force. Included are categories for being at work, at work and in school, in school, in the armed forces, and not in the labor force (including persons unemployed and not attending school). Table 1 summarizes the criteria used to construct these categories. The definition of labor force is more restrictive than that in current use in order to render current labor force status more comparable with labor force status five years ago. The labor force status five years ago variables only distinguishes between persons being at work and not at work, with the latter including persons who were unemployed. One should note further that age and attendance at school are used to identify persons whose predominant activity is that of working versus those who were both working and in school, and those in school only (which includes individuals who are unemployed, but in school). In most of the analyses presented, categories 1 and 2 are combined to form a total "at work" category, and 3 and 5 are combined to form a "not at work" category. Persons who were less than 25 years of age and reported working less than 35 hours during the census reference week and persons who were less than 18 years of age in 1965 (1975) were defined as being "not at work" in 1970 (1980) or 1965 (1975), respectively. We assume that schooling was the principal activity of these individuals.

Census-derived information on migration and activity status based on retrospective accounts over a five-year period are subject to several sources of errors. The accuracy with which respondents are able to report

on past events and/or the timing of such events vary depending on the amount of time separating the point at which an inquiry is made and the reference period (or interval) of interest. Recall errors increase as the time interval over which respondents are asked to provide information increases, particularly if the respondents changed status several times during the interval or around the time period that is the object of recall (see Miller 1981; Ryscauge and Short 1986; Ryscauge and Feldman-Harkins 1987). In addition, recall errors are magnified by the Census Bureau's convention of requesting a household member to report on the previous activity of another member. These sources of errors, notwithstanding, Miller's (1981) excellent analysis of retrospective reporting on activity status five years ago in the 1970 census provides confidence that these data provide reasonably good approximations to what one would obtain if respondents were asked to provide this information contemporaneously, as in the CPS and the National Longitudinal Survey.

Given that relatively little change occurred in the content of questions and in procedures between the 1970 and 1980 censuses, recall errors are not likely to affect the comparability of information obtained at these dates. On the other hand, the inclusion of persons in the earlier time period who had left the universe (through death or immigration) by the most recent time period, and the inclusion of persons at the most recent time period who were not present at the earlier period (due to immigration) affects comparability both with respect to the distinction of respondents by current activity and activity five years ago and with respect to these distributions as they are observed in 1970 and 1980. Moreover, a more serious source of noncomparability between the 1970 and 1980 census data arises from differences in the treatment of persons failing to report their previous activity. In 1970, activity status five years ago and migration are two of the few questions in which no effort was made to allocate responses if information was not provided the census sample schedule. In 1980, however, a "hot deck" procedure was used to allocate a response to individuals if they did not respond to the residence or activity five years ago questions. The presence of a substantial number of respondents who were assigned "not reported" codes in 1970 makes comparisons across the two PUMS files difficult.

Therefore, in order to achieve comparability, a random allocation procedure was applied to individuals who in 1970 were recorded as "not reporting" information on migration and activity five years ago. The allocation procedure was applied as follows. First, individuals 16 years of age and over who in 1980 were allocated a response were cross-classified by state of residence in 1980 (51 categories), sex, age (11 categories), and education (7 categories). The counts of individuals in each cell of this classification according to the category of migration or activity status five years ago assigned were percentaged. In the case of migration, the distribution included nonmigrant, intercounty migrant, migrant to an adjacent state, migrant to a nonadjacent state, and migrant from abroad. In the case of activity status five years ago, individuals were assigned codes indicating whether or not they were engaged in each of the following activities (separately): at work, in college, or in the armed forces. Individuals in 1970 who were recorded as "not reporting" also were cross-classified by state of residence in 1970, sex, age, and education. Within this classification, persons in the not reported category were randomly distributed separately among the migration and previous activity status categories according to the proportionate distributions of persons "hot decked" in 1980 for these variables. No effort was made to allocate the nonresponses into the first-time, repeat, and return migrant categories.



The number of respondents distributed across state of residence in 1975 and 1980, sex, age, and education were deemed too few to assume that the allocation procedure would produce reasonably unbiased distributions for 1970. In the case of activity status five years ago, individuals who were allocated a status of "yes" at work or school also were assigned "no" on the armed force status five years ago variable if a response had to be allocated.

The percentage of 1970 respondents who were allocated a status on migration and each of the three activity statuses in 1965 are given in Table 2 by ethnicity. In allocating the "not reported" in 1970 according to 1980 distribution, we assume that the proportionate distributions of not reported in 1970 according to state of residence in 1970, sex, age, and education are the same as that of persons who in 1980 were assigned responses according to the "hot deck" procedure. One possible bias that we may have introduced in the 1970 data is that resulting from changes in the relative distribution of respondents across the categories of each of the relevant variables. For example, the percentage of migrants and the percentage of persons reported as being at work, in school, or in the armed forces probably changed between 1965-70 and 1975-80, because the former would have been substantially affected by the U.S. involvement in the Vietnam War. Moreover, since the percent allocated in 1970 averages to approximately 5 percent, we do not think that the bias is that great.

## RESULTS

### ***Trends in Employment***

The United States labor force underwent major changes between 1965 and 1980. First, the unemployment rates increased over this period, and although the rate was certainly higher during recessionary years, the level of unemployment during periods of recovery is substantially higher than the level prevailing during the late sixties. The rising level of unemployment in the 1970s was probably associated with the noticeable shift away from heavy manufacturing into services and high tech industries. This shift resulted in the dislocation of a large segment of the labor force, particularly among those who worked in manufacturing. So too, the structural changes did not affect all subgroups of the population uniformly. Youth unemployment increased, particularly among the less educated, and their transition to stable employment also seems to have increased. Minority populations were also disproportionately affected by structural changes, in part because of age, education, and occupation composition, and in part because of the geographic pattern of decline in jobs in certain sectors.

Second, trends in the labor force participation of the sexes moved in opposite directions. While the labor force participation of men declined, that of women went up dramatically in all prime working age groups. The participation rate of entry level female cohorts not only exceeds that of their mothers, because of changing patterns of family formation and attitudes toward work, but their attachment to the labor force is stronger and will probably result in their accumulating substantially more working years over the life course. Third, shifting levels of employment and participation occurred at a time when the largest birth cohorts in U.S. history begin to enter the labor force. Moreover, during 1965-1975,

military conscription associated with the Vietnam War delayed the timing of the entrance of at least the male cohorts into the labor force.

This section analyzes in somewhat greater detail some of the major labor force changes described above. The changing level of attachment to employment over the 1965-80 period is the major focus of the analysis presented below, particularly differences among sex, age, and ethnic groups. The objective is to determine whether sex, age, and ethnic groups experienced different patterns of work to work transitions, and whether such differences changed between 1965-70 and 1975-80.

The lack of information on annual work status during each five year interval renders interpretation of observed patterns problematic. Individuals may move from work to nonwork or nonwork to work any number of times during a five year period, and hence the fact that she/he is observed as working or not working at the beginning or end of the interval cannot necessarily be interpreted to mean that the person has either a strong attachment or no attachment to the labor force. There are methodological and substantive reasons why such an interpretation would seem problematic. Results from Miller's (1981) analyses comparing results from the 1970 census with those from longitudinal samples from the CPS and the National Longitudinal Survey of Mature Men indicate that individuals giving retrospective accounts of their work status are more likely to underreport changes in work status. Substantively, shifts in work status over a five year interval is common, probably involving 25 percent of persons in the prime working age. The results reported in Table 3 bears directly on this issue. Table 3 presents estimates of the percentage of males aged 25 to 64 who were in the four work status categories over a five year period as reported in the 1980 census and the Panel Study of Income Dynamics (PSID). A smaller percentage of males were at work in both 1975 and 1980 and a larger percentage were reported as being not at work at both dates for the census. The fact that the PSID sample consists only of heads of household who were in the sample continuously from 1975 to 1980 possibly accounts for a substantial part of the difference with the census, because the PSID sample is more selective of males who are stable. Nevertheless, the distributions reported in Table 3 from the PSID are relevant with respect to the correspondence between current work status and work status five years ago.

Ninety percent of males who reported being at work in 1980 are also likely to have been at work in 1975, and 72 percent of males who reported they were not at work in 1980 were also not at work in 1975. The distributions for the categories of being not at work in 1975 but at work in 1980 and being at work in 1975 but not at work in 1980 indicate that a higher percentage of these individuals change statuses at least once between 1975 and 1980. These results have implications for the use and interpretation of the work status distribution derived from the census. In particular, they suggest that stability or change in work status over a five year period may be an indication of whether individuals of prime working ages have a stable or marginal attachment to the labor force. Thus while the results from the PSID indicate that focusing only on work status at the beginning and end of a five year period misrepresents the incidence of changes in work status during the five year interval, one can obtain reasonably consistent estimates of whether an individual has a stable or marginal attachment to the world of work. In addition, since variation in labor force participation by age and sex have been shown to exhibit patterns that are consistent with conceptualizations of the occurrence of significant life events, such as the timing and extent of employment and labor force nonparticipation in the life course, the presence of similar

patterns in the census data would suggest that the observed trends are substantially relevant for understanding individuals involvement with the world of work (see Clogg 1979).

As noted previously, this section describes the work status of various ethnic groups to ascertain whether they experienced similar patterns of work to work transitions over a five year period, and whether these transitions changed between 1970 and 1980. Table 4 summarizes the work status of Blacks, Cubans, Mexicans, Puerto Ricans, and non-Hispanic Whites by sex for 1965-70 and 1975-80. In the case of males, the percentage of persons at work at the end of the 1965-70 and 1975-80 periods are highest for Mexicans and Cubans, followed by Whites, Puerto Ricans, and Blacks. The worker rates for Whites seems counter-intuitive, as the rates are intermediate between the three Hispanic groups. It is likely that these ethnic group differences are a reflection of differences in age. The White population, for example, is older, and hence would be expected to have a higher proportion of its members reaching retirement ages. Perhaps the most noticeable trend for males observed in Table 4 is the uniform decline in the percent at work by 1980. The employment status of Blacks and Puerto Ricans was lowest in 1970 and experienced declines of 7 and 8 percentage points between 1970 and 1980, respectively. Mexicans experienced the least decline, and had a worker rate in 1980 slightly higher than any of the groups. The decline for Blacks, Puerto Ricans, and Whites were due almost exclusively to a decline in the percentage of persons working in 1965 or 1975 and 1970 or 1980; for Cubans, the percentage of persons shifting from not at work to being at work was the major source of the decline; and for Mexicans, both factors contributed to the decline. The percentage not at work exhibit a similar pattern, namely an increase in the percentage not at work by 1980, due to an increase in the percentage who were not at work in either 1975 or 1980. That the transition from work to nonwork or nonwork to work do not appear to have played a major role in altering the percentage either at work or not at work, may be partly spurious because of the likelihood of individuals underreporting such transitions in retrospective accounts.

The worker rates for females increased for each of the ethnic groups between 1970 and 1980, with Mexicans experiencing the largest increase followed by Whites, Cubans, Puerto Ricans, and Blacks. In contrast to males, the 1980 worker rates for Blacks is the second highest, while that of Puerto Ricans is 10 percentage points lower than that of the other groups. Increases in the percentage of women working at the beginning and end of the five year interval were largely responsible for most of the upward shifts in worker rates. Actually, the increase in worker rates among Blacks and Cuban females would have been much higher in 1980 had the percent shifting from not at work to work not declined. This change may be suggestive of a pattern of increased commitment to work for women since 1970.

Table 5 presents worker rates for the total male and female population by age in 1965 and 1975. The age and sex patterns of employment evident in this table are consistent with results reported by others. Being employed increases with age up to fifty, then declines. Sex differences in employment are substantial, which are mainly a consequence of the lower worker rates of females. Moreover, the most significant trend observed in Table 5 is the divergence in worker rates for male and females. The worker rates for males age 16-19 increased, but declined for all other age groups. The decline in male rates accelerated beyond ages 30-34, reaching its highest point at age 55-59. These declines indicate a weakening attachment to the world of work: For aged 20-49, the decline in the percent at work

might be due to an increase in the marginal character of employment in which a substantial number of workers are being exposed to disruptions in their work experience caused by structural changes in the economy. The substantial rise in unemployment since the beginning of the 1970s is consistent with the decline in the percentage of males not at work in either 1975 or 1980.

While the percentage of males of prime labor force ages reported being at work declined between 1970 and 1980, the percentage of females of prime labor force age working increased. The worker rates for women between the ages of 20 to 39 increased by at least 13 percentage points between 1970 and 1980. The fact that this increase is reflected among women who were working in both 1975 and 1980 suggests that women's attachment to the world of work is becoming stronger. Since the increased work commitment is most evident among women aged 20 to 29, it is likely that these women will accumulate more working years than previous age cohorts.

We expected transitions from work to nonwork or nonwork to work to be greater during 1975-80 than 1965-70, because the latter was a period of low unemployment and the former a period of high unemployment and increasing labor force nonparticipation. Moreover, the results reported in Tables 4 and 5 indicate that the changes in work status occurred prior to the 1975-80 interval, as indicated by the fact that the major source of change in work status is reflected in the percentage point decline in persons working at both the beginning or end of the five-year interval, and, conversely, an increase in the percentage of persons not working at either date. The similarity in the percentage of persons in the two transition categories for 1965-70 and 1975-80 might be reflective of the tendency of individuals to forget short-term work status transitions. However, we think it likely that recall error is only part of the explanation, since one would have to assume that the proportion of the population likely to commit this type of error was for some unexplicable reasons greater in 1975-80.

The results presented in Tables 4 and 5 are designed to assess general trends in employment by age, sex, and ethnic status. Now we wish to analyze employment trends in greater detail taking into account other factors that impact on employment status. Two important questions not addressed by the results reported in Tables 4 and 5 are how much change has occurred in the size and composition of the labor force and how have these changes impacted on employment status. We apply Goodman's (1972) log-linear model for the analysis of cross-classification tables in search of answers to these questions. The following equations are estimated to assess the impact of changes in labor force composition on work status:

$$H_0 \quad F_{ijklmno} = \eta \gamma_{ijklmno}^{ABCDEG} \quad (1)$$

$$H_1 \quad F_{ijklmno} = \eta \gamma_{ijklmno}^{ABCDEG} \gamma_{n}^F \quad (2)$$

$$H_2 \quad F_{ijklmno} = \eta \gamma_{ijklmno}^{ABCDEG} \gamma_{kn}^{CF} \quad (3)$$

$$H_3 \quad F_{ijklmno} = \eta \gamma_{ijklmno}^{ABCDEG} \gamma_{kn}^{CF} \gamma_{ijlmno}^{ABDEFG} \quad (4)$$

Where  $F_{ijklmno}$  is the observed frequency in a cross-classification table. A is years of schooling completed (less than high school, high school, some college). B is nativity (native born, foreign born). C is work status (at work at T and T+N; not at work at T, at work T+N; at work at T, not at work at T+N; not at work at T and T+N). D is age in 1965 or 1975 (16-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+). E is sex (male, female). F is time (1970, 1980). G is ethnicity (Black, Cuban, Mexican, Puerto Rican, non-Hispanic White).  $\eta$  and  $\gamma$  are multiplicative parameters estimated from the model.

Equation (1) tests the hypothesis that the observed cell frequencies are completely a function of the marginal and interaction effects of education, nativity, work status, age, sex, and ethnic status; or alternatively, it tests the hypothesis that the association among these variables are constant across the two time periods. In assessing the impact of change, equation (1) is the baseline model. In equation (2), a parameter for the marginal effect of time period is added to allow for uniform change in the relations among the labor force variables. Equation (3) hypothesizes that the changes in work status between 1970 and 1980 has an incremental effect on observed cell frequencies. Finally, equation (4) hypothesizes that the incremental effect of adding parameters for changes in the demographic composition variables of education, nativity, age, sex, and ethnicity will account for the remaining observed cell frequencies not accounted for by equation (3). Table 6 reports the results from estimating these four equations for four populations, with respect to their ability to reduce the chi square value obtained from the estimation of equation (1). Columns (1) and (3) report results for all age groups for the total and Hispanic populations, and columns (2) and (4) report similar results for cohorts aged 16 to 54 in 1965 and aged 26 to 64 in 1975. The columns labelled cohorts focus only on changes that occur among age groups that were present in both 1965 and 1975. This attempt to estimate the effect of cohort change is only approximate, because we are not able to adjust age groups for the effects of mortality, participation in the armed forces, and immigration on the size of cohorts who were age (x) in 1965 and aged (x + 10) in 1975. The results in column (1) of Table 6 indicate that general changes in the size of the labor force accounts for 16 percent of the change which occurred. Changes in work status accounts for only 1 percent of the total change, while changes in demographic compositional factors accounts for 59 percent. The latter indicate that the changing relations between age, sex, education, nativity, and ethnicity are the major source of change in the labor force of the total population. Perhaps of particular importance is the fact that the changing relationship of work status with age, nativity, education, sex, and ethnic status accounts for 24 percent of the observed change, indicating that the impact of the demographic factors on the distribution of individuals across the work status categories underwent substantial change between 1970 and 1980.

Column (2) of Table 6 gives components of change in the labor force of age cohorts for the total population present in 1970 and 1980, where one can observe significant changes in the contribution of the various components. Changes in work status and changes in demographic composition factors account for larger shares of the change which occurred among cohorts, while the contributions of change in the size of labor force and changes in the relationship of demographic composition factors with work status to total change were smaller. These differences indicate that changes peculiar to cohorts entering and exiting from the labor force are responsible for some of the change observed in the size and distribution of

the labor force. Columns (3) and (4) presents similar results for Mexicans, Cubans, and Puerto Ricans combined. Change in the size of the labor force population account for substantially more of the total change which occurred among Hispanics than was true for the total population, while changes in demographic composition and the changing relationship of demographic composition with work status account for less. These results indicate that the total Hispanic labor force increased substantially in size, and changes in work status were less effected by changes in demographic composition. In the case of cohorts, the changing relation among the demographic factors and their impact on work status were greater. A comparison of the values reported in columns (1) and (2) with those reported in (3) and (4) suggests that changes in the size and distribution of the Hispanic population are the major sources of change in the total population. The results reported in Table 7 presents a more detail assessment of the impact of demographic factors on work status and changes in work status between 1970 and 1980. Column (2) gives the percent reduction in chi-square associated with the addition or deletion of a parameter from a reference or baseline model. For example, the addition of a parameter for the marginal effect of work status on the distribution of cell frequencies for the total population reduces the chi-square value to 58.5 percent of its size in model 1. This suggests that once you control for the marginal and interaction effects of education, age, sex, nativity, ethnicity, and time period approximately 41 percent of the variation which remains is associated with the cell frequency distribution of work status. Models 3 through 8 assess the main effect of the demographic factors on work status ignoring changes which may have occurred between 1970 and 1980. The main effect parameters included in model 3 reduces the chi-square for model 1 to 13 percent of its original size, indicating that the vast majority of the association between work status and the demographic factors is due to the direct effect of these factors. The substantial rise in the percentage reductions in chi-square from 13 to 61 percent from model 3 to model 6 and 13 to 44 (sex) percent from model 3 to model 7 indicate that the direct association of age and sex, respectively, account for most of the variation in work status. Somewhat surprising is the fact that the direct effect of ethnic status accounts for less than one tenth of 1 percent of the variation in work status. These results indicate that the age and sex pattern of work and nonwork transitions are similar for all ethnic groups. The three-way interaction action terms (model 9) reduces the chi square from 13 to 10, but note that this reduction is due primarily to the interaction of age and sex with work status.

Models 15 through 23 assess the impact of the demographic factors on changes in work status, in which the chi-square for model 14 is used as the baseline model. The addition of all three-way interaction terms involving each demographic factor, work status, and time period reduces the chi-square for model 15 from 97 to 26 percent. As in the main effect models, changes in work status are primarily a function of the changing impact of age and sex. The net chi-square for ethnic status (model 21) accounts for only 3 percent of the change in work status. However, a comparison of the percentage reduction values for models 22 and 23 indicate that the major influence of ethnic status lies in changes in work status by age and sex for each ethnic group. In other words, some of the effects of both age and sex on changes in work status are specific to ethnic group membership.

Column 3 presents percentage reductions in chi-square for age cohorts present in both years. Most noticeable is the substantial decline in the effect of age on work status, and the emergence of sex as the major factor associated with work status. Consistent with the results reported in Table

5, these results merely indicates that a substantial portion of the age effect is related to the work status (and changes therein) of cohorts who became of labor force age since 1965, and of existing cohorts aged 65 and over by 1975.

The second panel presents percent reductions in chi-square for the effects of demographic factors on work status for the Hispanic population. There are several noticeable differences between the total and Hispanic population in the effects of the compositional factors on work status. First, sex has a greater effect on work status even for the total Hispanic population, with respect to both its direct effect (model 6 versus model 5) and its effect on changes in work status between 1970 and 1980 (model 20 versus model 19). Second, the conditional effects of age and sex on changes in work status is much more dependent on whether the group of reference is Cuban, Mexican, or Puerto Rican (model 22 versus model 23). Finally, education and nativity appear to play a greater role in structuring changes in work status among Hispanics than the total population, as indicated by the differences in percentages reported for model 23. These results then mirror those reported in Table 4 indicating that the work status of the Hispanic groups are becoming increasing dissimilar, particularly that of Puerto Ricans relative to Mexicans and Cubans.

#### *Employment Returns to Migration*

Results presented in the last section indicate that the U.S. labor force is being substantially altered as a result of changes in the employment patterns of age, sex, and ethnic groups. Specifically, while female employment levels are rising, that of males, particularly Blacks and Puerto Ricans, are declining. Since geographic context was omitted, we do not know whether these labor force changes are constant across regions and urban agglomerations; although results from previous studies indicate that geography does indeed matter. In addition, the results presented in Tables 4-7 simply describe what has occurred with respect to the distribution of individuals across the four work status categories. Now we wish to proceed to the next level which involves an effort to account for shifts in work status from being nonemployed to employed. Our primary concern here is whether the migration of the nonemployed increases the likelihood of their becoming employed, and in particular, whether the likelihood of employment after migration is the same for each ethnic group.

The dependent variable for this analysis is whether or not an individual who was nonemployed in 1975 is conditionally employed in 1980. (It is important to emphasize that the employed/nonemployed dichotomy does not conform to the conventional employed/unemployed usage. The nonemployed category consist of individuals who are either unemployed or not in the labor force.) The equations to be estimated take the following forms:

$$\text{EMPLOY}_{80} = X\beta + e \quad (5)$$

$$\text{NEMPLOY}_{75} = X\gamma + e \quad (6)$$

Where EMPLOY is one if an individual was not at work in 1975 but at work in 1980, and zero if not at work in 1980; NEMPLOY is one if an individual was not at work in 1975 and zero otherwise. For EMPLOY, the matrix X includes region of residence in 1980, nativity, metropolitan residence, head of household, age, marital status, completed less than high school, completed 1-3 years of college, completed college, foreign born interstate migrant,

native born interstate migrant, return migrant, repeat migrant, and terms for the interaction of migration with years of schooling completed, current and previous region of residence, and nativity. For NEMPLOY, the Matrix X includes region of residence in 1975, age, education( three categories) and nativity. Equation (5) and (6) were estimated using the BIPROBIT statistical package. Equation (6) is the selection equation and is estimated with the full sample, while equation (5) is a conditional equation and is estimated only for persons who were not at work in 1975. The BIPROBIT program estimates the two equations simultaneously and the RHO coefficient, which indicates the extent of correlation among the errors, is a byproduct. The results from the selection equation (6) are not reported.

Estimating the equations simultaneously allow us to determine whether there are unmeasured factors affecting both NEMPLOY and EMPLOY. In the case of EMPLOY, this is important because focusing only on individuals who were not employed in 1975 may yield a biased representation of the effects of the independent variables. Individuals who were not employed in 1975 may not be representative of individuals in the universe who are ever nonemployed.

The variables of age, marital status, nativity, metropolitan residence, and education are included in equation (5) as controls, and, since their effects on labor force participation are well known, we need not elaborate them here. Our primary interest is in the effects of the residence and migration variables. In including these variables, we seek to determine whether individuals who were nonemployed are more likely to become employed if they migrate. We expect that return and repeat migrants and foreign born interstate migrants would have a greater likelihood of becoming employed, because their previous migration experience makes them more susceptible to moving in response to changing employment opportunities than persons who have never moved in the past. Similarly, persons who were abroad in 1975 (mostly immigrants) are more likely to be employed because of the high probability that they secured employment prior to leaving their country of origin. We also expect that employment returns to migration will vary by education attainment. We can suggest several reasons for this expectation. First, as is true of return and repeat movers, education increases an individual's ability to both obtain and analyze information from a variety of sources, on a variety of locations, which would be of great interest in assessing whether a move will lead to advancement. Second, education inculcates values and skills that ease the severance and establishment of social ties, and pursuing it often requires leaving the parental place of residence. Finally, the labor market area for persons with differing levels of skills tends to vary from local to regional to the national level. The highly educated not only have more locations in which to search for a job, but are also likely to have secured a job before a move is made.

The likelihood of becoming employed should be greater in the South and West regions, because these regions experienced greater employment growth during the 1970's. Also included in equation (5) are interaction terms to determine whether migrants from and to the South and West are more likely to become employed than migrants from other regions and non- migrants in general. Thus these region/migrant interactions allow us to determine whether origin and destination regions matter in securing employment and whether migrants are more successful in securing employment than nonmigrants.

Equations (5) and (6) are estimated for non-Hispanic Whites, Blacks, Mexicans, and Puerto Ricans. Cuban are excluded because of sample size restrictions. Our expectation is that employment returns to migration will differ among the four ethnic groups. There is some evidence suggesting that



labor markets are partly organized around ethnic lines, and hence one would expect that migrants of different ethnic backgrounds will not have access to the same job opportunities (see Tienda and Lii 1987; and Tienda and Fielding 1987; Lieberman 1980). The employment returns to migration for non-Hispanic Whites are used as the basis for evaluating the returns of the other groups. It seems reasonable to hypothesize that the employment levels of non-Hispanic White migrants would be more responsive to changes in economic opportunities, because they are less likely to encounter restrictive barriers in securing employment.

Tables 8 through 11 present the results from the biprobit analysis of the effects of measured and unmeasured determinants of being conditionally employed in 1980 for Blacks, Mexicans, Puerto Ricans, and non-Hispanic Whites. The coefficients reported under the column headed "K EMPLOY" measures the effects of each independent variable on the probability of employment at the sample proportion employed. The size and significance of three of the RHO coefficients indicate that the single equation estimates are seriously biased by the omission of unmeasured variables. Moreover, the value of the RHO coefficients reported at the bottom of each table indicate a substantial difference between the two Hispanic groups and Blacks and Whites. For Blacks and Whites, the near perfect positive RHO coefficient indicate that not being employed in 1975 and being employed in 1980 are affected possibly by the same unmeasured factor. The RHO coefficient for Mexicans and Puerto Ricans is negative, but only the coefficient for Mexicans is statistically significant. This Hispanic/non-Hispanic difference indicates that either the unmeasured factor involved is different or its effect on employment is simply different. The difference might in some way be related to the composition of the groups with respect to nativity. For example, less than 3 percent of the Black and White population aged 25-64 years are foreign born, whereas the percentage is 41 for Mexicans and 82 for Puerto Ricans.

The results reported in Tables 8 through 11 on whether there are significant employment returns to migration are mixed, both with respect to ethnic group and the measured effects of the relevant variables. Living in the South and West raises the probability of being employed in 1980, particularly for Mexicans and Puerto Ricans. This is not surprising given that employment growth in these regions has been greater in recent decades. Experienced native born migrants do not have a greater likelihood of being employed than first-time migrants. Actually, for Blacks and Puerto Ricans, the opposite is true. Hence, contrary to earlier expectations these results do not indicate for Blacks, Puerto Ricans and non-Hispanic Whites that previous migration experience or familiarity with destination give chronic movers an advantage over first-time movers and nonmovers. Mexican return migrants do, however, have a greater likelihood of being employed. The results for Mexicans might be a consequence of their being more responsive to the sharp regional differences in employment opportunities so evident during the 1970s. There is some evidence indicating that during the 1970s, many Mexicans who have previously left the South (mainly Texas) returned as the economies of the North and East declined (see Bean and Tienda 1988).

The foreign born (included only in the equations for Mexicans and Puerto Ricans) appears to do better than the native born in securing employment. This is indicated by the statistically significant positive coefficients for foreign born, foreign born interstate migrants, and persons who were abroad in 1975. Among Mexicans, being foreign born raises the probability of employment by 10 percentage points, and among Puerto Ricans by 8 percentage points. Of perhaps greater importance is the fact that being a foreign born interstate migrant raises the probability of employment 20

percentage points for Mexicans and 18 points for Puerto Ricans. We are mystified as to the substantive significance of these results. One possibility is that the foreign born are much more likely to accept marginal or low wage jobs, because these jobs are viewed as being more desirable than those available at country of origin. In addition, the foreign born may not have as extensive a social network upon which they can rely during periods of unemployment as the native born, leading to a greater inclination to move in search of opportunities.

Migrants who did not complete high school fared no worse than those who completed high school, and the college educated migrant did no better than high school graduates. Among Mexicans having less or more than a high school education is a definite penalty. For example, being a Mexican migrant with a college degree lowers the probability of employment by 17 percentage points relative to those who have only completed high school. While these results suggest in general that education does not increase the likelihood of becoming employed after migration, it does not necessarily follow, however, that college graduates are no more successful in securing jobs in distant labor markets than non-graduates. This is because the labor market for college graduates is more formally organized, such that they are more likely to move with a job (often in the form of job transfers).

## DISCUSSION

This paper addresses the issues of whether (1) the employment patterns of Blacks, Cubans, Mexicans, Puerto Ricans, and non-Hispanic Whites of labor force age changed between 1965 and 1980; and (2) whether migration between 1975 and 1980 affected the likelihood of being employed in 1980. The results show that the employment pattern of each of the groups changed significantly during the fifteen year period. The employment levels of males declined (particularly among Blacks and Puerto Ricans), while that of females increased substantially. Age and sex were the primary factors associated with work to nonwork transitions during two five year periods. Changes in the employment pattern of the Hispanic population appeared to have been less conditional on changes in the age, sex, nativity, and educational distribution of the labor force population. In addition, our results suggest that changes in the U.S. labor force since 1965 are primarily a consequence of the growth and distribution of the Hispanic population. Migration among the native born population did not increase the likelihood of becoming employed, even for the college educated. On the other hand, the foreign born and the foreign born who migrated between 1975 and 1980 increased their likelihood of being employed by at least 10 percent.

Previous work has shown that the unemployed are willing to migrate in search of jobs, particularly if unemployment is high in their local area (see Da Vanzo 1978; Wilson 1981b). Hence, the question is not whether the unemployed are willing to seek employment through migration, but rather whether they are successful in actually securing employment. The results reported here for the native born indicate that they are not very successful. Actually, as Clark (1983) argues in a recent book on interregional migration, immobility can under certain conditions be viewed as rational behavior, considering search costs and relocation expenses, disruption in social networks, and the low likelihood of success in obtaining a job that contains an adequate compensation package. Moreover, the results must be viewed as tentative at this point for several reasons. First, the data used in this analysis do not permit us to establish a

precise temporal ordering between employment and migration. Although it is possible to determine an individual's employment status at the beginning and end of the 1975-80 migration interval, we do not know his status immediately prior to or immediately after migration. Second, sample size restrictions and the absence of specific indicators of labor market conditions limits what we can say about the impact of place variations in employment opportunities.

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TABLE 1  
Definitions of Activity Status

Activity Status in 1980 (1970)

1. At Work
  - a. With a job and not attending school, or
  - b. With a job, attending school, and
    - (1) 25 years of age and over, and
    - (2) worked more than 35 hours a week
2. Work/School
  - a. With a job, attending school, and
    - (1) greater than 24 years of age, and
    - (2) worked less than 35 hours a week, or
  - b. With a job, attending school, and
    - (1) less than 25 years old, and
    - (2) worked 5 hours a week or more
3. School
  - a. With a job, attending school, and
    - (1) less than 25 years old, and
    - (2) worked less than 35 hours, or
  - b. Not in labor force, attending school, or
  - c. Unemployed and attending school
4. Armed Forces  
--unemployed and not in school
5. Unemployed  
--unemployed and not in school
6. Not in Labor Force

continued on **following** page

Table 1, continued

Activity Status in 1975 (1965)

1. At Work
  - a. Working in 1975 and 25 years t
  - b. Working in 1975, 18-24 years in 1975, and
    - (1) not in college
    - (2) not in armed forces
2. Work/School
  - a. Working in 1975, and
    - (1) not in armed forces, and
    - (2) in college, or age less than 18 years in 1975
3. School
  - a. Not at work, and
    - (1) age less than 18 years in 1975; or
    - (2) in college in 1975
4. Armed Forces  
--in armed forces
5. Not in Labor Force (also includes unemployed)
  - a. Not at work, and
    - (1) not in armed forces
    - (2) not in college
    - (3) 18 years and over in 1975

TABLE 2

Percentage of 1970 Census Sample Respondents Who Were Allocated  
into a Category for Selected Attributes by Ethnicity

Attribute	Recent Allocated			
	Native American	Black	Hispanic	Non-Hispanic White
Migration, 1965-70	4.32	5.38	2.82	3.26
At work, 1965	4.91	6.99	3.11	4.20
At college, 1965	4.42	6.18	5.75	9.68
In armed forces <sup>1</sup>	1.29	1.39	0.72	0.89
Total 1970 records	5,970	197,929	88,607	310,581

1. The following sampling weights were applied to respondents on the 1/100 PUS, 15 percent sample: Hispanics, Blacks, and Native Americans, 100 percent; non-Hispanic whites, 20 percent.

<sup>1</sup> Respondents who were allocated to the "yes" at work or "yes" at college categories were defined as being not in the armed forces in 1965.

TABLE 3

Work Status of the Male Population Aged 30 to 64 in 1980 Based on Estimates from the Census and Panel Study of Income Dynamics

	Work Both Dates	At Work, 1980 Not at Work 1975	Not at Work, 1980 At Work, 1975	Not at Work Both Dates
<b>Census</b>				
Number	33,425,579	1,381,766	5,118,019	4,192,065
Percent (100)	75.77	3.13	11.60	9.50
<b>PSID</b>				
Number	51,820	2,708	5,445	2,518
Percent (100)	82.93	4.33	8.71	4.03
<b>Total</b>	<b>00.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
At work, 1975-80	90.28	NA	NA	NA
Not at work, 1975-80	NA	NA	NA	72.00
Worked 1 yr	NA	2.03	12.82	6.39
Worked 2 yrs	0.18	5.87	6.85	7.78
Worked 3 yrs	0.27	16.65	19.54	6.91
Worked 4 yrs	1.40	23.67	23.82	6.91
Worked 5 yrs	7.87	52.77	36.97	NA



TABLE 4

Work Status of the Population Aged 16 Years and Over in 1965 and 1975  
by Ethnic Status and Sex: 1965-70 and 1975-80

Ethnic Status and Year (T)	Males						Females					
	At Work, T+N			Not At Work, T+N			At Work, T+N			Not at Work, T+N		
	Total	At Work	Not at Work	Total	At Work	Not at Work	Total	At Work	Not at Work	Total	At Work	Not at Work
		T	T		T	T		T	T		T	T
<b>Blacks</b>												
1965	69.47	59.91	9.56	30.53	12.26	18.27	46.18	31.16	15.01	53.82	11.69	42.13
1975	62.46	51.29	10.72	37.99	13.02	24.97	49.75	36.97	12.78	50.25	9.78	40.47
Difference	-7.46	-8.61	1.15	-7.46	0.76	6.70	3.57	5.81	-2.23	-3.57	-1.91	-1.66
<b>Cubans</b>												
1965	81.56	67.64	13.92	18.44	7.87	10.57	45.02	24.44	20.58	54.98	10.00	44.98
1975	75.79	66.90	8.89	24.21	9.73	14.48	51.58	39.94	11.64	48.42	9.87	38.55
Difference	-5.77	-0.73	-5.04	5.77	1.86	3.92	6.56	15.49	-8.94	-6.56	-0.13	-6.43
<b>Mexicans</b>												
1965	78.07	67.68	10.39	21.93	9.88	12.05	35.40	20.92	14.48	64.60	10.95	53.65
1975	76.32	63.01	13.31	23.68	9.93	13.75	45.00	29.34	15.67	55.00	9.14	45.86
Difference	-1.75	-4.67	2.92	1.75	0.05	1.71	9.60	8.41	1.19	-9.60	-1.81	-7.79
<b>Puerto Ricans</b>												
1965	76.21	63.12	13.09	23.79	8.14	15.64	29.21	18.19	11.02	70.79	10.92	59.87
1975	67.81	55.54	12.28	32.19	11.01	21.18	35.73	23.41	12.32	64.27	9.10	55.67
Difference	-8.40	-7.59	-0.81	8.40	2.86	5.54	6.52	5.22	1.30	-6.52	-1.82	-4.70
<b>Whites</b>												
1965	76.26	68.90	7.36	23.74	9.68	14.06	38.77	25.71	13.05	61.23	11.24	49.99
1975	72.47	65.08	7.39	27.53	11.11	16.42	45.68	33.21	12.47	54.32	10.57	43.75
Difference	-3.79	-3.82	0.03	3.79	1.43	2.36	6.92	7.50	-0.58	-6.92	-0.68	-6.24

TABLE 5

Work Status of the Population 16 Years and Over in 1965 and 1975 by Age and Sex: 1965-70 and 1975-80

Age and Period (T)	Males						Females					
	At Work, T+N			Not At Work, T+N			At Work, T+N			Not at Work, T+N		
	Total	At Work	Not at Work	Total	At Work	Not at Work	Total	At Work	Not at Work	Total	At Work	Not at Work
		T	T		T	T		T	T		T	
<b>16-19 Years</b>												
1965	61.86	29.67	32.19	38.14	8.68	29.47	46.61	14.08	32.53	53.39	11.32	42.07
1975	64.74	35.35	29.39	35.26	11.11	24.15	54.14	25.73	28.42	45.86	12.63	33.23
Difference	2.88	5.68	-2.80	-2.88	2.43	-5.31	7.53	11.65	-4.11	-7.53	1.31	-8.84
<b>20-24 Years</b>												
1965	89.95	75.93	14.02	10.05	5.63	4.41	42.79	26.56	16.24	57.21	20.40	36.81
1975	85.46	72.03	13.44	14.54	8.68	5.86	62.03	45.50	16.53	37.97	15.21	22.76
Difference	-4.49	-3.90	-0.59	4.49	3.04	1.45	19.23	18.94	0.29	-19.23	-5.19	-14.04
<b>25-29 Years</b>												
1965	92.86	87.59	5.27	7.14	4.67	2.47	41.94	26.31	15.63	58.06	12.35	45.71
1975	89.17	84.33	4.84	10.83	6.62	4.21	58.61	43.66	14.94	41.39	12.41	28.98
Difference	-3.70	-2.27	-0.43	3.70	1.95	1.75	16.66	17.36	-0.69	-16.66	0.06	-16.73
<b>30-34 Years</b>												
1965	92.71	89.37	3.35	7.29	4.78	2.50	46.07	29.28	16.79	53.93	9.15	44.78
1975	90.60	87.67	2.92	9.40	6.24	3.16	61.54	43.95	17.60	38.46	8.27	30.19
Difference	-2.12	-1.70	-0.42	2.12	1.46	0.66	15.47	14.67	0.80	-15.47	-0.88	-14.59
<b>35-39 Years</b>												
1965	92.13	89.17	2.96	7.87	5.22	2.65	49.92	34.62	15.30	50.08	8.50	41.58
1975	89.79	87.08	2.71	10.21	6.20	4.01	62.74	47.04	15.69	37.26	6.84	30.42
Difference	-2.34	-2.09	-0.24	2.34	0.97	1.36	12.82	12.43	0.39	-12.82	-1.66	-11.16

*continued on the following page*

Table 5, continued

Age and Period (T)	Males						Females					
	At Work, T+N			Not At Work, T+N			At Work, T+N			Not at Work, T+N		
	Total	At	Not at	Total	At	Not at	Total	At	Not at	Total	At	Not at
		Work	Work		Work	Work		Work	Work		Work	
	T	T		T	T		T	T		T	T	
40-44 Years												
1965	91.03	88.17	2.86	8.97	5.63	3.34	50.58	38.47	12.11	49.42	8.91	40.51
1975	88.51	85.97	2.55	11.49	6.37	5.12	58.36	47.26	11.10	41.64	7.60	34.04
Difference	-2.52	-2.21	-0.31	2.52	0.73	1.78	7.78	8.79	-1.00	-7.78	-1.31	-6.47
45-49 Years												
1965	89.42	86.61	2.82	10.58	6.53	4.05	50.84	41.26	9.58	<b>49.16</b>	9.24	39.92
1975	84.98	82.59	2.40	15.02	8.28	6.74	54.05	45.06	8.99	45.95	8.16	37.78
Difference	-4.44	-4.02	-0.42	4.44	1.76	2.69	3.21	3.80	-0.59	-3.21	-1.07	-2.14
50-54 Years												
1965	84.66	81.24	3.42	15.34	9.05	6.30	46.39	38.38	8.01	53.61	10.44	43.17
1975	77.94	75.12	2.83	22.06	11.90	10.16	46.18	39.02	7.16	53.82	10.34	43.48
Difference	-6.71	-6.12	-0.59	6.71	2.86	3.86	-0.21	0.64	-0.85	0.21	-0.10	0.31
55-59 Years												
1965	70.42	66.31	4.11	29.58	17.96	11.63	35.30	29.48	5.82	64.70	12.42	52.27
1975	57.21	54.34	2.87	42.79	24.75	18.03	33.03	28.44	4.59	66.97	14.12	52.85
Difference	-13.20	-11.96	-1.24	13.20	6.80	6.41	-2.27	-1.04	-1.23	2.27	1.69	0.58
60-64 Years												
1965	37.88	34.15	3.73	62.12	35.94	26.18	16.00	13.24	2.76	84.00	16.37	67.63
1975	27.71	24.48	3.23	72.29	34.12	38.17	13.49	11.02	2.47	86.51	15.47	71.04
Difference	-10.17	-9.67	-0.50	10.17	-1.82	11.99	-2.51	-2.22	0.29	2.51	-0.90	3.41
65+ Years												
1965	15.73	13.53	2.20	84.27	17.73	66.54	6.09	4.52	1.58	93.91	7.08	86.83
1975	12.05	9.57	2.47	87.95	12.44	75.51	4.59	3.05	1.55	95.41	4.23	91.17
Difference	-3.68	-3.95	0.27	3.68	-5.29	8.97	-1.50	-1.47	-0.03	1.50	-2.84	4.34

TABLE 6

Components of Change in the Labor Force for the Total  
and Hispanic Populations: 1970-1980

Models: Components of Change	Populati on			
	Total		Hi spani c	
	All Age (1)	Cohort (2)	All Ages (3)	Cohort (4)
Model 1 ( $H_0$ ): Total change, L.L. $\chi^2$ Percent	17,396,121 100.00	8,750,465 100.00	1,341,637 100.00	593,399 100.00
Model 2 ( $H_0 - H_1$ ): Change in the size of the labor force population	15.95	6.88	40.53	33.31
Model 3 ( $H_1 - H_2$ ): General change in work status	0.97	3.86	1.04	1.29
Model 4 ( $H_2 - H_3$ ): Changes in the relations among demographic composition factors	59.39	70.23	42.94	46.15
Model 5 ( $H_3$ ): Changing relationship of demographic composition factors with work status	23.69	19.03	15.49	19.25

TABLE 7

The Impact of Demographic Composition Factors on Work Status  
and Changes in Work Status for the Total and Hispanic Population

Models	Total Population			Hispanic Population <sup>2</sup>		
	All Age Groups		Cohorts <sup>1</sup>	All Age Groups		Cohorts <sup>1</sup>
	X <sup>2</sup> (1,000's) (1)	Percent Reduct'ion in X <sup>2</sup> (2)	Percent Reduct'ion in X <sup>2</sup> (3)	X <sup>2</sup> (1,000's) (1)	Percent Reduct'ion in X <sup>2</sup> (2)	Percent Reduct'ion in X <sup>2</sup> (3)
1. [AE]EFG]	241,680			7,953		
2. [AE]EFG][C] <sup>3</sup>	141,327	58.48	<b>46.36</b>	<b>4,672</b>	58.75	51.93
3. [AE]EFG][AC][BC][CD][CE][CG] <sup>4</sup>	18,444	13.05	<b>13.55</b>	<b>647</b>	13.85	12.94
4. [AE]EFG][BC][CD][CE][CG]	22,431	15.87	<b>17.37</b>	<b>893</b>	<b>19.12</b>	18.88
5. [AE]EFG][AC][CD][CE][CG]	18,450	13.05	<b>13.56</b>	<b>655</b>	<b>14.02</b>	13.21
6. [AE]EFG][AC][BC][CE][CG]	86,511	61.21	<b>44.97</b>	<b>2,322</b>	<b>49.70</b>	33.33
7. [AE]EFG][AC][BC][CD][CG]	62,949	44.54	<b>66.11</b>	<b>2,773</b>	<b>59.36</b>	72.63
8. [AE]EFG][AC][BC][CD][CE]	18,604	13.16	<b>13.79</b>	<b>727</b>	<b>15.57</b>	14.94
9. [AE]EFG][CDE][CDG][CEG]	14,584	10.32	<b>11.25</b>	<b>764</b>	<b>16.36</b>	16.77
10. [AE]EFG][CDG][CDG]	21,070	<b>14.91</b>	<b>15.99</b>	<b>892</b>	<b>19.10</b>	<b>18.96</b>
11. [AE]EFG][CDE][CEG]	14,956	<b>10.58</b>	<b>11.49</b>	<b>779</b>	<b>16.67</b>	<b>17.18</b>
12. [AE]EFG][CDE][CDG]	15,540	<b>11.00</b>	<b>12.42</b>	<b>775</b>	<b>16.58</b>	<b>17.02</b>
13. [AE]EFG][CDEG]	14,080	<b>9.96</b>	<b>10.83</b>	<b>755</b>	<b>16.17</b>	<b>16.51</b>
14. [AE]EFG][ABCDEG]	4,260	<b>3.01</b>	<b>2.33</b>	<b>215</b>	<b>4.61</b>	<b>3.88</b>
15. [AE]EFG][ABCDEG][CF] <sup>5</sup>	4,121	<b>96.74</b>	<b>91.90</b>	<b>208</b>	<b>96.55</b>	<b>96.05</b>
16. [AE]EFG][ABCDEG][ACF][BCF][CDF][CEF][CFG]	<b>1,091</b>	<b>25.60</b>	<b>22.71</b>	<b>117</b>	<b>54.35</b>	<b>48.67</b>
17. [AE]EFG][ABCDEG][BCF][CDF][CEF][CFG]	<b>1,252</b>	<b>29.39</b>	<b>28.37</b>	<b>122</b>	<b>56.76</b>	<b>50.30</b>
18. [AE]EFG][ABCDEG][ACF][CDF][CEF][CFG]	<b>1,093</b>	<b>25.66</b>	<b>22.82</b>	<b>118</b>	<b>54.62</b>	<b>49.30</b>
19. [AE]EFG][ABCDEG][ACF][BCF][CEF][CFG]	<b>2,154</b>	<b>50.58</b>	<b>37.32</b>	<b>129</b>	<b>60.01</b>	<b>51.33</b>
20. [AE]EFG][ABCDEG][ACF][BCF][CDF][CFG]	<b>2,061</b>	<b>48.38</b>	<b>60.81</b>	<b>159</b>	<b>73.87</b>	<b>74.40</b>
21. [AE]EFG][ABCDEG][ACF][BCF][CDF][CEF]	<b>1,194</b>	<b>28.04</b>	<b>25.64</b>	<b>133</b>	<b>61.93</b>	<b>59.82</b>
22. [AE]EFG][ABCDEG][CDEF]	<b>1,048</b>	<b>24.46</b>	<b>27.38</b>	<b>130</b>	<b>60.33</b>	<b>60.52</b>
23. [AE]EFG][ABCDEG][CDEFG]	<b>764</b>	<b>17.93</b>	<b>20.41</b>	<b>90</b>	<b>41.81</b>	<b>39.44</b>

Notes on the following page

Definition of terms: A is education; B is nativity; C is work status; D is a age; E is sex; F is time period; and G is ethnic status.

- 1 Cohorts refers to eight age categories (in five year intervals) including persons aged 16 to 19 in 1965 and 26 to 29 in 1975 through persons age 50-54 in 1965 and 60 to 64 in 1975.
- 2 Hispanics includes Mexicans, Cubans, and Puerto Ricans.
- 3  $\chi^2$  for Model 1 used to compute the percentage reported for Model 2.
- 4  $\chi^2$  for Model 2 used to compute the percentage reported for Models 3 through 14.
- 5  $\chi^2$  for Model 14 used to compute the percentages reported for Models 15 through 23.

TABLE 8

Effects of Independent Variables on the Probability of Working in 1980  
for Black Males Aged 25-64 Years in 1975

Variables	Single Equation		Two Equation'	
	Coefficients	EMPLOY'	Coefficient	EMPLOY <sup>2</sup>
Intercept	-.2272*	-.0882	-1.2612*	-.4896
1980 residence: South (EQ 1)	.2737*	.1062	.0761*	.0295
1980 residence: West (EQ 1)	.0585	.0227	.1601*	.0621
Return migrant (EQ 1)	-.0369	-.0143	-.0185	-.0072
Repeat migrant (EQ 1)	-.1409	-.0547	-.0455	-.0176
Head of household (EQ 1)	.5672*	.2203	.3093*	.1200
Metropolitan area (EQ 1)	.0788*	.0306	.0369*	.0143
AGE	-.2840*	-.1102	-.1941*	-.0753
Married (EQ 1)	.1933*	.0750	.0930*	.0361
Did not complete high school (EQ 1)	-.3319*	-.1288	.0048	.0019
Completed 1-3 years college (EQ 1)	.3369*	.1307	.1177*	.0457
Completed 4 years college (EQ 1)	.6449*	.2503	.1493*	.0579
Did not complete high school (X) migrant (EQ 1)	-.0866	-.0336	.0147	.0057
Completed 1-3 years college (X) migrant (EQ 1)	-.1395	-.0541	-.0796	-.0309
Completed 4 years college (X) migrant (EQ 1)	-.0466	-.0181	-.0830	-.0322
1980 residence: South (X) interstate migrant (EQ 1)	-.2166	-.0841	-.0544	-.0211
1980 residence: South (X) abroad in 1975 (EQ 1)	.0441	.0171	.1139	.0442
1975 residence: South (X) interstate migrant (EQ 1)	.0914	.0355	-.0194	-.0075
1980 residence: West (X) interstate migrant (EQ 1)	-.1156	-.0449	-.1979	-.0768
1980 residence: West (X) abroad in 1975 (EQ 1)	.2505	.0972	-.0527	-.0204
1975 residence: West (X) interstate migrant (EQ 1)	.2481	.0963	.2279*	.0885
First time movers (EQ 1)	.4841*	.1879	.2253*	.0874
Abroad in 1975 (EQ 1)	.6287*	.2440	.2360*	.0916
RHO			.9729*	
-2 log likelihood	10,521		52,047	
Degrees of freedom	2,881		2,873	
Observations	9,232		37,857	
Average probability of employment in 1980		.4070		.4070

\*Indicates that the coefficient is twice the size of its standard error

'The selection equation (not shown) estimates the effects of selected independent variables on the probability of not working in 1975.

Evaluation of effects at the sample mean of the dependent variable.

TABLE 9

Effects of Independent Variables on the Probability of Working in 1980  
for Mexican Males Aged 25-64 Years in 1975

Variables	Single Equation		Two Equation1	
	Coeffi ci ents	EMPLOY'	Coeffi ci ent	EMPLOY'
Intercept	.3010*	.1172	1.3348*	.5198
1980 residence: South (EQ 1)	.2051*	.0798	.3177*	.1237
1980 residence: West (EQ1)	-.0103	-.0040	.1771*	.0690
Foreign born (EQ1)	.4025*	.1567	.2551*	.0994
Return migrant (EQ1)	.3236*	.1260	.2047*	.0797
Repeat migrant (EQ1)	.2295*	.0894	.1472	.0573
Head of household (EQ1)	.4296*	.1673	.2855*	.1112
Metropolitan area (EQ1)	.0383	.0149	.0253	.0099
AGE	-.3621*	-.1410	-.2197*	-.0853
Married (EQ1)	.2826*	.1101	.1787*	.0696
Foreign born interstate migrant (EQ1)	.8305	.3234	.5473*	.2031
Did not complete high school (EQ1)	-.3472*	-.1352	-.3628*	-.1413
Completed 1-3 years college (EQ1)	.3719*	.1448	.2101*	.0818
Completed 4 years college (EQ1)	.7418*	.2889	.4515*	.1758
Did not complete high school (X) migrant (EQ1)	-.2852*	.1111	-.2087*	-.0813
Completed 1-3 years college (X) migrant (EQ1)	-.3763*	-.1465	-.2535*	-.0987
Completed 4 years college (X) migrant (EQ1)	-.6811*	-.2652	-.4422*	-.1722
1980 residence: South (X) native born interstate migrant (EQ1)	.1851	.0721	-.0595	-.0232
1980 residence: South (X) foreign born interstate migrant (EQ1)	-.8803*	-.3428	-.7719*	-.3006
1980 residence: South (X) abroad in 1975 (EQ1)	-.1012	-.0394	-.2497*	-.0972
1975 residence: South (X) native born interstate migrant (EQ1)	-.0260	-.0101	.1727	.0672
1975 residence: South (X) foreign born interstate migrant (EQ1)	.1911	.0744	.3294	.1283
1980 residence: West (X) native born interstate migrant (EQ1)	.2396	.0933	-.0229	-.0089
1980 residence: West (X) foreign born interstate migrant (EQ1)	-.7285	-.2837	-.6724*	-.2618
1980 residence: West (X) abroad in 1975 (EQ1)	.1837	.0715	-.0560	-.0218
1975 residence: West (X) native born interstate migrant (EQ1)	-.2697	-.1050	.0116	.0045

*table continued on the following page*



Table 9, continued

Variables	Single Equation		Two Equation'	
	Coefficients	EMPLOY'	Coefficient	EMPLOY'
1975 residence: West (X) Foreign born interstate migrant (EQ 1)	.2436	.0949	.3585	.1396
First time movers(EQ1)	.2313	.0901	.1514	.0590
Abroad in 1975(EQ1)	.5214*	.2030	.3737*	.1455
RHO			-.8462*	
-2log likelihood	8,137		45,967	
Degrees of freedom	3,603		3,594	
Observations	7,232		41,141	
Average probability of employment		.5873		.5873

\*Indicates that the coefficient is twice the size of its standard error.

'The selection equation (not reported) estimates the effects of selected variables on the probability of not working in 1975.

^Evaluation of effects at the sample mean of the dependent variable.

Table 10

Effects of Independent Variables on the Probability of Working in 1980  
for Puerto Rican Males Aged 25-64 Years in 1975

Variables	Single Equation		Two Equation <sup>1</sup>	
	Coefficients	EMPLOY <sup>2</sup>	Coefficient	EMPLOY <sup>1</sup>
Intercept	-.1712	-.0667	.3343	.1302
1980 residence: South and West (EQ 1)	.3163*	.1232	.3241*	.1262
Foreign born (EQ 1)	.1753*	.0683	.1907*	.0743
Chronic (return and repeat EQ1)	.0073	.0028	.0133	.0052
Head of household (EQ1)	.2708*	.1055	.2558*	.0996
Metropolitan area (EQ 1)	.0818	.0319	.0775	.0302
AGE	-.2283*	-.0889	-.2139	-.0833
Married (EQ1)	.1019	.0397	.0964	.0375
Did not complete high school (EQ 1)	-.3156*	-.1229	-.3807*	-.1482
Completed 1-3 years college (EQ 1)	.4545*	.1770	.4271*	.1663
Completed 4 years college (EQ 1)	.5756*	.2242	.5430*	.2114
Did not complete high school (X) migrant (EQ1)	-.4365*	-.1700	-.4102	-.1597
Completed 1-3 years college (X) migrant (EQ 1)	-.3745	-.1458	-.3549	-.1382
Completed 4 years college (X) migrant (EQ 1)	-.0223	-.0087	-.0227	-.0088
First time movers (EQ 1)	.5687*	.2215	.5379	.2095
Abroad in 1975 (EQ 1)	.4530*	.1764	.4203	.1637
Foreign born interstate mover (EQ 1)	.4645*	.1809	.4353	.1695
RHO			-.3744	
-2 log likelihood	2,819		13,095	
Degrees of freedom	1,347		1,339	
Observations	2,318		9,181	
Average probability of employment		.4129		.4129

\*Indicates that the coefficient is twice the size of its standard error.

<sup>1</sup>The selection equation (not shown) estimates the effects of selected independent variables on the probability of not working in 1975.

<sup>2</sup>Evaluation of effects at the sample mean of the dependent variable.

TABLE 11

Effects of Independent Variables on the Probability of Working in 1980  
for White Males Aged 25-64 Years in 1975

Variables	Single Equation		Two Equation <sup>1</sup>	
	Coefficients	EMPLOY <sup>2</sup>	Coefficient	EMPLOY <sup>2</sup>
Intercept	.4421*	.1761	-1.4422*	-.5746
1980 residence: South (EQ 1)	.0545	.0217	.1157*	.0461
1980 residence: West (EQ 1)	-.1059	-.0422	.0507	.0202
Return migrant (EQ 1)	.1612	.0642	.0558	.0222
Repeat migrant (EQ 1)	.1598	.0637	.0592	.0236
Head of household (EQ 1)	.6871*	.2737	.2780*	.1108
Metropolitan area (EQ 1)	.0893*	.0356	.0458	.0182
AGE	-.5405*	-.2153	-.2866*	-.1142
Married (EQ 1)	.1633*	.0651	.0815*	.0325
Did not complete high school (EQ 1)	-.2819*	-.1123	.1301*	.0518
Completed 1-3 years college (EQ 1)	.3318*	.1322	.1480*	.0590
Completed 4 years college (EQ 1)	.6761*	.2694	.3559*	.1418
Did not complete high school (X) migrant (EQ 1)	-.1894	-.0755	-.0199	-.0079
Completed 1-3 years college (X) migrant (EQ 1)	-.1095	-.0436	-.0573	-.0288
Completed 4 years college (X) migrant (EQ 1)	.0075	.0030	-.0366	-.0146
1980 residence: South (X) interstate migrant (EQ 1)	-.0733	-.0292	-.1029*	-.0410
1980 residence: South (X) abroad in 1975 (EQ 1)	.1007	.0401	-.0577	-.0230
1975 residence: South (X) interstate migrant (EQ 1)	-.0305	-.0122	.0733	.0292
1980 residence: West (X) interstate migrant (EQ 1)	-.0311	-.0124	-.0926	-.0369
1980 residence: West (X) abroad in 1975 (EQ 1)	-.1265	-.0504	-.1241	-.0494
1975 residence: West (X) interstate migrant (EQ 1)	-.1042	-.0415	.0495	.0197
First time movers (EQ 1)	.2593	.1033	.0883	.0353
Abroad in 1975 (EQ 1)	.4199*	.1673	.1371*	.0546
RHO			.9729*	
-2 log likelihood	5,105		38,439	
Degrees of freedom	3,647		3,639	
Observations	5,433		47,721	
Average probability of employment in 1980		.5205		.5205

\*Indicates that the coefficient is twice the size of its standard error.

<sup>1</sup>The selection equation (not shown) estimates the effects of selected independent variables on the probability of not working in 1975.

<sup>2</sup>Evaluation of effects at the sample mean of the dependent variable.