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A COMPARATIVE ANALYSIS OF THE LABOR FORCE ACTIVITIES OF ETHNIC POPULATIONS

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A COMPARATIVE ANALYSIS OF THE LABOR FORCE ACTIVITIES OF ETHNIC POPULATIONS BY GENDER

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ABSTRACT

This paper presents a comparative analysis of the labor force activities of men and women drawn from the black, American Indian, Asian, Mexican, Puerto-Rican, other Hispanic and non-Hispanic white population of the United States. Our objectives are to: 1) document variation in the annualized probability of employment, unemployment, and nonparticipation for these groups; and 2) analyze transition rates between labor force statuses of employment, unemployment, and nonparticipation using multistate event history methods that control for selected demographic, socioeconomic, household, and residence characteristics of respondents.

KEYWORDS:

SIPP, Labor Force Transitions, Race and Ethnicity, Gender

INTRODUCTION

This paper uses data from the 1984 through 1987 panels of the Survey of Income and Program Participation (SIPP) to compare the labor force activities of men and women drawn from the black, American Indian, Asian, Mexican, Puerto Rican, other Hispanic, and non-Hispanic white population of the United States. Our goals are to: 1) document exposure to episodes of employment, unemployment, and nonparticipation during a one-year period; and 2) analyze transition rates between labor force statuses of employment, unemployment, and nonparticipation using multistate event history methods that control for selected demographic, socioeconomic, household, and residence characteristics of respondents.

The paper is organized as follows. We begin with a summary of the literature and major issues. We next describe data sources, characteristics of the sample, and the analytic methods employed. We then present findings in two sections. The first section of findings presents descriptive results on the incidence and duration of exposure to particular labor force states during a one-year period. The second section of findings models group differences in transitions to and from particular labor force states using multistate event history methods. We conclude with a discussion of limitations and implications of the analysis.

BACKGROUND

Blacks have been, without question, the most intensely studied of all minority groups in the U.S. The size of this group, its long history of residence in the U.S., and the peculiar dynamics of race relations shaped by its mode of insertion into the economy has influenced both the volume of research and the kinds of questions addressed by researchers. In recent years, research on the labor force activities of other ethnic minorities has expanded appreciably, which has prompted researchers to ask if certain minorities encounter unique disadvantages in the labor market (Farley 1990; Bean and Tienda 1987; Snipp 1989; Lieberson and Waters 1988).

There are several reasons why a comparative analysis of minority experience might prove fruitful. First, the wave of immigration following changes in immigration laws since the mid-1960s has rapidly changed the ethnic composition of the U.S. minority population. As a result, the percentage of the minority population that is black declined from approximately 67 percent in 1970 to 58 percent in 1980 and 49 percent in 1990 (U.S. Bureau of the Census 1991). The increased ethnic diversity of the minority population as a whole suggests that the labor market experiences of any particular ethnic group may not be representative of the labor market experiences of other groups. Second, the massive influx of immigrants, both legal and illegal, has led some to ask if newcomers have become a substitute for native born minorities, perhaps reflecting employer preferences and immigrants' willingness to work at lower wages (Bailey and Waldinger 1991, 1992). Third, recent work has found wide ethnic disparities in unemployment and nonparticipation, with joblessness low for whites and Asians (except perhaps Southeast Asians), intermediate for Mexicans and other Hispanics, and high for blacks, American Indians, and Puerto Ricans (Hirschman 1988; Lieberson and Waters 1988; Snipp 1989; Farley 1990; Bean and Tienda 1987; Clogg, Eliason, and Wahl 1990; Moss and Tilly 1991; Fernandez 1992). These findings suggest that blacks are not the only group whose members experience difficulties in securing employment. Finally, differences in labor force status may also be due to structural shifts in employment opportunities across industry, occupation, region, metropolitan, and nonmetropolitan areas (Kasarda 1985). These considerations suggest that we need to know more about how and why minority group membership, coupled with variation in resources available to minorities (both individually and collectively), geographic concentration, historical mode of insertion into the U.S. labor market, and intergroup dynamics have affected labor market outcomes for minorities.

A number of competing theories purport to explain ethnic group differences in labor force status. Frequently cited explanations include those stressing mismatches in occupational-related skills or discrepancies in the spatial distribution of employment and residence (Kasarda 1985; Wilson 1987, 1991; Moss and Tilly 1991; Levy 1987); economic polarization due to industrial restructuring (Levy 1987; Harrison and Bluestone 1988); changes in labor demand due to shifting modes of production in manufacturing (Scott 1988; Johnson and Oliver 1991); ghetto culture and the third world origin of immigrants affecting the composition of labor supply (Mead 1986, 1992; Welch 1990); employer

practices with respect to ethnic and gender queuing (Kirschenman and Neckerman 1990; Neckerman and Kirschenman 1991; Braddock and McPartland 1987; Turner, Fix, and Struyk 1991; Zwerling and Silver 1992; Lieberson 1980; Reskin and Roos 1990); and the expansion of ethnic enclaves that exploit social and cultural capital in the pursuit of particular labor market outcomes (Sanders and Nee 1987; Wilson and Martin 1982; Portes and Jensen 1989; Bailey and Waldinger 1991). Although this literature informs our analyses and our interpretation of results, we make no attempt to test such hypotheses primarily because our main goal is descriptive, that is, to provide stylized "facts" about the labor force status of ethnic and gender groups.

CURRENT ANALYSIS

This paper is part of a larger project on the labor market experiences of ethnic populations that seeks to identify factors associated with group differences in labor market outcomes. Our use of data from SIPP lets us address different aspects of the labor market experiences of minorities than previous work. Nearly all previous work has employed cross-sectional data, which confounds the experiences of jobless individuals (either unemployed or nonparticipant) at different durations and which excludes individuals who exited joblessness prior to interview. The few exceptions have been limited to comparisons of blacks and whites (see Ryscavage and Short 1986; DiPrete 1987; Martini 1988; Corcoran and Hill 1979, 1980; U.S. Bureau of the Census 1989; Lichter, Landry and Clogg 1991).

We use SIPP to describe the labor force dynamics of men and women in the white, black, American Indian, Asian, Mexican, Puerto Rican, and other Hispanic population of the U.S. In particular, we use these data to 1) document the duration of spells of employment, unemployment, and nonparticipation; 2) assess the incidence of transitions into and out of these labor force states by gender and race and ethnicity; and 3) analyze the association between selected demographic, socioeconomic, household, labor market and residence characteristics of respondents and rates of transition into and out of employment, unemployment, and nonparticipation.

A unique aspect of this paper is its emphasis on labor force dynamics and its comparative focus by gender and ethnicity. This emphasis builds upon recent critiques, especially Kiefer's (1988) assertion that understanding the labor force trajectories of minorities requires careful attention to the dynamic processes underlying the incidence, occurrence, and duration of spells of employment and joblessness. Our analyses contribute to this growing literature on labor force dynamics by assessing the short-term stability of labor force activities by women and minorities with greater precision than previous research.

Data and Methods

The Survey of Income and Program Participation (SIPP) was designed by the Bureau of the Census to allow the detailed study of income dynamics. The survey

contains both retrospective and prospective data on the labor force activities over a 28 to 36 month time frame for a representative sample of the U.S. population. Retrospective data include information on education, job training, disability, marriage, fertility, migration, and participation in transfer and welfare programs. Prospective data include information on household structure, income (by type and source), taxes, employee benefits, liabilities, and assets. These data are thus particularly well suited for studying the incidence, timing, and duration of employment, unemployment, and nonparticipation for ethnic and gender groups.

Several comparisons of labor force survey data suggest that the SIPP captures certain types of statuses and flows better than other surveys, including longitudinal surveys. For example, Ryscavage and Feldman-Harkins (1987) find that employment flows based on the SIPP are generally smaller than those based on the CPS, and that the SIPP flows are more consistent with net changes in labor force stock estimates. Hill and Hill (1986) report that the SIPP interview schedule produces a more complete accounting of unemployment than does the PSID schedule, with unemployment estimates approximately 15% higher in the SIPP than in the PSID.

The temporal precision of SIPP labor force data is high. In each wave, sample respondents are asked about weekly labor force activities for the previous four-month period. The availability of such a substantial amount of labor force information on a weekly basis is a major advantage of SIPP. Although some have argued that weekly data provides excessive detail, our experience suggests that such weekly data provides considerable flexibility in aggregating by time and, in particular, lets one identify short spells of labor force activity that may be lost in more aggregated data.

Although the SIPP offers distinct advantages over other surveys, it is not without limitations. Unlike the CPS, the SIPP lacks data on job search activities for those who are employed and current activities for those not in the labor force. The SIPP is also subject to standard sources of nonsampling error in longitudinal surveys, including sample attrition, respondent nonresponse, panel conditioning, proxy report bias, response variability (particularly at the junction of waves), and matching and coding errors (see Kasprzyk and Herriot 1986; Nelson, Bowie and Walker 1987; McMillen and Kasprzyk 1986; Kalton, Hill and Miller 1990). Some of these problems are difficult to address because of limited side information, others are inherent in a longitudinal design, and yet others (e.g., right censoring and sample attrition) can be addressed statistically.

We analyze data from the 1984 through 1987 panels of SIPP for respondents ever aged 20 to 64 who were not in school and who had valid labor force data. Although labor force data are collected for persons 16 years of age and over, most individuals aged 16 to 20 are in school and are not full-time participants in the labor force.[1] We

[1] Auxiliary tabulations (not shown) show that individuals under 24 years of age and enrolled in school have more labor force transitions than any other group. Most of these transitions involved moves to and from employment and nonparticipation.

exclude these respondents although we acknowledge that ethnic and gender group differences in stable employment later in the life cycle may depend on patterns established at earlier ages (see, e.g., Robinson 1989).

Table 1 reports synthetic life-table estimates of sample retention for men and women ever 20 to 64 years of age and not in school during their participation in one of the SIPP panels for each ethnic and gender group.[2] For convenience, whites were sampled with probability .30 for the 1984 SIPP panel, .40 for 1985 panel, and .60 for the 1986 and 1987 panels. The probability of retention by week 52 ranges from .714 for other Hispanic men to .818 for white women. The probability of retention is slightly higher in the 1986 and 1987 panels (results not shown in Table 1), partly as a result of changes in the SIPP sample design. By week 122, the probability of retention is affected as much by differences across panel in the length of the observation period as by sample attrition. Finally, note that sample sizes are small for some groups --- in particular, Puerto Ricans and American Indians --- which limits the accuracy of some of our results.

RESULTS

A. Annualized Probability of Exposure to Different Labor Force States

Our objective in this section is to document variation by gender and race and ethnicity in episodes of employment, unemployment, and nonparticipation during a fifth-two week period. These analyses address two issues. First, how do ethnic and gender groups differ in the incidence and extent of episodes of employment, unemployment and nonparticipation during a one-year period? And second, what is the average annual duration in each labor force state?

Results in this section examine the labor force experiences of individuals who remained in SIPP for at least 52 weeks. We calibrate our results by reporting estimates annualized to a one-year reference period. Because each SIPP panel covers different calendar years, ranging from June 1983 through April 1989, and because respondents can enter each panel while the survey is in progress, the observation period for a respondent covers the first fifty-two weeks of a respondent's participation in SIPP.

Table 2 presents the percentage distribution of respondents by change in labor force status using the traditional classification of labor force statuses. Since SIPP tracks labor force status to the nearest week, Table 2 supplies unique information on the incidence, character, and stability of labor force spells, including spells of short duration.

The results suggest strong variation in labor force stability by ethnicity and gender. The first column shows that 73.8 percent of white men and 65.5 percent of white women experienced no change in status. Similarly large percentages of Asian men

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[2] These estimates are synthetic because we have combined samples from different panels of different lengths and with different retention rates.

and women experienced no change in labor force status. By contrast, far fewer American Indian men and women experienced no change in status.

The second column gives the percent employed the entire year for those who experienced no change in status. (The denominator for these percentages consists of employed, unemployed, and nonparticipants who experienced no change in status.) Empirically, the main point of contrast in column 2 is between stable employed and stable nonparticipation, since, as shown below, fewer than one percent of any group were unemployed all year. Over 90 percent of white men, Mexican men, other Hispanic men, and Asian men who experienced no change in status were also employed the entire year. The corresponding percentages range between 80 and 84 percent for black men, Puerto Rican men, and American men, which reflect higher levels of nonparticipation in these groups.

The third and fourth columns of Table 2 examine respondents who have experienced one or more changes in status during the respondent's first year of participation in SIPP. Differences by gender and ethnic groups are generally smaller than those in the first two columns. Except for American Indian men, the mean number of changes in labor force status occurring during a year ranges from 2.3 for Asian men to 2.9 for black men and Puerto Rican men. The mean number of changes for American Indians exceed three for both men and women. The absence of large group differences does not necessarily imply that men and women and ethnic groups share common origin/destination states. The fact that the observation period is limited partly accounts for the similarity between groups since only a small number of transitions will typically be observed during a one-year period.

Although Table 2 gives some sense of the overall stability in the labor force experiences of SIPP respondents, it says little about the stability of those who are employed, unemployed, or out of the labor force. Tables 3 through 5 supply this information by characterizing the stability of the labor force experiences separately for employment, unemployment, and nonparticipation by race, ethnicity, and gender.

Table 3 reports the percentage distribution by ethnicity and gender for those ever and never employed during the first fifty-two weeks of participation in SIPP. The percentages in column 1 show that employment is the most common experienced of both men and women during a one-year period. More than 90 percent of white men, Mexican men, other Hispanic men, and Asian men were employed at least one week; by contrast, only about 83 percent of black men, Puerto Rican men, and American Indian men were employed at least one week. Over two-thirds of Asian men and white men were employed throughout the entire period, while the corresponding percentages for the other groups range from 41 percent for American Indian men to 58 percent for men in the other Hispanic group. Hispanic men, except Puerto Ricans, have a higher percentage ever employed, in part because a substantial number of these men work intermittently, and like whites and Asians, accumulate more weeks worked during the year. The percentage of women employed at least one week during a year is about

twenty points lower than that of men. Much of this difference is due to the fact that women who were employed are less likely than men to work all 52 weeks. Among those working, men clearly spent more weeks working than did women, but the differences in column (2) are smaller than might be expected. Selection may play a role here since women with strong attachments to the labor market may have longer durations of employment than women with weaker attachments.

Table 4 reports the percentage of individuals ever and never unemployed during a one-year period by race, ethnicity, and gender. Episodes of unemployment are substantially higher for men and women in our black, Hispanic, and American Indian samples than for men and women in our white and Asian samples (column 4). The ranking of ethnic groups on the basis of the percentage ever unemployed is practically identical for men and women, with American Indians having the highest percentage and whites the lowest percentage (column 1). Among those unemployed at least one week, men spent more weeks, on average, unemployed than women. Following standard practice, we defined respondents as unemployed if they were without a job but were looking for employment. Hence, the observed gender difference in weeks spent unemployed could reflect greater difficulties by males in finding employment or a higher level of commitment by males to the labor force, as indicated by their search behavior. Black men and Puerto Rican men spent more weeks looking for work than other men, and averaged five more weeks looking for work than white men. Similarly, black women, Puerto Rican women, and other Hispanic women spent an average of five weeks more looking for work than white women. In practically all instances, the percentage of individuals unemployed for the entire year is less than five-tenths of a percentage point (column 3). This indicates that while spells of unemployment are common, few individuals experience long spells. However, these results indicate that minority men and women (except for Asian men and women) not only have a higher probability of unemployment, but also tend to be unemployed longer.

Table 5 reports the percentage of individuals ever or never nonparticipants for a one-year period by ethnic group and gender. As one would expect, nonparticipation is substantially higher for women than men, ranging from 44 percent for white women to 67 percent for Puerto Rican women, versus 14 percent for white men to 36 percent for American Indian men. Not only are women more likely to have an episode of nonparticipation than men, but their average duration of nonparticipation is nine to twelve weeks longer than that for men, and the percentage who remain out of the labor force for the entire year is two to seven times that of men in the same ethnic group. The higher incidence of nonparticipation among women undoubtedly reflects the greater demands of other responsibilities, and, as shown below, results in women moving more frequently between states of employment and nonparticipation than men.

The descriptive results on employment, unemployment and nonparticipation in Tables 3--5 provide information on the gross prevalence of these labor force statuses but say little about when spells begin relative to the one-year reference period and whether they are still in progress during this period. The results in Tables 6--8 provide such

information by distinguishing censored spells from completed spells and by reporting the distribution of completed labor force spells.

Table 6 indicates that, except for American Indians, over 50 percent of all labor force spells were in progress (left censored) at the initiation of respondents' participation in SIPP, with the percentages being higher for men than women. American Indian men and women had the highest percentage of completed spells, following by black men and women. However, interpreting these results requires care since limiting the observation period to a one-year interval substantially reduces the number of completed spells one is likely to observe.

Table 7 presents the distribution and average duration of completed labor force spells by type of spell. Completed spells of unemployment are common for both men and women and tend to be shorter in duration than completed spells of employment or nonparticipation. Completed spells of employment are more prevalent for white men, Mexican men, and other Hispanic men than completed spells of nonparticipation. By contrast, the reverse is true for black men, Puerto Rican men, American Indian men, and Asian men. Among women, completed spells of nonparticipation are clearly more prevalent than completed spells of employment. Finally, there are only negligible differences in the average duration of completed spells across types of spells.

The results reported in Table 8 focus on an important but frequently ignored aspect of labor force dynamics, namely, transitions to and from different labor force states (see Tienda et al. 1992 for an exception). A change in labor force status involves both an origin and a destination state, which, when viewed as a unit, provides a useful means of studying the underlying mechanisms generating change. For example, men in the prime working ages are expected to be in the labor force, either working or actively seeking work. This would suggest that transitions between employment and unemployment should be more prevalent for these men than transitions involving nonparticipation; hence, exiting unemployment by entering a spell of employment should be more likely than by entering a spell of nonparticipation. Conversely, spells of unemployment should be more likely to end in employment than in nonparticipation. Similarly, consider the transition from employment to nonparticipation. For young men, such a transitions may represent a temporary exit from the labor force, perhaps because of disability; for older men, entry into nonparticipation will become increasingly prevalent with age as men exit the labor force permanently (Robinson 1989).

One might also expect a link between unemployment and nonparticipation, with the volume of movement from unemployment to nonparticipation a consequence either of discouragement following an unsuccessful job search or of temporary exits from the labor force because of the need to pursue other activities (such as schooling, illnesses, family responsibilities, etc.). On the other hand, individuals may move from nonparticipation to unemployment as they re-enter the labor force following a short absence, or, in the case of the young, if they are new entrants into the labor force. These linkages between unemployment and nonparticipation point to a major weakness in the

traditional approach to measuring labor force activities, which ignores individuals who may desire a job but are no longer looking because no jobs are available for someone with their background, experience, and labor market qualifications (Tienda et al. 1992).

The results reported in Table 8 describe the pattern of flows between origin and destination states for completed spells, that is, spells that were initiated and completed during the fifty-two week reference period. Since there are only two destination states for each origin state, we report percentages for only one destination state for each origin state since percentages for the other destination states are the complement of reported percentages. Among men, employment spells are substantially more likely to end in unemployment than nonparticipation; similarly, unemployment spells are more likely to end in employment than nonparticipation. However, the percentage of unemployment spells ending in employment is at least 15 percent lower for black men, Puerto Rican men, and American Indian men than for white men, Mexican men, and other Hispanic men.

A large percentage of nonparticipation spells end in employment rather than unemployment, particularly for white men, Mexican men, other Hispanic men, and Asian men. One possibility is that many of these men had very short job searches, so short that respondents did not perceive themselves as having looked for work in any meaningful way. However, some of these individuals may be waiting to report to a new job and thus are no longer looking. Alternatively, reports of such transitions may have been provided in proxy reports by other household members, which may upwardly biased estimates of the transition from nonparticipation to employment.

The unemployment to nonparticipation sequence observed for black men, Puerto Rican men, and American Indian men is what one might expect if job search was unsuccessful. Clark and Summers (1979) refer to the nonparticipation to unemployment flow as "re-entrant" unemployment, in which individuals interrupt long unemployment spells with short spells of nonparticipation.[3]

The destinations of completed spells for women differ from those reported for men in several respects. Among women, spells of employment are much more likely to end in nonparticipation, with the exception of black and Puerto Rican women. Similarly, spells of unemployment are more likely to end in nonparticipation, with the exception of white and Asian women. Finally, spells of nonparticipation are more likely to end in employment for whites, other Hispanics, and Asians; by contrast, spells of nonparticipation are more likely to end in unemployment for blacks, Puerto Ricans, and American Indians. The unemployment/nonparticipation linkages are similar to those observed for men and probably for many of the same reasons.

The results presented in this section can be summarized as follows. Participation

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[3] The link between unemployment, discouragement, and nonparticipation is examined in Tienda, Wu, Hsueh and Wilson (1992).

by men in the labor force is substantially higher than women, as indicated by higher levels of employment, lower proportions ever experiencing nonparticipation, fewer weeks of nonparticipation, and higher proportions entering employment from unemployment or nonparticipation. Substantial proportions of white men, Mexican men, other Hispanic men, and Asian men were employed at least one week during the year. These men also spent more time employed and were more likely to exit unemployment or nonparticipation through employment than black men, Puerto Rican men, or American Indian men. We note, however, that the unemployment experiences of Mexican men and other Hispanic men were more like those of black men, Puerto Rican men, and American Indian men, but that the nonparticipation experiences of Mexican men and other Hispanic men are more similar to those of white men. Many black men, Puerto Rican men, and American Indian men had unstable work experiences during the year, characterized by intermittent patterns of work, unemployment and nonparticipation, by more weeks unemployed, and by more weeks spent not in the labor force. By contrast, Mexican men and other Hispanic men were more actively involved in the labor force, although they too experienced intermittent patterns of work and unemployment.

Women are not only less likely to be in the labor force than men, but are more likely to transit between employment and nonparticipation than between either of those states and unemployment. In general, ethnic group differences are less pronounced for women, possibly because employment opportunities available to women are similar and possibly because women, regardless of ethnicity, are more likely to experience disruptions in work experience due to child care and other family responsibilities. Two findings are especially worth noting. First, in contrast to the pattern observed for men, the percentages of black women ever employed and ever a nonparticipant are similar to those of white women. Second, the percentage of Mexican women ever unemployed and ever a nonparticipant is more similar to that of Puerto Ricans than any other group.

B. Ethnic Group Differences in Labor Force Transitions

What accounts for differences in the labor force experiences of ethnic groups? To address this question, we estimate hazard models for the transition to and from particular labor force states after controlling for relevant individual, family, household, and residential characteristics. We focus particular attention on compositional differences by race and ethnicity in characteristics known to affect labor force behavior. For example, we hypothesize that visits to jobless states, which our descriptive analyses suggest are prevalent for black men, Puerto Rican men, and American Indian men, increase the risk of visiting such a state in the future. Similarly, among women, differences by ethnicity in the presence of pre-school age children may affect transitions into or out of the labor force. Group differences in the age and education attainment of members are also likely to affect the relative risk of particular transitions. Hispanic men, for example, may be at a greater risk of movements from employment to unemployment because of lower average levels of education. Similarly, occupation and industry of employment may have substantial effects on the risk of transition into employment or

unemployment. These examples, while not exhaustive, suggest why one might observe differences in the labor force status of ethnic groups when other variables are not controlled.

The sample used in the hazard analyses differs in several ways from the sample used in the descriptive analyses. We restricted the sample to respondents who were interviewed in the first wave of a SIPP panel because respondents who entered a SIPP panel after the first wave are missing data concerning place of residence, such as whether they live in a metropolitan area and/or a central city. The observation period used in the analyses extends to all continuous waves of participation, from a minimum of one wave (17-18 weeks) to a maximum of seven waves for the 1986 and 1987 panels, eight for the 1985 panel and nine for the 1984 panel. Thus, once a first wave respondent leaves a panel for any reason, we treat the respondent's participation in SIPP in all subsequent periods as censored. The unit of observation is a labor force spell initiated during respondents' participation in SIPP. Thus, we exclude left-censored spells and thus retain only completed and right censored spells.

We employ a multistate hazard model that specifies the transition rate from labor force state j to labor force state k as a function of duration spent in state and covariates observed for respondent i:

$$\log r_{ijk}(t) = \alpha_{jk} + \sum_{m=1}^{M} \beta_{jk} X_{ijk} + \gamma_{jk} t \quad , \qquad (1)$$

where i indexes individuals; j is the origin state; k is the destination state; $\mathbf{X}$ is a vector of time-invariant covariates of dimension M; t denotes duration in state j; and α_{jk}, β_{jk} and γ_{jk} are parameters to be estimated. [See Table A1 for a description of the covariates.] Equation (1) specifies a Gompertz model that assumes that the transition rate from state j to state k increases or decreases exponentially with duration. In estimating this model, we make a number of assumptions. First, we assume that the effect of duration does not vary with race and ethnicity. Although the univariate results above cast doubt on this assumption, we were unable to reject it for nearly all groups and transitions in our multivariate analysis. (The exceptions were unemployment spells for black males and nonparticipation spells for Hispanic women). Second, we measure values of covariates at the start of spells. This constrains the values of the covariates to be fixed within a spell but lets the values of the covariates vary across spells for a respondent. This assumption is made primarily on practical grounds due to difficulties associated with augmenting public SIPP files with confidential geographic data while the first author was in residence at the Bureau of the Census.

Labor Force Transitions of Men. Are effects of ethnic group membership smaller after controlling for observed characteristics of respondents? We examine this question in Table 9, which reports gross and effects of ethnic group membership on labor force transition rates states for men 20 to 64 years of age and not in school. Estimates in column (1) give the effect of ethnic group membership relative to the effect for white

men when no other variables are in the model. Estimates in column (2) give effects of race and ethnicity after controlling for variables that capture design features of SIPP, including whether a transition occurred at the seam of two waves, whether the information for the respondent was imputed or provided by a proxy report, and a period variable.[4]

For most transitions, the size and statistical significance of effects of race and ethnicity are not changed substantially between columns (1) and (2).[5] One exception is that estimates for Puerto Rican men and other Hispanic men increase substantially for the transition from unemployment to nonparticipation; similarly, the estimate for Puerto Rican men increases for the transition from nonparticipation to unemployment.

Column (3) reports estimates when we include all observed covariates, including covariates for design effects. Comparing estimates in columns (2) and (3) lets us assess the substantive significance of the observed characteristics of respondents, that is, if controlling for all observed covariates accounts for the difference observed between white men and men in other race and ethnic groups. While the answer to this question is clearly no for many groups and transitions, many effects for other groups and transitions are no longer statistically significant or are substantially reduced in size in column (3). Note, however, that covariation among sets of variables can result in no change in estimated effects if excluding a particular set of variables raises the magnitude of effects of the remaining sets of variables.

Several patterns emerge when comparing estimates in columns (2) and (3). First, 8 of the 36 transition-specific estimates for men are not statistically significant in either column. Second, 12 of 36 estimates are statistically significant in columns (2) and (3). Of these 12, 8 estimates change magnitude by a factor of 10% or more. Third, 14 of 36 estimates are significant in column (2) but not significant in column (3). Finally, 2 of 36 estimates are not significant in column (2) but attain significance in column (3).

Estimates in columns (4)-(8) give the effects of ethnic group membership when the indicated set of variables is dropped from the model in column (3). There is little consistency in the effect of different sets of variables across labor force transitions, with the possible exception of previous labor force status for black men. This is surprising given that previous labor force status, labor market position, human capital attributes, and household (family) characteristics have strong effects on labor force transition rates

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[4] The period variable is intended to control for macro-economic trends that affected employment and labor force participation during the 1983-89 period. However, our decision to fix the values of covariates within a spell is least satisfactory for the design variables, especially for the variables for seam and period effects. In future analyses, we intend to explore other time-varying measures for seam and period effects.

[5] We characterize a change in an effect as "substantial" if an effect changes significance or if the size of a significant effect changes by 10 percent or more.

(see Appendix Tables A2 and A3).

In comparing effects of ethnicity in columns (2)-(8) for Table 9 as a whole, note that many effects of ethnicity in the transitions from employment to unemployment and from employment to nonparticipation are significant in column (2) or in columns (4)-(8) and that only a few of these effects lose significance in column (3). This pattern also roughly characterizes transitions into employment, i.e., transitions from unemployment into employment and from nonparticipation into employment. These results suggest that the full model in column (3) explains relatively little of the differential between white men and minority men for transitions into and out of employment. By contrast, note that for transitions from unemployment into nonparticipation and from nonparticipation into unemployment, a number of effects of ethnicity that are significant in column (2) or columns (4)--(8) lose significance in column (3).

For many men, the transition from employment to unemployment is affected only marginally by the observed covariates. Exceptions are black men, Mexican men, and Puerto Rican men. For black men, prior labor force status, human capital attributes, household characteristics, and residence substantially reduce black/white differences in the transition from employment to unemployment. Labor market position and household characteristics have significant effects on Mexican/white differences, and these variables also account for some of the differences between Puerto Rican men and white men. Column (3) also shows that other Hispanic men and Asian men have substantially lower rates relative to white men, but this differences is not appreciably affected by the covariates. American Indian men have much higher rates relative to white men, but this difference is also not affected by the covariates.

For the transition from employment to nonparticipation, only three effects in column (3) are statistically significant. Prior labor force experience emerges as a key explanatory factor for this transition. After controlling for this variable, transition rates are significantly lower for Asian men than for white men, but significantly higher for black men and American Indian men than white men.

The model in column (3) is most effective in explaining differences between white men and minority men for the two types of transition out of unemployment. For the transition from unemployment to employment , the effect of ethnicity is significant for all racial and ethnic groups in columns (4)-(8); in column (3), only three of these effects remains significant. For the transition from unemployment to nonparticipation, the effect of ethnicity varies in significance with race and ethnicity in columns (4)-(8), but only the effect for American Indian men remains significant in column (3).

For the transition from nonparticipation to employment, the results in column (3) show that black men and Mexican men have significantly higher rates than white men. A substantial portion of the effect of ethnicity for black men, Mexican men, and Asian men is due to their prior labor force experience. Human capital also accounts for some of the effect of ethnicity for Mexican men.

For the transition from nonparticipation to unemployment, the results in column (3) show black men again have significantly higher rates than white men. Prior labor force experience again accounts for a substantial portion of the effect of ethnicity for black men, Mexican men, and American Indian men. Note in particular that the effect of ethnicity for Mexican men and American Indian men is highly significant when prior labor force experience is omitted from the model (columns 1, 2, and 4), but not significant when included in the model (column 3 and columns 5-8).

Labor Force Transitions of Women. Table 10 replicates the analyses of Table 9 for women. As for men, effects of ethnicity change little between columns (1) and (2); hence, adding variables capturing design aspects of SIPP does little to explain race and ethnic differences in labor force transition rates for women. A comparison of estimates in columns (2) and (3) also yields patterns similar to those for men. For example, 7 of the 36 transition-specific estimates are not statistically significant in either column, 12 other estimates are significant in both columns, 15 estimates are significant in column (2) but not in column (3), and the remaining 2 estimates are not significant in column (2) but attain significance in column (3). Overall, the model in column (3) is reasonably successful in explaining differences between white women and minority women for all transitions except the transition from unemployment to nonparticipation, and nonparticipation to unemployment. However, the model in column (3) represents little improvement on the model in column (2) for the transitions from employment to unemployment and from nonparticipation to unemployment. As for men, differences in transition rates for black women and white women remain significant in column (3), but estimated differences are also much smaller in column (3) than in column (2). Prior labor force status, followed by human capital and current labor market position explain some, but not all, differences in the labor force experiences of white women and minority women.[6]

DISCUSSION

Our results suggest several conclusions about the labor force experiences of ethnic populations. First, they confirm strong differences in labor force dynamics by race and ethnicity. For example, transition rates from joblessness to employment are lower for minorities than for whites, while transitions rates from one jobless state to another jobless state are higher for minorities than for whites. Men and women in the black and American Indian populations have especially low rates of entry into employment; these individuals also have high rates of exit from employment.

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[6] To evaluate the effect of differential attrition on our findings, we reestimated the model in column 8 of Tables 9 and 10 by treating attrition as a competing risk to the other labor force statuses of employment, unemployment, and nonparticipation. (Re-estimating the models in columns 1-7 in Tables 9 and 10 requires confidential residence data that are only available at the Bureau of the Census.) Results for this model (not reported) show that attrition has little effect on the effects of ethnicity for both men and women.

Second, our results suggest that prior labor force status explains some, but not all, of the difference in labor force transition rates observed between whites and minorities for both men and women (see also DiPrete 1987). Of all variables we examined, only those related to prior labor force status consistently accounted for part of the effect of ethnicity on the labor force transitions of men and women. Prior labor force status also had strong effects net of ethnicity for particular transitions. For example, a previous spell of joblessness is associated with both higher rates of entry into a subsequent spell of joblessness and lower rates of entry into a subsequent spell of employment.

Third, while variables other than prior labor force experience did little to explain differences between whites and minorities, these variables were nevertheless important for understanding variation in transition rates. For example, current labor force position has strong and significant effects on labor force transition rates in part because transitions between employment, unemployment, and nonparticipation vary strongly with occupation and industry.

The results from our multistate event history analyses rest on a number of assumptions. First, although we allow the values of covariates for an individual to vary across labor force spells for this individual, we constrained values of the covariates to be fixed within a given spell for this individual because of practical considerations stemming from our use of confidential data on the residential characteristics of SIPP respondents. Second, we have not controlled for the effects of several variables because we viewed them as potentially endogenous to the labor force process we analyze. These variables include household income, unemployment compensation, retirement and disability income, and benefits from means-tested programs. Finally, the analyses only consider spells that begin during a respondent's participation in SIPP; hence, we dropped all left-censored spells in these analyses. This implicitly assumes that the duration distribution of spells is conditionally independent of the sampling frame — that is, that the duration distribution of spells that are left-censored by the start of SIPP observation is the same as the duration distribution of spells that begin after the start of SIPP observation after adjusting for right censoring and for the covariates observed for respondents at the start of a spell. This assumption is potentially problematic because we observe no change in labor force status for many respondents. These respondents are thus observed with only a single spell, which will be both right and left censored. Hence, comparisons between the labor force experiences of whites and minorities will be biased if (1) whites and minorities differ in the likelihood of being observed in a labor force spell that is both left and right censored; and (2) the within-group distribution of left censored spells differs from the within-group distribution of non-left censored spells after correcting for right censoring and for observed covariates. We will examine this assumption more carefully in future research by incorporating retrospective information on left censored spells that is contained in SIPP topical modules.

More generally, our findings concerning the prevalence of joblessness among some minorities are consistent with those obtained by researchers using cross-sectional data, but we are better able to identify and describe dynamic aspects of an individual's

labor force trajectory that are associated with episodes of joblessness than previous research. For example, our results show considerable stability in the jobless population, but also reveal substantial movement between the labor force statuses of unemployment and nonparticipation that comprise joblessness. Although these findings are largely descriptive in nature and are not guided by a specific theoretical framework intended to test competing hypotheses, they nevertheless represent a useful and necessary first step in moving away from cross-sectional analyses of minority labor force experiences (Moss and Tilly 1991; Fernandez 1992).

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Table 1. Numbers and Retention Probabilities by Weeks in SIPP, Gender, and Ethnicity: Men and Women, Ages 20-64, and Not in School

Gender and Ethnicity	Weeks in Panels[1] 1 Number	1 Retention Probability	52 Number	52 Retention Probability	104 Number	104 Retention Probability	121 Number	121 Retention Probability	138 Number	138 Retention Probability	156 Number	156 Retention Probability
Men												
White[2,3]	16,973	1.000	13,580	.800	10,788	.636	9,720	.427	3,496	.206	1,021	.060
Black[2]	3,887	1.000	2,891	.744	2,039	.525	1,821	.469	931	.240	310	.080
Mexican	1,866	1.000	1,342	.719	961	.515	856	.459	393	.211	122	.065
Puerto Rican	330	1.000	240	.727	167	.506	139	.421	66	.200	29	.088
Other Hispanic	856	1.000	611	.714	443	.518	393	.459	169	.197	43	.050
American Indian	257	1.000	187	.728	124	.483	109	.424	47	.183	13	.051
Asian	984	1.000	762	.774	566	.575	513	.521	235	.239	76	.077
Women												
White[2,3]	17,453	1.000	14,281	.818	11,520	.660	10,418	.597	3,818	.219	1,113	.064
Black[2]	5,013	1.000	3,902	.778	2,880	.575	2,584	.516	1,286	.257	420	.084
Mexican	1,861	1.000	1,417	.761	1,088	.585	990	.532	457	.246	149	.080
Puerto Rican	417	1.000	318	.763	227	.544	205	.492	104	.249	32	.077
Other Hispanic	1,008	1.000	770	.764	564	.560	509	.505	230	.228	63	.063
American Indian	259	1.000	205	.792	145	.560	132	.510	51	.197	10	.039
Asian	1,092	1.000	861	.789	641	.587	576	.528	268	.245	107	.098

Source: 1984-1987 SIPP Panels

[1]The observation period (in weeks) for each panel is as follows: 1984, 156 (157); 1985, 138 (139); 1986 and 1987, 121 (122).

[2]Non-Hispanic origin

[3]A random sample of whites was selected from each panel according to the following sampling proportion: 1984, (.333); 1985, (.400); 1986 and 1987, (.600).

Table 2. Percentage Distribution of Respondents by Change in Labor Force Status During a Fifty-Two Week Period: Men and Women, Ages 20-64, and Not in School

Gender and Ethnicity	No Change in Status		One or More Changes in Status		Total Observations
	Percent	Percent Employed Entire Year	Percent	Mean Number of Changes	
Men					
White	73.8	91.7	26.2	2.44	13,580 (100%)
Black	60.6	84.4	39.4	2.87	2,891 (100%)
Mexican	61.1	92.0	38.9	2.69	1,342 (100%)
Puerto Rican	64.2	84.4	35.8	2.88	240 (100%)
Other Hispanic	64.2	90.6	35.8	2.37	611 (100%)
American Indian	50.8	80.0	49.2	3.48	187 (100%)
Asian	72.3	95.5	27.7	2.26	762 (100%)
Women					
White	65.5	67.4	36.5	2.37	14,281 (100%)
Black	57.5	69.3	42.5	2.93	3,902 (100%)
Mexican	54.5	56.0	45.5	2.73	1,417 (100%)
Puerto Rican	61.9	36.5	38.1	2.37	318 (100%)
Other Hispanic	57.8	63.1	42.2	2.58	770 (100%)
American Indian	47.8	51.0	52.2	3.15	205 (100%)
Asian	63.0	62.9	37.0	2.36	861 (100%)

Source: 1984-1987 SIPP Panels

Table 3. Percentage of Respondents Ever and Never Employed During a Fifty-Two Week Period: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Employed One or More Weeks (percent)				Never Employed	Total Observations
	Total		Employed All 52 Weeks	Employed 1 to 51 Weeks		
	Percent	Mean No. of Weeks				
	(1)	(2)	(3)	(4)	(5)	(6)
Men						
White	92.1	48.6	67.6	24.5	7.9	13,580
Black	83.4	45.4	51.2	32.2	16.6	2,891
Mexican	92.6	46.3	56.2	36.4	7.4	1,342
Puerto Rican	83.3	44.8	54.1	29.2	16.7	240
Other Hispanic	91.3	46.5	58.1	33.2	8.7	611
American Indian	83.4	41.1	40.6	42.8	16.6	187
Asian	93.3	48.4	69.0	24.3	6.7	762
Women						
White	73.3	45.1	42.8	30.5	26.7	14,281
Black	70.8	43.5	39.8	31.0	29.2	3,902
Mexican	65.8	40.8	40.5	25.3	34.2	1,417
Puerto Rican	47.5	41.2	22.6	24.9	52.5	318
Other Hispanic	71.2	42.2	36.5	34.7	28.8	770
American Indian	64.4	40.3	24.4	40.0	35.6	205
Asian	69.6	44.3	39.6	30.3	30.1	861

Note: The percentages in columns 1 and 5 sum (up to rounding error) to 100 percent; the percentages in columns 3 and 4 sum (up to rounding error) to the percentages in column 1.

Table 4. Percentage of Respondents Ever and Never Unemployed During a Fifty-Two Week Period: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Unemployed One or More Weeks (Percent)				Never Unemployed	Total Observations
	Total		Unemployed All 52 Wks	Unemployed 1 to 51 Weeks		
	Percent	Mean No. of Weeks				
	(1)	(2)	(3)	(4)	(5)	(6)
Men						
White	14.0	16.4	0.2	13.8	86.0	13,580
Black	26.0	22.8	0.7	25.3	73.9	2,891
Mexican	25.6	17.5	0.1	25.5	74.4	1,342
Puerto Rican	25.0	21.6	0.4	24.6	75.0	240
Other Hispanic	22.1	16.5	0.2	21.9	77.9	611
American Indian	36.3	19.7	0.0	36.3	36.6	187
Asian	15.0	18.2	0.2	14.8	85.0	762
Women						
White	12.7	12.9	0.0	12.7	87.3	14,281
Black	24.5	17.8	0.3	24.2	75.5	3,902
Mexican	21.4	14.2	0.1	21.3	78.6	1,417
Puerto Rican	20.1	16.2	0.0	20.1	79.9	318
Other Hispanic	18.7	17.7	0.0	18.7	81.3	770
American Indian	30.2	13.5	0.0	30.2	69.8	205
Asian	16.8	13.5	0.0	16.8	83.2	861

Note: The percentages in columns 1 and 5 sum (up to rounding error) to 100 percent; the percentages in columns 3 and 4 sum (up to rounding error) to the percentages in column 1.

Table 5. Percentage of Respondents Ever and Never Nonparticipants During a Fifty-Two Week Period: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Nonparticipant One or More Weeks (Percent)				Never a Nonparticipant	Total Observations
	Total		Nonparticipant All 52 Weeks	Nonparticipant 1 to 52 Weeks		
	Percent	Mean No. of Weeks				
	(1)	(2)	(3)	(4)	(5)	(6)
Men						
White	13.7	32.6	6.0	7.7	85.3	13,580
Black	25.1	32.0	8.8	16.3	74.9	2,891
Mexican	17.1	27.1	4.8	12.3	82.9	1,342
Puerto Rican	25.8	34.5	10.0	15.8	74.2	240
Other Hispanic	19.5	29.7	6.0	13.5	80.5	611
American Indian	36.4	28.7	10.2	26.2	63.6	187
Asian	15.2	26.6	3.0	12.2	84.8	762
Women						
White	44.2	39.0	20.7	23.5	55.8	14,281
Black	45.0	37.1	17.4	27.6	55.0	3,902
Mexican	56.7	39.0	23.9	32.8	43.3	1,417
Puerto Rican	66.7	43.8	39.3	27.4	33.3	318
Other Hispanic	49.9	37.2	21.3	28.6	50.1	770
American Indian	58.5	37.4	23.4	35.1	41.5	205
Asian	48.9	38.8	23.3	25.6	51.1	861

Note: The percentages in columns 1 and 5 sum (up to rounding error) to 100 percent; the percentages in columns 3 and 4 sum (up to rounding error) to the percentages in column 1.

Table 6. Percentage Distribution of Censored and Completed Labor Force Spells: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Distribution of Labor Force Spells						
	Total Spells	Percent					
		Left Censored Spells	Right Censored Spells	Completed Spells			
				Total	Number		
					(1)	(2)	(3)
Men							
White	20,280	68.0	12.1	19.9	8.1	3.9	8.0
Black	5,575	53.3	15.6	31.2	9.9	5.4	15.8
Mexican	2,413	56.4	16.2	27.4	11.1	5.6	10.7
Puerto Rican	446	54.9	15.5	29.6	10.1	5.4	14.1
Other Hispanic	1,025	61.2	17.7	21.2	10.2	4.2	6.7
American Indian	456	42.3	16.9	40.8	12.3	8.3	20.2
Asian	1,168	66.6	14.7	18.7	8.9	3.9	5.9
Women							
White	23,485	62.0	15.4	22.6	9.5	4.5	8.6
Black	7,976	50.5	16.3	33.2	11.3	5.8	16.1
Mexican	2,765	52.5	17.3	20.3	11.8	6.2	12.2
Puerto Rican	532	61.5	15.2	23.3	11.1	4.1	8.1
Other Hispanic	1,389	57.1	18.5	24.4	10.7	5.1	8.6
American Indian	497	42.5	16.5	41.1	13.3	7.9	19.9
Asian	1,463	60.6	17.2	22.2	9.7	4.6	7.9

Table 7. Percentage Distribution of Completed Labor Force Spells by Type and Duration: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Total Completed Spells		Type of Completed Spell					
			Employment		Unemployment		Nonparticipation	
	No.	Duration (weeks)	Percent	Duration (weeks)	Percent	Duration (weeks)	Percent	Duration (weeks)
Men								
White	4,053	6.7	30.6	7.0	46.8	6.8	22.6	6.0
Black	1,740	5.9	25.8	6.1	46.7	5.7	27.5	5.9
Mexican	663	7.3	30.5	8.5	48.4	7.0	21.1	6.1
Puerto Rican	132	6.1	24.2	5.8	50.0	6.5	25.8	5.8
Other Hispanic	217	7.5	27.2	7.9	53.5	7.2	19.4	7.6
American Indian	186	5.8	27.4	5.9	44.6	6.1	28.0	5.5
Asian	221	8.1	20.4	8.4	50.7	7.9	29.0	8.4
Women								
White	5,338	7.0	30.4	7.6	34.9	6.0	34.6	7.4
Black	2,661	6.1	17.3	8.1	46.0	5.1	36.8	6.4
Mexican	839	6.8	26.9	7.1	39.7	5.9	33.4	7.6
Puerto Rican	124	8.5	21.8	8.6	41.9	7.2	36.3	10.0
Other Hispanic	343	7.9	25.7	8.4	37.6	7.0	36.7	8.5
American Indian	206	5.1	21.4	6.2	42.2	4.7	36.4	4.8
Asian	325	7.3	27.4	8.4	44.0	6.6	28.6	7.6

Table 8. Origin and Destination States for Completed Labor Force Spells: Men and Women, Ages 20 to 64, and Not in School

Gender and Ethnicity	Employment to Unemployment	Unemployment to Employment	Nonparticipation to Employment
Men			
White	71.6	78.4	59.7
Black	77.2	56.5	25.9
Mexican	79.2	74.8	47.9
Puerto Rican	71.9	56.1	26.5
Other Hispanic	83.1	76.7	50.0
American Indian	68.6	57.8	40.4
Asian	80.0	58.9	48.4
Women			
White	33.7	57.5	67.7
Black	52.0	30.5	26.9
Mexican	41.6	41.4	48.2
Puerto Rican	51.9	30.8	33.3
Other Hispanic	44.3	48.4	56.3
American Indian	34.1	33.3	36.0
Asian	46.1	57.3	54.8

Table 9. Gross and Net Effects of Ethnicity on Labor Force Transition Rates: Men, 20 to 64 Years of Age, and Not in School

Transition and Ethnic Group	Gross	Gross + Survey Design	All Variables	Net of Previous Labor Force Status	Net of Labor Market Position	Net of Human Capital	Net of Household/ Family Character-istics	Net of Residence
	1	2	3	4	5	6	7	8
Employed to Unemployed								
Black	.149**	.225**	.090**	.135**	.067	.116**	.121**	.138**
Mexican	.121**	.118**	-.072	-.045	-.097*	.030	-.106*	-.010
Puerto Rican	-.205	-.136	-.158	-.122	-.259*	-.075	-.179	-.142
Other Hispanic	-.266**	-.175*	-.245**	-.262**	-.257**	-.200**	-.247**	-.216**
American Indian	.371**	.329**	.254**	.284**	.235**	.254**	.225*	.291**
Asian	-.599**	-.536**	-.354**	-.440**	-.404**	-.383**	-.378**	-.305**
Employed to Nonparticipant								
Black	.105*	.108*	.173**	.011	.129**	.216**	.197**	.158**
Mexican	-.072	-.069	-.105	-.198	-.122	-.023	-.153	-.100
Puerto Rican	.070	.099	.267	.079	.225	.301	.220	.196
Other Hispanic	-.167	-.148	-.177	-.177	-.205	-.094	-.242*	-.186
American Indian	.207	.198	.486**	.311	.438**	.465**	.329*	.501**
Asian	-.097	-.102	-.260*	-.157	-.263**	-.292**	-.248*	-.263**
Unemployed to Employed								
Black	-.564**	-.510**	-.267**	-.348**	-.341**	-.351**	-.365**	-.327**
Mexican	-.184**	-.154**	-.097**	-.137**	-.141**	-.179**	-.130**	-.108**
Puerto Rican	-.653**	-.568**	-.307**	-.370**	-.378**	-.394**	-.353**	-.390**
Other Hispanic	-.323**	-.282**	-.116	-.188**	-.206**	-.228**	-.203**	-.173**
American Indian	-.227**	-.187*	-.154	-.230**	-.228**	-.240**	-.243**	-.230**
Asian	-.411**	-.383**	-.114	-.215**	-.206**	-.166*	-.181**	-.152*
Unemployed to Nonparticipant								
Black	.512**	.594**	.070	.140**	.094*	.077	.087*	.055
Mexican	.117	.160**	.104	.148*	.107	.110	.098	.081
Puerto Rican	.235*	.379**	-.076	-.043	-.036	-.008	-.108	-.087
Other Hispanic	.125	.206*	-.035	-.062	.009	-.008	-.217**	-.050
American Indian	.483**	.528**	.496**	.548**	.499**	.474**	.484**	.484**
Asian	.527**	.580**	-.037	.094	-.031	-.059	-.508**	-.051

Table 9, Continued

Transition and Ethnic Group	Gross	Gross + Survey Design	All Variables	Net of Previous Labor Force Status	Net of Labor Market Position	Net of Human Capital	Net of Household/ Family Character-istics	Net of Residence
	1	2	3	4	5	6	7	8
Nonparticipant to Employed								
Black	-.747**	-.685**	-.333**	-.592**	-.333**	-.377**	-.349**	-.364**
Mexican	-.301**	-.262**	-.143*	-.184**	-.143*	-.172**	-.112	-.148*
Puerto Rican	-.523**	-.382**	-.072	-.217	-.072	-.087	-.046	-.136
Other Hispanic	-.086	-.001	.080	.046	.080	.076	.110	.057
American Indian	-.139	-.083	.051	-.166	.051	.203	.168	.066
Asian	-.211**	-.171*	-.084	-.270**	-.083	-.144	-.078	-.099
Nonparticipant to Unemployed								
Black	.578**	.624**	.139**	.467**	.139**	.130**	.120**	.142**
Mexican	.361**	.333**	.133	.239**	.133	.133	.127	.107
Puerto Rican	.128	.268*	-.180	-.024	-.180	-.190	-.123	-.144
Other Hispanic	-.011	.134	-.064	.047	-.064	-.136	-.082	-.077
American Indian	.549**	.639**	.112	.417**	.112	.203	.167	.101
Asian	.068	.104	-.175	.068	-.175	-.101	-.149	-.213*

Source: 1984-87 SIPP Panels

* $p < .10$

** $p < .05$

Table 10. Gross and Net Effects of Ethnicity on Labor Force Transition Rates: Women, 20 to 64 Years of Age, and Not in School

Transition and Ethnic Group	Gross	Gross + Survey Design	All Variables	Net of Previous Labor Force Status	Net of Labor Market Position	Net of Human Capital	Net of Household Family Character-istics	Net of Residence
	1	2	3	4	5	6	7	8
Employed to Unemployed								
Black	.392**	.447**	.189**	.251**	.211**	.189**	.226**	.175**
Mexican	.295**	.314**	.143*	.142*	.157**	.198**	.129*	.120*
Puerto Rican	.003	.121	-.053	-.005	-.057	-.017	-.050	-.103
Other Hispanic	.059	.132	-.027	-.012	-.004	.000	-.004	-.059
American Indian	.248	.220	.034	.125	.028	.047	.055	.047
Asian	-.046	-.027	-.080	-.115	.021	-.085	-.092	-.106
Employed to Nonparticipant								
Black	-.265**	-.253**	-.041	-.121**	-.066	-.032	-.056	-.041
Mexican	.053	.067	.022	.033	.002	.088	.031	-.037
Puerto Rican	-.333**	-.261*	-.072	-.160	-.110	-.016	-.098	-.109
Other Hispanic	-.221**	-.181**	-.092	-.127	-.114	-.063	-.103	-.098
American Indian	.078	.037	.154	.061	.133	.159	.122	.178
Asian	-.372**	-.347**	-.304**	-.286**	-.330**	-.303**	-.311**	-.298**
Unemployed to Employed								
Black	-.654**	-.624**	-.313**	-.307**	-.452**	-.319**	.347**	-.312**
Mexican	-.340**	-.326**	-.077	.092*	-.140**	-.119**	-.093*	-.054
Puerto Rican	-.490**	-.428**	.070	.074	-.147	.044	.050	.057
Other Hispanic	-.408**	-.373**	-.167**	-.163**	-.257**	-.204**	-.184**	-.153**
American Indian	-.362**	-.356**	-.062	-.071	-.183	-.078	-.063	-.656
Asian	-.182**	-.147*	-.005	-.030	-.095	-.003	-.005	.019
Unemployed to Nonparticipant								
Black	.404**	.495**	.147**	.205**	.165**	.159**	.128**	.154**
Mexican	.329**	.357**	-.017	.021	-.021	.068	-.013	-.024
Puerto Rican	.049	.293**	-.096	-.083	-.075	-.048	-.097	-.085
Other Hispanic	-.154**	-.014	-.222**	-.177**	-.224**	-.132*	-.229**	-.235**
American Indian	.502**	.509**	.135	.130	.145	.139	.138	.148
Asian	-.039	.156	-.203**	-.143*	-.225**	-.169**	-.165*	-.224**

Table 10, Continued

Transition and Ethnic Group	Gross	Gross + Survey Design	All Variables	Net of Previous Labor Force Status	Net of Labor Market Position	Net of Human Capital	Net of Household Family Character-istics	Net of Residence
	1	2	3	4	5	6	7	8
Nonparticipant to Employed								
Black	-.705**	-.692**	-.212**	-.436**	-.217**	-.258**	.250**	-.246**
Mexican	-.402**	-.385**	.004	-.097*	.009	-.127**	-.001	-.032
Puerto Rican	-.677	-.642**	-.305**	-.399**	-.308**	-.400**	-.305**	-.320**
Other Hispanic	-.230**	-.186**	.036	-.004	.038	-.050	.023	.013
American Indian	-.267**	-.255**	.104	-.081	.100	.075	.084	.096
Asian	-.206**	-.187**	-.078	-.161**	-.075	-.096	-.073	-.104
Nonparticipant to Unemployed								
Black	.848**	-.863**	.262**	.536**	.262**	.243**	.317**	.288**
Mexican	.455**	.469**	.063	.235**	.063	.047	.055	.108**
Puerto Rican	.105	.148	-.182	-.071	-.182	-.222*	-.141	-.208*
Other Hispanic	.344**	.450**	.290**	.366**	.290**	.246**	.292**	.303**
American Indian	.732**	.740**	.188*	.448**	.188*	.181*	.242**	.231**
Asian	.232**	.258**	.159*	.285**	.159*	.145	.126	.193**

Source: 1984-87 SIPP Panels

* $p < .10$

** $p < .05$

Table A1. Definition of Variables

SEAM is one if a labor force transition occurred in the last week of a wave

ALLOCATE is one if respondent was allocated a labor force response

PROXY is one if the information provided during a wave interview was given by someone other than the reference respondent

SELF is one if reference respondent provided information on her/himself

PERIOD is measured in calendar year and month to estimate period effects, with respect to the month and year a transition occurred

BENOTLF1 is one if respondent had a spell of nonparticipation at spell T-1, where T is the current spell

BENOTLF2 is one if respondent had a spell of nonparticipation at spell T-2

EMPLOY1 is one if respondent had a spell of employment at spell T-1

EMPLOY2 is one if respondent had a spell of employment at spell T-2

UNEMPLY1 is one if respondent had a spell of unemployment at spell T-1

UNEMPLY2 is one if respondent had a spell of unemployment at spell T-2

EMPLOYER is one if respondent worked for an employer at the start of the current spell

SKWCOL is one if respondent's occupation was professional, managerial, or technical at the start of the current spell

SSKWCOL is one if respondent's occupation was administrative, sales, service (except private household)

SKBCOL is one if respondent's occupation was craft or precision manufacturing

SSKBCOL is one if respondent's occupation was operative, laborer, or private household worker

OTHER is one if respondent's occupation was not reported

CONSTRT is one if respondent's industry was mining or construction at the start of the current spell

MANUFACT is one if respondent's industry was manufacturing

DISTWHOL is one if respondent's industry was transportation or wholesale

RETACONS is one if respondent's industry was retail or consumer services

Table A1, Continued

PRODUCER is one if respondent's industry was finance, insurance, business, or real estate

HEALEDUC is one if respondent's industry was health or education

PUBLIC is one if respondent's industry was federal, state, or local government

OTHERI is one if respondent's industry was not reported

AGE is measured in single years for respondents ever 20 to 64 years of age

1SCHOOL is years of schooling completed, single years

FAMILY is one if respondent was a member of a primary family at the start of the current spell

PRIMARY is one if respondent lived in a single person household

NRELATE is one if respondent was unrelated to householder

RELATE is one if respondent was a relative of householder (other than child or spouse)

ADCHILD1 is one if respondent was a child of the householder and less than 30 years of age

ADCHILD2 is one if respondent was a child of the householder and 30 years of age and over

SPOUSE is one if respondent was the spouse of the householder

EMARRIED is one if respondent was separated, divorced, or widowed

NMARRIED is one if respondent has never been married

MARRIED is one if respondent was married

CHILD1 is one if respondent's own children, ages 0-5, were present in the household

CHILD2 is one if respondent's own children, ages 6-18, were present in the household

CITY is one if respondent lived in a central city of a metropolitan area at the start of the current spell

MSA83 is one if respondent lived in a metropolitan area based on the 1983 definition of MSAs

Table A2. The Effects of Selected Variables on Labor Force Transition Rates: Men, 20 to 64 Years of Age and Not in School

Variables	Employed to		Unemployed to		Nonparticipant to	
	Unemployed	Nonparti-cipant	Employed	Nonparti-cipant	Employed	Unemployed
Survey Design						
SEAM	-.744**	-.916**	.192**	-1.541**	-.461**	-1.059**
ALLOCATE	-.033	.216**	.357**	.295**	.294**	-.160
PROXY	-.154**	-.258**	.064**	-.086*	.025	-.044
SELF[1]	---	---	---	---	---	---
PERIOD	.0006**	-.0007**	-.0002**	-.0006**	-.0001	-.0001
Previous Labor Force Status						
BENOTLF1	-.591*	1.697**	1.508**	2.037**	a	a
BENOTLF2	-.127*	.457**	-.124**	.747**	.200**	.250**
EMPLOY1	a	a	.199**	.337	1.605**	-.110
EMPLOY2	.132**	.095	.430**	-.227**	1.050**	-.160*
UNEMPLY1	.671*	-.029	a	a	.088	1.567**
UNEMPLY2	.690**	-.220**	.132**	.215**	.021	.685**
Labor Market Position						
EMPLOYER	-.159**	-.407**	1.101**	a	a	a
OCCUPATION						
SKWCOL	-.261**	-.017	.001	.164	a	a
SSKWCOL	-.087	.082	.017	.211	a	a
SKBCOL	.051	-.070	.173**	-.078	a	a
SSKBCOL[1]	---	---	---	---		
OTHER	-.251**	-.035	-.215**	.530**	a	a
INDUSTRY						
MINING & CONSTRUCTION	.396**	.259**	.056	-.088	a	a
DISTRIBUTIVE/WHOLESALE	.021	-.176	.072	-.351	a	a
RETAIL/CONSUMER SERVICES	.110**	.221**	.072	.161	a	a
PRODUCER SERVICES	.265**	.168	.190**	-.242	a	a
HEALTH/EDUCATION	-.226**	.003	.071	.069	a	a
PUBLIC	.095	-.110	.010	.149	a	a
OTHER	.216**	.208**	.151**	.659**	a	a
MANUFACTURING[1]	---	---	---	---	a	a
Human Capital						
AGE	-.001	.021**	-.007**	.009**	-.027**	-.023**
EDUCATION	-.056**	-.058**	.027**	-.034**	.057**	.032**

Table A2, Continued

Variables	Employed to		Unemployed to		Nonparticipant to	
	Unemployed	Nonparticipant	Employed	Nonparti-cipant	Employed	Unemployed
Household/Family						
Type of Household						
FAMILY	-.368	1.139**	-.186**	-.059	-.916**	-.617**
PRIMARY INDIVIDUAL	-.148*	-.149	-.008	-.041	-.028	.159
OTHERS[1]	---	---	---	---	---	---
Relationship to Head						
NRELATE	-.125	.944**	-.061	-.089	-.600**	-.502**
SPOUSE	.162**	.078	-.100	-.042	-.127	.081
ADCHILD1	.320**	.516**	-.122**	.132	-.241**	-.134
ADCHILD2	.214**	.069	-.158*	.012	.128	.263**
RELATIVE[1]	---	---	---	---	---	---
Marital Status						
EMARRIED	.177**	.024	-.079	-.004	-.340**	-.212**
NMARRIED	.061	.398**	-.155**	.102	-.425**	-.291**
MARRIED[1]	---	---	---	---	---	---
Residence						
CITY	.150**	-.089	-.043	-.057	-.102**	.040
SMSA	-.120**	.012	-.095**	.037	.020	-.054
NORTH/EAST	-.103**	-.061	-.058**	.035	-.044	.080*
SOUTH/WEST	---	---	---	---	---	---
Duration	-.032**	-.027**	-.017**	-.036**	-.030**	-.034**
Intercept	125.8**	129.7**	41.4**	114.1**	15.7	19.8

Source: 1984-87 SIPP Panels

* $p < .10$

** $p < .05$

[1] Omitted category

[a] This variable not included in the model

Table A3. The Effects of Selected Variables on Labor Force Transition Rates: Women, 20 to 64 Years of Age and Not in School

Variables	Employed to		Unemployed to		Nonparticipant to	
	Unemployed	Nonparticipant	Employed	Nonparti-cipant	Employed	Unemployed
Survey Design						
SEAM	-.513**	-.873**	.315**	-1.669**	-.420**	-.786**
ALLOCATE	-.023	.354**	.274**	.060	.291**	-.131
PROXY	-.145**	-.138**	-.017	-.051	.0001	-.112**
SELF[1]	---	---	---	---	---	---
PERIOD	-.0009**	-.0008**	-.0001	-.0004**	-.0005**	-.0004**
Previous Labor Force Status						
BENOTLF1	.405	1.016**	1.970**	1.548**	a	a
BENOTLF2	-.151**	.291**	-.153**	.095	.248**	.131**
EMPLOY1	a	a	.208**	.510**	1.323**	-.567**
EMPLOY2	.104**	.125**	.171**	-.333**	1.185**	-.086
UNEMPLY1	2.006**	-.460*	a	a	-.184	.993**
UNEMPLY2	.779**	-.024	.045	.135**	-.032	.563**
Labor Market Position						
EMPLOYER	.202*	-.238**	1.603**	a	a	a
OCCUPATION						
SKWCOL	-.504**	-.118	-.094	-.050	a	a
SSKWCOL	-.264**	-.159**	-.045	.126	a	a
SKBCOL	-.028	-.204*	-.070	.180	a	a
SSKBCOL[1]	---	---	---	---		
OTHER	.407**	-.133**	-.111**	.207*	a	a
INDUSTRY						
MINING & CONSTRUCTION	.213*	.231**	.515**	.014	a	a
DISTRIBUTIVE/WHOLESALE	.016	.249**	.046	.113	a	a
RETAIL/CONSUMER SERVICES	.002	.316**	.196**	-.049	a	a
PRODUCER SERVICES	.155*	.173**	.209**	-.065	a	a
HEALTH/EDUCATION	-.229**	.118*	.237**	-.171	a	a
PUBLIC	-.080	.327**	.002	.008	a	a
OTHER	.032	.192**	-.066	1.127**	a	a
MANUFACTURING[1]	---	---	---	---	a	a
Human Capital						
AGE	-.004**	.000	-.003**	.006**	-.005**	-.013**
EDUCATION	-.031**	-.035**	.028**	-.040**	.058**	.015

Table A3, Continued

Variables	Employed to		Unemployed to		Nonparticipant to	
	Unemployed	Nonparticipant	Employed	Nonparti-cipant	Employed	Unemployed
Household/Family						
Type of Household						
FAMILY	.138	.324**	-.245**	-.053	-.160	-.193
PRIMARY INDIVIDUAL	.043	-.065	-.053	-.020	-.204*	-.065
OTHERS[1]	---	---	---	---	---	---
Relationship to Head						
NRELATE	.307	.196*	-.049	-.229**	.106	-.113
SPOUSE	-.007	.229**	-.064	.048	.073	-.134*
ADCHILD1	.096	.112**	-.057	.006	-.022	.064
ADCHILD2	.155	-.445**	-.207*	-.067	.119	.204*
RELATIVE[1]	---	---	---	---	---	---
Marital Status						
EMARRIED	.099	.019	-.033	-.148**	-.014	.176**
NMARRIED	.195**	.109	-.042	-.113*	.072	-.007
MARRIED[1]	---	---	---	---	---	---
Own Children <19						
CHILD1	.085	.185**	-.110**	.072*	-.337**	-.118**
CHILD2	.002	.048	-.083	.016	.064	.112**
Residence						
CITY	-.037	-.206	-.038	.073**	-.059*	.068*
SMSA	-.097*	-.026	.087**	-.117**	-.015	-.075*
NORTH/EAST	.002	-.061**	-.048	.013	.062	-.111**
SOUTH/WEST	---	---	---	---	---	---
Duration	-.034**	-.028**	-.011**	-.035**	-.031**	-.030**
Intercept	168.8**	162.0**	13.2	73.8**	94.1**	81.1**

Source: 1984-87 SIPP Panels

* $p < .10$

** $p < .05$

[1] Omitted category

[a] This variable not included in the model