**Hispanic Youth in the Labor Market:**
**An Analysis of High School and Beyond**

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## HISPANIC YOUTH IN THE LABOR MARKET:
## AN ANALYSIS OF HIGH SCHOOL AND BEYOND

It is clear that Hispanics are a substantial and growing part of
the population of the United States with 14.6 million identified in
the 1980 census (U.S. Bureau of the Census, 1982: Table 3.2).
Hispanics tend to be younger than non-Hispanic whites (Current
Population Survey, 1979) with the median age of the Spanish-origin
population is 22.1 years versus 30.0 for non-Hispanic whites. Since
Hispanics are disproportionately young, they are more likely to suffer
the employment problems than youth in general, (e.g., low employment
and labor force participation rates). In fact, when we consider data
for the population regardless of age, Hispanics show lower rates of
employment and labor force participation than non-Hispanic whites, but
not as low as Native Americans or non-Hispanic blacks (U.S. Commission
on Civil Rights, 1978: Table 3.1).

However, differences alone in age profiles cannot explain why
Hispanic youth are less successful than white majority youth in the
labor market. For example, among those aged 16-19 in 1981, Hispanics
showed an unemployment rate of 24.1 percent and a civilian labor force
participation rate of 46.3 percent compared to 17.3 and 59.0 percent
for whites and 41.5 and 37.4 percent for blacks (National Commission
for Employment Policy, 1982: Table 1). Other barriers for 14-19
year-olds, are indicated by "underemployment," involuntary part-time
employment, living in poverty households and receiving inequitable pay
in comparison to non-Hispanic whites and blacks, (U.S. Commission on
Civil Rights, 1982: Table 5.4; also see Clogg, 1979).

Determining the causes of Hispanic underachievement have
important practical implications since the choice of relevant policy
interventions to ameliorate these conditions depend on understanding
the factors that lead Hispanics to fare less successfully in the labor
market. In this paper, we seek to accomplish two tasks. First, we
will document the extent of Hispanics' employment difficulties as
compared to non-Hispanic whites and blacks using data from the
sophomore cohort of "High School and Beyond," a national longitudinal
study of high school sophomores and seniors in 1980. Because
respondents in "High School and Beyond" are enrolled in school, labor

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force statistics will not be directly comparable to statistics based on household surveys of the labor force. However, because the respondents all started in high school, this survey is ideal for studying the transition of youth from school to work. We will focus on two important measures of labor market status-labor force participation and unemployment rates. Because of the interdependency between youths' school-leaving and employment decisions during the school-to-work transition (see National Commission on Manpower Policy, 1976; Stevenson, 1978b) we will also present these labor force status indicators by school status, i.e., by high school dropout versus in-school.

Second, we will examine some of the presumed causes of Hispanic youths' difficulties in the labor market. The dependent variable, labor force participation will have four dimensions: participating in the labor force and enrolled in school; participating in the labor force/out of school; out of the labor force and enrolled in school; out of the labor force/out of school. Employment status will be treated similarly with four categories, i.e., employed and enrolled in school; unemployed and enrolled; employed and out of school. Using logistic regression analysis, we will predict these labor force/enrollment status indicators with measures of family background, school performance, language, immigration history, and other demographic variables.

Section 2 reviews the extant knowledge on the labor market status of Hispanic youth. Section 3 discusses the advantages of using "High School and Beyond" for studying Hispanic youth achievement. Section 4 presents descriptive analyses for the various subpopulations under study. Section 5 presents the casual analyses of the labor force/enrollment status indicators. Finally, Section 6 summarizes the results of the empirical analyses and concludes with recommendations for policies to improve Hispanic youths' labor market status.

## The Labor Market Status of Hispanic Youth

All Hispanics' relative share of the population has increased, their socioeconomic achievement has increasingly become the object of policy discussions (see e.g., National Center for Education

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Statistics, 1980; National Commission for Employment Policy, 1982). Unfortunately, research on Hispanics in general, and Hispanic youth in particular, has been hampered by a lack of suitable data (see Estrada, 1980). For this reason, information on the labor market status of Hispanic youth is poor relative to that available on non-Hispanic white and black youth (see e.g., Freeman and Wise, 1982).

Because much research suggests that youths' labor force participation and school continuation decisions are interdependent (see Duncan, 1965; Ornstein, 1976), it is important to examine the causes of Hispanics' educational difficulties. These causes will be divided into two types: general and specific. General factors, such as family socioeconomic status and gender are potentially important for explaining the school and labor market achievements for everyone. Specific factors are characteristics that are particularly salient for some minority groups and are expected to disproportionately affect those groups. In the case of Hispanics, specific factors are language practices and immigration history.

Distinguishing between general and specific effects on Hispanic labor market achievements is important for policy purposes. For example, if Hispanics' labor market disadvantages are due primarily to their lower levels of family socioeconomic status, then general policies designed to help all poor people would help improve Hispanics' labor market status. However, if specific factors, such as language background account for a large portion of Hispanics' school or labor market difficulties; then general policies are apt to do little to improve Hispanics' performance in the schools or labor market. In this case, policy instruments such as bilingual education may need to be targeted specifically on the Hispanic population in order to improve Hispanics' labor market achievements.

General Factors

There is much evidence that Hispanics experience considerable educational difficulties. At each age level, school enrollment rates for Hispanics lag behind those for whites (National Center for Education Statistics, 1980: Table 1.08). Hispanics also have significantly lower rates of high school completion than non-Hispanic

whites (National Center for Education Statistics, 1980: Table 1.09). Among those who remain in school, Hispanics are much more likely to be grade delayed in their progress than non-Hispanic whites (National Center for Education Statistics, 1980: Table 2.1).

However, there is much research that suggests that these educational difficulties are, in turn, caused by other general factors. These other factors may also influence Hispanics' labor market achievements directly, or indirectly via educational attainments. These most important factors for the general population is family socioeconomic background (Blau and Duncan, 1967; Duncan et al., 1972; Jencks et al., 1972). This is generally interpreted to mean that higher-income families are more likely to support children in educational endeavors. Persons in less affluent families may emphasize education for their children less.

In addition to the indirect effects of family background on labor market outcomes through education, most studies have also shown direct effects of family background on offsprings' labor market success (e.g., Blau and Duncan, 1967). Unfortunately, the mechanisms by which these direct effects operate are not well- understood in the case of occupational status and earnings. A number of complicated and sometimes cross-cutting processes appear to be operating to convert family background into occupational status and earning (see Jencks et al., 1979: Chapter 3). However, in the case of youth's labor force participation and employment, it has been shown that children of poorer families are likely to enter the labor force at earlier ages than offspring of wealthier families (Neugarten and Hagestad, 1976), even after the effects of educational attainment are controlled (Hogan, 1981: Chapter 5).

A number of recent studies of the various Hispanic subgroups have reached similar conclusion e.g. family socioeconomic background is an important determinant of Hispanics' educational (see Aspira, 1976; Fligstein and Fernandez; 1982; 1984; Nielsen and Fernandez, 1982) and occupational (see Stolzenberg, 1982; Tienda, 1981) achievements. The most important of these background factors is thought to be family income (see e.g., Aspira, 1976; Briggs et al., 1977). Hispanics are

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much poorer than non-Hispanics. In 1977, the median family income of Hispanics was $11,421 compared to $16,284 for non-Hispanics (U.S. Bureau of the Census, 1976b). Hispanic families also tend to be larger than non-Hispanic families (3.88 persons versus 3.31; see U.S. Bureau of the Census, 1979b). These authors argue that in order to help ease the family's financial burdens, Hispanic youth become increasingly involved in the world of work, and they are correspondingly drawn out of school. Hence, Hispanics are presented with a self-reinforcing situation where they leave school in order to work, but then their lack of schooling presents itself as a major obstacle for success in the labor market.

Specific Factors

Language problems often head the list of the specific factors that may disproportionately affect Hispanics' educational and labor market achievement (National Commission for Employment Policy, 1982; Barrera, 1979).

For youth entering school from non-English language backgrounds, limited-English proficiency can certainly constitute a barrier to effective learning in English-only school systems. Put simply, students who cannot understand what is being taught through the median of the English language are likely to have both psychological and substantive difficulties in interactions with teachers and curriculum. As a consequence, these students tend to have lower scholastic performance and are more likely to drop out of school (see, Hirano-Nakanishi and Diaz, 1982). Survey research in this area tends to support these notions. For example, Lopez (1976) has found that U.S.-born Mexican Americans raised in Spanish language environments had lower educational attainments than U.S.-born Mexican American counterparts raised in English language environments.

To the extent that Hispanics speak only or predominantly Spanish when they complete their schooling, studies suggest negative effects on work-related variables (Garcia, 1983; Veltman, 1981; Chiswick, 1978). Because effective communication is an important component of any production activity, Spanish monolinguals' inability to communicate in English may make them less attractive to employers. In

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addition, Spanish monolinguals are likely to receive lower wages (see McManus et al., 1983; Tienda, 1983), and to be underemployed and unemployed (Carliner, 1981). For Spanish dominant bilinguals, there is some evidence to suggest that accented or non-standard English may result in employers consciously or unconsciously showing bias against Spanish users (Garcia, 1983).

Spanish, however, may not be intrinsically harmful to bilinguals' educational and work-related achievement. The effects of using Spanish, controlling for English proficiency, have been subject to debate. One argument emphasizes the cost of bilingualism. In this view, the coexistence to two lexical and two syntaxes in the mind of the bilingual represents a drain on a finite amount of mental energy. This leaves less mental energy to be allocated to intellectual tasks in school. Another harmful consequence of bilingualism may be that the languages interfere with one another. This process is known as "code switching" (Albert and Obler, 1978). In this view, Spanish proficiency and use should retard school achievement.

On the other hand, other studies have found that bilingual proficiency is an asset or does not hinder bilinguals both in school (Fernandez and Nielsen, 1984; Cummins, 1977; Lambert and Tucker, 1972) and in the labor market (Tienda, 1981 Chapter 8; Tienda, 1982). The fact that bilinguals have two codes for every concept may help them to realize that codes are arbitrary. Therefore, bilingualism may serve to stimulate intellectual development for abstract reasoning tasks which should be expressed in higher scholastic achievement. Regarding the labor market, some studies have suggested that bilingualism can be seen as a form of human capital that may yield returns in the labor market (Carliner, 1976; Tienda, 1982). Therefore, in areas where there is a demand for workers who can communicate in more than one language, bilinguals will be in an advantaged position in the labor market. Also, Lopez (1976) suggests that the knowledge of Spanish may aid bilinguals in job search in the blue collar job markets.

Results from research on the effects of immigration experiences on achievement have been inconsistent. A substantial body of work documents that despite an initial lack of familiarity with language

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and customs, immigrants sometimes achieve higher education and occupational levels than non- immigrants (Blau and Duncan, 1967). Chiswick's research (1977; 1978; 1980a; 1982) tends to support these findings, although he shows that an initial adjustment period is needed before immigrants' attainments overtake those of non-immigrants. Carliner's (1980) analyses support Chiswick's initial adjustment period: recent immigrants generally receive lower wages than second generation workers, but second generation workers receive higher wages than do third generation workers.

These findings have been taken to be indicative of a selection process whereby immigrants' high levels of ability and motivation manifest themselves in high socioeconomic attainment. Nielson and Fernandez (1982) speculate that this high level of motivation may be passed on to immigrants' children, thus explaining why progeny of more recent immigrants perform better in high school.

However, when considering Hispanic immigrants specifically, others (e.g., Featherman and Hauser, 1978; Borjas, 1982; Tienda, 1983) find that Hispanic immigrants are at a socioeconomic disadvantage (relative to long-time residents), which these authors attribute to difficulties of language, cultural adjustment, and transferability of skills. In addition, it has been shown with Census data that Hispanic immigrants have lower levels of education (Jaffe et al., 1980) that can translate through the general mechanisms described above into lower educational and occupational achievements for themselves and their children.

A number of researchers have emphasized that the political and economic climate of the U.S. at the time of immigration may be an important determinant of how well and how quickly immigrants assimilate in the U.S. For example, it has been argued that the particular historical circumstances in which the initial wave of Cuban immigration took place, the legal status of Cubans as political rather than economic migrants (Pedraza-Bailey, 1980; Wilson and Portes, 1980), and supportive government policies at the time of Cuban settlement (see, Jorge and Moncarz, 1980; Pedraza-Bailey and Sullivan, 1979) explain their relative advantage over other Hispanic subgroups (see,

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e.g., Nielsen and Fernandez, 1982; Portes, 1982). A number of authors have also argued that the fact that Cuban immigrants have largely settled in an ethnic enclave (Miami) made up of previous immigrants (see Wilson and Portes, 1980; Wilson and Martin, 1982) has had beneficial effects on Cubans' socioeconomic achievements (see Portes and Bach, 1980).

## Data and Variable

The data analyzed in this paper are from the first two waves (1980 and 1982) of the sophomore cohort of the National Center for Education Statistics (NCES) study, "High School and Beyond," a longitudinal study of the high school sophomores and seniors in 1980. The data were collected for NCES by the National Opinion Research Center at the University of Chicago. The base year (1980) sophomore sample consists of 30,030 respondents in 1,015 high schools with an overall response rate of 84 percent. Of these, 25,875 respondents were followed-up in 1982. Hispanic schools were oversampled in the base-year and respondents in those schools were assigned very high probabilities of selection for inclusion in the follow-up sample (see Frankel et al., 1981).

Three features of "High School and Beyond" make it ideal for studying Hispanic youths' labor market achievements. First, because "High School and Beyond" is a longitudinal study of the sophomore and senior high school classes in 1980, respondents in "High School and Beyond" can be tracked through their process of transition from school to work. In addition "High School and Beyond" contains detailed data on respondents' educational backgrounds, as well as how respondents combine their school and labor force activities.

Second, because Hispanics were oversampled, "High School and Beyond" contains sufficient numbers of Cubans, Puerto Ricans, and Mexican Americans for separate analyses. This is important because past research has shown that Hispanic subgroups differ in their school and labor market achievement profiles (National Center for Education Statistics, 1980; Nielsen and Fernandez, 1982; Jaffe et al., 1980).

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Third, "High School and Beyond" is rare in that it includes many detailed questions about the linguistic practices of the respondent and his/her family (see Nielson, 1980: Appendices B and C) as well as other information especially relevant to Hispanics such as length of United States residence and nativity.

## Characterization of Comparison Groups

One of the main goals of this paper is to provide statistics showing how Hispanic youth compare to non-Hispanic youth on different measures of employment status. Later we divide the sample into groups of Hispanics, non-Hispanic whites, and non- Hispanic blacks.

Self-identification is used to classify respondents' ethnic identity.[1] This is for both theoretical and practical reasons. First, the use of self-identification to define ethnic identification is in agreement with the emerging theoretical consensus on what constitutes "ethnic" identity (Barth, 1969). Second, the self-identification of ethnicity is particularly well-suited for use in surveys. Smith (1980) has shown that of the various methods of classification (i.e., natal definitions, such as those based on the respondent's country of birth; behavioral definitions, based on some objective cultural criterion such as the use of a language other than English; subjective criteria involving self-identification by the respondent). Self-identification is the most efficient technique for eliciting a positive national origin identification from respondents in the general population (also see Smith, 1983; for research regarding the identification of Mexican Americans, see Hernandez et al., 1973).

## Independent Variables

Corresponding to the discussion in the literature review section, the independent variables are divided into two groups: general and specific. Among the general predictors of labor force and school enrollment status are family socioeconomic background: scholastic performance; demographic variables; and a measure of past labor force involvement. We measure family socioeconomic background with a composite variable derived from a number of measures of parental

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background and family resources.[2]

In order to assess the effects of scholastic performance on school retention, labor force participation and employment propensity, we also include two measures of scholastic achievement: self-reported grades and a standardized test composite. As measures of scholastic achievement, grades and test scores differ in that grades do not vary across schools; while test scores vary both within and between schools.

Three demographic variables are also included as general predictors: sex, age, and marital status. Respondents' sex is measured by a dummy variable coded 1=male and 0=female. Because we expected younger respondents to be less likely to participate in the labor force and be more likely to be enrolled in school, we also included a measure of the respondent's age coded in years in the models below. The final demographic variable included is marital status. We hypothesize that the increased financial responsibilities that accompany marriage are likely to force respondents into the labor force.

Finally, in order to assess the effects of past labor force experience on youth's labor force/enrollment status, we also include a dummy variable measured in the base-year survey on past work experience. Consistent with our discussion above, we also include six variables that are likely to disproportionately affect Hispanics as predictors: respondent's, father's and mother's length of U.S. residence; a dummy variable for whether the respondent is bilingual or not; proficiency in the non- English language; and proficiency in English.

The length of U.S. residence variables are each measured in years (see Appendix for coding details). Regarding the language measures, we consider respondents bilingual if a language other than English was given in response to at least one of three questions: mother tongue of respondent (first language spoken); second mother tongue (other language spoken before schooling); respondent's usual language. These criteria clearly distinguish those students who have never used a language other than English from those who have had at least some

natural exposure to another language. Our definition also excludes respondents with only indirect contact with languages other than English, such as those who studied it in school as an academic subject.

The non-English language proficiency scale is based on the student's self-assessed ability to understand, speak, read, and write in the non-English language.[3] Finally, English proficiency is measured by performance on a standardized vocabulary test. Note that using vocabulary test performance as an indicator of English proficiency builds in a correlation with the standardized test composite that is used as a measure of student's scholastic achievement. Although it would have been preferable to have independent measures of student's English proficiency and scholastic ability, we choose this specification because the alternative self-reported measure of English proficiency (based on a set of items parallel to the proficiency in other language items) showed very little variation.[4]

## Descriptive Analyses

"High School and Beyond" followed-up sophomores in 1982, two years later, whether or not they remained in high school. Table 1 presents high school dropout rates by sex and population subgroup for the sophomores.[5] The high school dropout rate for Hispanic males overall (18.5 percent) is lower than the rate for blacks (20.3 percent), and higher than the rate for whites (13.4 percent). Consistent with past research on high school non- completion, among males, Puerto Ricans have the highest dropout rate (24.0 percent), followed by Mexican Americans (21.4 percent).

Other Latin Americans have the lowest dropout rate among males, lower than whites (12.0 versus 13.4 percent); while the rate for Cuban males is slightly higher than the rate for whites (14.6 percent). Among females, Hispanics overall have the highest dropout rate (18.1 percent overall, compared to 14.2 percent for blacks and 11.6 percent for whites). Cuban females have the highest dropout rate of any subgroup of either sex, i.e., 26.5 percent. The pattern for the remaining Hispanic subgroups is the same as that for males: the rate

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for Puerto Ricans is highest (21.5 percent), Mexican Americans next highest (20.8 percent), and Other Latin Americans have the lowest rate (10.8 percent).

The mechanisms underlying these differences in dropout rates are unclear. In part because of problems of data availability, very little empirical research exists on the causes of these different dropout rates. However, the limited research available suggests that Hispanics are likely to drop out in order to work and help support the family (National Council of La Raza, 1980). At least for males, the dropout statistics in Table 1 are consistent with this hypothesis: the dropout rates for the various subgroups increase as the median family income of the subgroup decreases (National Center for Education Statistics, 1980). The same pattern holds for females with the exception of blacks, who drop out less than we would expect, and Cubans who drop out more than we would expect.

Table 2 also lends support to the idea that Hispanic males tend to drop out for financial reasons. Table 2 shows labor force status by school enrollment status. Among out-of-school males, Hispanics overall show a higher degree of labor force attachment than whites or blacks: 85 percent of Hispanic males participate in the labor force compared to 82.5 and 73.1 percent for whites and blacks. The relatively poorer Mexican Americans show the highest, and the relatively richer Cubans the lowest degree of labor force involvement among the out-of-school males. Consistent with past research (Ryscavage and Meller, 1973), the poorest subgroup, the Puerto Ricans, show a very low rate of labor force participation. However, this is probably due to their very high rate of military enlistment (see Table 2). A number of authors have noted that because Puerto Ricans are heavily concentrated in New York, which has had a declining economy in recent years (Newman, 1978; National Council of La Raza, 1980). Enlistment in the military is common among those bleak job prospects. For females' labor force participation rates who are out-of-school, we find that Hispanics overall have a lower rate of participation than either whites or blacks.

Past research on the adult population that has shown that the

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labor force participation rate of Puerto Rican females is especially low (Newman, 1978; Ryscavage and Meller, 1973) and declining (National Commission for Employment Policy, 1982; Santana-Cooney and Warren, 1979); yet in Table 2 Puerto Rican females have the highest rate of labor force participation, higher than white females (67.8 versus 66.0 percent). Also contrary to the past research on the adult population where Cuban females have a higher rate of labor force participation relative to other Hispanic subgroups (Ryscavage and Mellor, 1973; National Commission for Employment Policy, 1982), the data in Table 2 shows Cubans have the lowest labor force participation rate among female youth.[6]

While out-of-school Hispanics are more likely than out-of- school whites to participate in the labor force, Hispanics are less successful than whites at finding employment. For both sexes, unemployment rates among out-of-school Hispanics are considerably higher than those of out-of-school whites (males: 30 versus 21.8 percent; females: 34.9 versus 26.6 percent), albeit not as high as out-of-school blacks (36.8 and 47.4 for black males and females).

Puerto Rican males have the highest unemployment rate among Hispanic subgroups. However, the employment situation of out-of-school other Latin Americans is significantly better: their rates for both sexes are relatively low and in the case of males, even lower than the unemployment rate for whites. Somewhat surprisingly, out-of-school Cuban females show the highest jobless rate in Table 2. More than half of out-of-school Cuban females (52.5 percent) are unemployed. The employment situation of out-of-school Puerto Rican females is also relatively poor. Finally, out-of-school Mexican-American males and females show very similar unemployment rates (32.6 versus 32.3).

When we consider students, we note that labor force participation rates among males do not vary very much among ethnic subgroups (75.5 to 79.5 percent). For female students, the variation in labor force participation rates across ethnic subgroups is considerably more than for males (67.3 to 77.7 percent), but is much less than the ranges exhibited by high school dropouts of either sex (males: 70.2 to 90.1;

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females:    47.4 to 67.8).

But while rates of labor force participation do not vary   very much, chances of employment do.  Among male students, Puerto   Ricans have the highest unemployment rate of any subgroup (27.5   percent). Only black female students have a higher unemployment   rate, 32.6 percent.   Among male Hispanics, Mexican Americans show   the lowest unemployment rate (14.8 percent); while among female   Hispanics, other Latin Americans have the lowest unemployment   rates.

If we compare students to dropouts, no simple pattern   emerges for males' labor force participation rates.   In some   cases, e.g., Mexican Americans, out-of-school youth show a higher   degree of labor force attachment (90.1 versus 77.2 percent); but   in other cases, such as Cuban males, students show a higher level   of labor force involvement (75.5 versus 70.2 percent).  However,   males' unemployment statistics show a clear-cut pattern:   once in   the labor force, high school dropouts have a more difficult time   finding work than students who remain in school.  This pattern   could reflect employer's responses to dropouts' relative lack of   education.  An alternative explanation for this pattern is that   high school students and dropouts seek different kinds of jobs.   For example, high school students largely seek part-time employment (Lewin-Epstein, 1981); while dropouts are more likely to look for full-time work (Borus, 1983).  Youth who are looking   for full-time work may be more disadvantaged than youth searching   for part-time jobs because youth seeking full-time employment are competing with adult workers.  In contrast, the job market for part-time work is likely to be less competitive.

When we consider the statistics for females, the pattern is  clear across all subgroups:  dropouts are less involved in the  work force than students.  Part of this pattern may be due to a   discouraged worker effect.  Because female dropouts have   relatively poor employment prospects, as evidenced by their very   high employment rates, females choose to stay out of the labor   force.  A second explanation for this pattern is related to the   reasons they dropped out in the first place.  Because many  females dropped out because they were pregnant or to get married   (see Borus, 1983), it is reasonable to

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expect that many of these youth chose the role of homemaker and therefore are not counted in traditional definitions of labor force participation.

## Multivariate Analyses: Analysis Strategy

In this section, we will develop models of labor force participation and employment for whites and Hispanics.[7] We seek to test a number of hypotheses derived from the literature concerning the causes of Hispanics' labor market under- underachievement. Specifically, we seek to test whether Hispanic-white differences in general background factors such as family income or scholastic achievement account for Hispanics' difficulties; or whether specific factors that differentiate Hispanics from the white majority, such as language or recency of migration explain Hispanics' labor market difficulties.

Our strategy is to first specify separate models of labor force participation[8] for both whites and Hispanics. Because of the small number of Cubans and Puerto Ricans, the various Hispanic subgroups have been aggregated and dummy variables have been included to distinguish subgroup membership. Although it would have been preferable to explore subgroup interactions with respect to the models developed here, my preliminary analysis has shown that the numbers of Cubans and Puerto Ricans are very small and therefore likely to yield unreliable estimates.

Two dependent variables are analyzed below: labor force participation rates and unemployment rates. In both cases, the statistics reported are for those in the civilian labor force. Therefore, those enlisted in the military are counted as out of the labor force. Because there is evidence that school continuation and labor force participation decisions are interrelated (Ornstein, 1976), we treat labor force participation and school enrollment status as joint dependent variables.[9] Therefore, the dependent variable has four categories: in the labor force and in school, in the labor force and out of school, out of the labor force and in school, out of the labor force and out of school. Three dummy variables are created for membership in these four categories. They are labeled: LFP1; LFP2;

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and LFP3 and correspond to the first three categories above. The excluded (base) category is out of the labor force and out of school. Each of these three dummy variables is predicted by means of logistic regression analysis.[10] The coefficients estimated from these models represent the effects of independent variables on the probability (log-odds) of being in particular labor force/school enrollment state (i.e., LFP1, LFP2, LFP3) as opposed to being in the base category, out of the labor force and out of school.[11]

We next specify models for employment versus unemployment for whites and Hispanics. Parallel to labor force participation, we treat employment and school enrollment as jointly determined variables. The dependent variable has four categories: employed and in school (labeled EMP1), employed and out of school (EMP2), unemployed and in school (EMP3), unemployed and out of school (the base category). A set of logistic regressions are then run predicting membership in the first three employment/school enrollment statuses (i.e., EMP1, EMP2, and EMP3). Because employment is defined only for those who participate in the labor force, the estimates derived from the logistic regressions for employment are conditional on participation in the labor force.

### Results

Table 3 shows the number of cases used in the analysis, and the means and standard deviations of the independent variables for labor force participation and employment models for whites and Hispanics. The data in Table 3 confirm a number of findings of past research.

Hispanic youth tend to come from poorer families than white youth. Hispanics show a shorter length of U.S. residence on all three length of residence variables. Hispanics are also much more likely to be bilingual, and among bilinguals, report a greater facility with the non-English language (i.e., Spanish) than whites. Hispanics also do poorly in school relative to whites: they have lower grades, and score lower on standardized tests. These results are also similar for those respondents who are in the labor force.

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Labor Force Participation

Table 4 presents the results of the logistic regression analyses of labor force participation/school enrollment for whites and Hispanics. For both Hispanics and whites, only one sex effect surfaces in Table 4: males are significantly more likely than females to be in the labor force and enrolled in school.

Considering the other demographic variables, the results for age are expected: older youth are more involved in the labor force and less involved in school. Among Hispanics, older youth are more likely to be in the labor force and out of school (see equation for LFP2) and are less likely to be in school and out of the labor force (equation LFP3) than out of the labor force and out of school. The results for whites follow a similar pattern, although only one effect is statistically significant, i.e., the effect of age in the equation for LFP1: younger youth are more likely to be in the labor force and in school than any of the other categories.

The independent effects of marital status on labor force participation and school enrollment are similar for whites and Hispanics. For both whites and Hispanics, being married decreases the chances of being in the labor force and in school and increases the odds of being in the labor force and out of school. For both whites and Hispanics, married people find it particularly difficult to combine participation in school and in the labor force.

If we examine the coefficients for the scholastic achievement variables, we find significant effects for both whites and Hispanics. For Hispanics, the higher the base-year grade point average, the greater the probability of being in school and out of the labor force; the lower the chances of being in the labor force and out of school (see equations for LFP2 and LFP3 respectively). This same pattern surfaces for whites as well, but the t-test for the coefficient in the equation for LFP1 is not significant. Performance on the battery of standardized tests is not related to labor force participation or school enrollment once the other predictors in the model are controlled. The equation for Hispanics predicting LFP2 is an

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exception: better performance on the test battery lowers the chances of being out of school and in the labor force.

The lack of significant effects for the composite test score suggests that between-school variation in scholastic achievement is largely irrelevant to dropout and labor force decisions.[12] The significant effects of grade point average, which only vary within schools, strongly suggests that the effects of scholastic achievement on dropout and labor force participation decisions are highly contextualized. It is only students' scholastic achievement relative to peers in their school context that affects their decisions to leave school and/or participate in the labor force.

If we consider the effects of the last general variables, i.e., previous work experience, we find similar effects on labor force participation and school enrollment for Hispanics and whites. Those respondents who worked at the time of the base year survey are less likely to be exclusively in school (see the equations for LFP2), although the effect for Hispanics fails to be significant. Previous work experience also increases the chances that both whites and Hispanics combine school and labor force activities (LFP1), and decreases the chances of being out of school and in the labor force (LFP3). Therefore, unlike previous studies that find that high school students who work suffer significant costs in terms of their schooling (Steinberg, Greenberger, Garduque, and McAuliffe, 1982), this data show no tendency for either Hispanics or whites to be pulled out of school and into the labor force by virtue of having worked during their sophomore year.

If we consider the effects of specific factors on youths' labor force participation and school enrollment, we find that none of the length of U.S. residence variables (i.e., mother's, father's, respondent's) significantly distinguish among the four categories of the dependent variable. The only exception is the coefficient for father's length of residence in the equation for LFP1 for Hispanics: respondents whose father's have been in the U.S. longer are more likely to be in the labor force and in school.

If we consider the effects of the language variables, we find

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that Hispanics being exposed to Spanish during their upbringing does not significantly predict school continuation or labor force participation. However, one effect of exposure to a non-English language does appear for whites, although compared to Hispanics relatively few whites have been exposed to another language (see Table 3). Exposure to a non-English language raises the probability of being in the labor force and out of school.

Contrary to our expectations, none of the language variables were significantly distinguished among the four categories of the dependent variable for Hispanics. Why the effect of non-English language background appears for whites, but not for Hispanics is unclear. Last among the language variables, the effects of our measure of English language proficiency (vocabulary test score) on labor force participation and school continuation are nil for both Hispanics and whites. This is most likely to be because the main effects of English language proficiency for these youth are likely to be through scholastic achievement (see Nielsen and Fernandez, 1982), which has been controlled in these models.

Finally, the dummy variables for Hispanic subgroup show only one effect. After controlling for the other variables in the model, Cubans are more likely to combine school and labor force activities and are less likely to be in the labor force and out of school than any of the other Hispanic groups. The lack of significant effects for the dummy variables for Hispanic subgroups imply that the other variables in our model have explained the subgroup variation in school continuation and labor force participation. Most important among the variables that have been found to account for differences among Hispanic subgroups in achievement is family socioeconomic background. For example, the relative affluence of the Cubans (see Jorge and Moncaz, 1980) is often cited as a major reason for Cubans' greater success in the school and labor market (see Nielsen and Fernandez, 1982).[13] However, other variables also explain our dependent variables and consequently differences among Hispanic subgroups in their labor force participation and school enrollment are the same ones that are important for whites, i.e., scholastic achievement,

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previous work experience, and marital status. According to these results, the processes by which Hispanics and whites decide to stay in or leave school and participate or not in the labor force are very similar. The "specific" variables that we hypothesized would be necessary to explain Hispanics' underachievement have proven to be insignificant.

## Employment Status

The coefficients of models predicting employment and school enrollment, (see Table 5) are shown as joint dependent variables. Similar to the results for labor force participation, sex does not significantly distinguish among the categories of the dependent variable. Considering the other demographic variables, we find that age is a significant predictor in two equations, i.e., EMP1 and EMP2 for Hispanics. Older Hispanics are less likely to be employed and in school and more likely to be employed and out of school than younger Hispanics.

Similar to the pattern for labor force participation, marital status is a strong predictor of employment and school continuation for both whites and Hispanics, independent of the other variables in the model. Being married increases the chances that the respondent is employed and out of school, and lowers the probability of being employed and in school for both whites and Hispanics. These results imply that both whites and Hispanics are more likely to be unemployed and out of school or unemployed and in school than being in school and employed. Apparently, employment and schooling are an "either-or" proposition for those whites and Hispanics who are married.

When we consider family socioeconomic background, we find that SES is not a significant predictor for both whites and Hispanics. The fact that effects of family socioeconomic background are weaker for employment than labor force participation for whites is not surprising. Family socioeconomic background may make it more or less desirable to seek employment, but actually securing a job involves convincing an employer that one is worth hiring. Especially in the youth labor market, family background is unlikely to be an important market signal to employers (see Spence, 1974).[14] Although the low-

wage, low-skill, high turnover structure of the youth job market (see Osterman, 1980) is likely to make employers' hiring decisions less dependent on productivity-related criteria; employers are probably more likely to pay attention to the effects of past work experience and the characteristics measured by the second set of general predictors, i.e., scholastic achievement.

Similar to the pattern of results for labor force participation, past work experience increases the chances of being in the two employed categories (i.e., EMP1 and EMP2), and lowers the probability of being unemployed and in school (EMP3). This pattern is similar for both whites and Hispanics, although the coefficient in the EMP2 equation is not significant for Hispanics. There is no evidence of work experience drawing students out of school.

If we turn to the effects of general scholastic achievement, as measured by performance on the test battery, we find that scholastic achievement is unrelated to the dependent variables for whites. For Hispanics, better performance on the tests raises the probability of being employed and in school. The pattern for the test score coefficient in the other two equations implies that better students are more likely to be in school, but neither of these effects is significant. However, two of the three coefficients for grades are significant for both whites and Hispanics. Higher grades increase the probability of being employed and in school, and decrease the chances of being employed and out of school.

The fact that grade point average is a significant predictor of employment suggests that employment choices are also made within the context of school. Employment choices reflect employers' choices among competitors looking for work. Because of the highly local nature of the youth job market (see Borus, 1983), it is possible that employers' hiring decisions are also made with reference to the same school context that students refer to when making their labor force participation decisions. Therefore, while better school performance increases students' school attachment and lowers their probability of labor force participation (see Table 4), employers try and choose the better students from among those who do choose to participate in the

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labor force—if not for their skills, then simply for their better discipline (see Bowles and Gintis, 1977).

If we consider the effects of the specific variables, we find that none of the variables measuring language patterns or immigration history significantly distinguish the four cells of the dependent variable. The only exception to this pattern is the effect of non-English language background in the equation for EMP2 for whites. Contrary to our predictions, Hispanics' special circumstances play no role in explaining their school continuation or employment. If these results are to be trusted, this would imply that employers do not find these specific characteristics relevant criteria on which to base their hiring decisions.

Finally, unlike the results for labor force participation, none of the subgroups are significantly different in their employment behavior. Apparently, the advantages that Cubans have in the transition into the labor force, do not appear in employment, once the other variables in the model have been controlled.

## Summary, Conclusion, and Policy Recommendations

The descriptive analyses in this paper have shown that overall, Hispanics fare worse than whites, but not as poorly as blacks, in the schools and in the labor market. Hispanic youth drop out of high school at a rate higher than white and lower than black youth. Similarly, the unemployment rate for Hispanic youth is higher than the rate for white, and lower than the rate for black youth. These statistics for the Hispanic population overall mask considerable heterogeneity among the various Hispanic subgroups. Specifically, Cubans and other Latin Americans fare relatively well compared to whites; while Puerto Ricans and Mexican Americans fare relatively poorly. Puerto Rican youth exhibit particularly severe employment problems and often show unemployment rates as high or higher than black youth. The descriptive analyses also show that Hispanic-white disparities in labor force participation and unemployment are more severe for high school dropouts than for students in school.

The multivariate analyses that attempt to explain labor force participation, unemployment, and school enrollment for whites and

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Hispanics show a number of patterns. For both whites and Hispanics, family socioeconomic background is consistently related to labor force participation and school enrollment. With a few exceptions, the specific factors of language and family immigration history fail to be consistently related to school and labor market achievements for Hispanics, and (not surprisingly) whites.

The two most important determinants of labor force participation, employment and school continuation for both white and Hispanic youth are scholastic achievement and previous employment experience. For both whites and Hispanics, grade point average is a consistent predictor of these school and labor market variables. Previous work experience is also strongly related to the dependent variables for both white and Hispanic youth.

In conclusion, it appears that the root of Hispanic youths' labor market problems lie in their education. These results would suggest that policy efforts be directed toward solving the problem of Hispanic underachievement in the schools. However, the positive independent effects of previous work experience also suggest that youth employment programs are likely to have beneficial results for Hispanic youth. Therefore, a two-pronged approach — through the schools and in the labor market — is likely to be most fruitful in tackling Hispanic youth employment problems.

TABLE 1. DROPOUT RATES BY SEX BY POPULATION SUBGROUP FOR SOPHOMORE COHORT

| Population Subgroup | Male | | | Female | | |
|---|---|---|---|---|---|---|
| | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size |
| All Hispanics | 18.5 | 1.3 | 2280 | 18.1 | 1.3 | 2210 |
| Mexican American | 21.4 | 1.8 | 1288 | 20.8 | 1.8 | 1270 |
| Cuban | 14.6 | 4.2 | 184 | 26.5 | 5.2 | 189 |
| Puerto Rican | 24.0 | 4.3 | 258 | 1.5 | 4.3 | 240 |
| Other Latin Americans | 12.0 | 2.2 | 550 | 10.8 | 2.2 | 511 |
| Non-Hispanic Blacks | 20.3 | 1.6 | 1685 | 14.2 | 1.3 | 1961 |
| Non-Hispanic Whites | 13.4 | 0.6 | 9226 | 11.6 | 0.6 | 9340 |

TABLE 2A  LABOR FORCE STATUS BY SCHOOL ENROLLMENT STATES BY SEX POPULATION SUBGROUP
FOR SOPHOMORE COHORT

| Population Subgroup | Males Enrolled in School | | | | | |
|---|---|---|---|---|---|---|
| | Labor Force Participation Rate | | | Unemployment Rate | | |
| | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size |
| All Hispanics | 77.1 | 1.7 | 1567 | 18.0 | 1.8 | 1180 |
| Mexican American | 77.2 | 2.3 | 872 | 14.8 | 2.2 | 649 |
| Cuban | 75.5 | 6.0 | 132 | 22.4 | 6.8 | 97 |
| Puerto Rican | 76.0 | 5.5 | 159 | 27.5 | 6.7 | 117 |
| Other Latin Americans | 77.7 | 3.3 | 404 | 18.4 | 3.5 | 317 |
| Non-Hispanic Blacks | 75.7 | 2.1 | 1089 | 24.8 | 2.5 | 804 |
| Non-Hispanic Whites | 79.5 | 0.8 | 7415 | 14.4 | 0.8 | 5831 |

TABLE 2A   LABOR FORCE STATUS BY SCHOOL ENROLLMENT STATES BY SEX POPULATION SUBGROUP
FOR SOPHOMORE COHORT
(CONTINUED)

| Population Subgroup | Females Enrolled in School | | | | | |
|---|---|---|---|---|---|---|
| | Labor Force Participation Rate | | | Unemployment Rate | | |
| | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size |
| All Hispanics | 72.7 | 1.8 | 1657 | 19.7 | 1.9 | 1141 |
| Mexican American | 71.3 | 2.4 | 935 | 21.5 | 2.6 | 642 |
| Cuban | 67.3 | 6.2 | 147 | 20.7 | 6.8 | 91 |
| Puerto Rican | 72.1 | 5.6 | 169 | 22.9 | 6.2 | 118 |
| Other Latin Americans | 75.6 | 3.4 | 406 | 16.3 | 3.5 | 290 |
| Non-Hispanic Blacks | 67.8 | 2.0 | 1451 | 32.6 | 2.4 | 1009 |
| Non-Hispanic Whites | 77.7 | 0.8 | 7987 | 14.8 | 0.8 | 6179 |

TABLE 2B  LABOR FORCE STATUS BY SCHOOL ENROLLMENT STATUS BY SEX BY POPULATION SUBGROUP FOR SOPHOMORE COHORT

## Males Enrolled in School

| Population Subgroup | Labor Force Participation Rate | | | Unemployment Rate | | | Percent in the Military | | |
|---|---|---|---|---|---|---|---|---|---|
| | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size |
| All Hispanics | 85.0 | 4.2 | 189 | 30.0 | 5.8 | 160 | 3.1 | 2.0 | 195 |
| Mexican American | 90.1 | 4.4 | 119 | 32.6 | 7.4 | 105 | 0.6 | 1.1 | 121 |
| Cuban | 70.2 | 19.0 | 15 | 33.9 | 23.0 | 11 | 0.0 | 0.0 | 15 |
| Puerto Rican | 73.7 | 13.9 | 26 | 34.7 | 17.1 | 20 | 14.4 | 10.5 | 29 |
| Other Latin Americans | 82.5 | 11.4 | 29 | 18.7 | 13.4 | 22 | 2.7 | 4.8 | 30 |
| Non-Hispanic Blacks | 73.1 | 6.2 | 134 | 36.8 | 7.8 | 99 | 1.4 | 1.6 | 137 |
| Non-Hispanic Whites | 82.5 | 2.8 | 508 | 21.8 | 3.3 | 449 | 8.4 | 2.0 | 556 |

TABLE 2B LABOR FORCE STATUS BY SCHOOL ENROLLMENT STATUS BY SEX BY POPULATION SUBGROUP FOR SOPHOMORE COHORT (CONTINUED)

| Population Subgroup | Females Enrolled in School | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Labor Force Participation Rate | | | Unemployment Rate | | | Percent in the Military | | |
| | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size | Percent | Standard Error | Sample Size |
| All Hispanics | 59.5 | 5.4 | 212 | 34.9 | 6.8 | 126 | 0.0 | 0.0 | 212 |
| Mexican American | 57.6 | 7.1 | 126 | 32.3 | 8.9 | 71 | 0.0 | 0.0 | 126 |
| Cuban | 47.4 | 16.8 | 23 | 52.5 | 20.8 | 15 | 0.0 | 0.0 | 23 |
| Puerto Rican | 67.8 | 14.0 | 29 | 46.2 | 18.4 | 19 | 0.0 | 0.0 | 29 |
| Other Latin Americans | 63.5 | 13.3 | 34 | 27.6 | 15.7 | 21 | 0.0 | 0.0 | 34 |
| Non-Hispanic Blacks | 60.4 | 7.0 | 128 | 47.4 | 8.7 | 85 | 2.9 | 2.4 | 130 |
| Non-Hispanic Whites | 66.0 | 3.4 | 552 | 26.6 | 3.9 | 354 | 0.9 | 0.7 | 556 |

TABLE 3. MEANS AND STANDARD DEVIATIONS FOR VARIABLES IN LABOR FORCE PARTICIPATION/SCHOOL ENROLLMENT ANALYSIS

| | Labor Force Participation | | | | Employment | | | |
| | White | | Hispanic | | White | | Hispanic | |
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
|---|---|---|---|---|---|---|---|---|
| FP1 | .73 | .44 | .65 | .48 | ----- | ---- | ----- | ----- |
| LFP2 | .04 | .20 | .07 | .26 | ----- | ---- | ----- | ----- |
| LFP3 | .21 | .41 | .26 | .44 | ----- | ---- | ----- | ----- |
| EMP1 | ----- | ---- | ----- | ---- | .80 | .40 | .72 | .45 |
| EMP2 | ----- | ---- | ----- | ---- | .04 | .20 | .07 | .26 |
| EMP3 | ----- | ---- | ----- | ---- | .14 | .35 | .19 | .39 |
| Sex (1=male) | .47 | .50 | .48 | .50 | .48 | .50 | .50 | .50 |
| Age | 15.47 | .59 | 15.62 | .74 | 15.48 | .59 | 15.65 | .75 |
| Mexican American | ----- | ---- | .53 | .50 | ----- | ---- | .52 | .50 |
| Cuban | ----- | ---- | .10 | .30 | ----- | ---- | .09 | .29 |
| Puerto Rican | ----- | ---- | .10 | .30 | ----- | ---- | .10 | .30 |
| Other Latin American | ----- | ---- | .27 | .44 | ----- | ---- | .29 | .45 |
| Bilingual (1= yes) | .04 | .20 | .51 | .50 | .04 | .20 | .50 | .50 |
| Proficiency in non-English Lang. | .06 | .35 | 1.04 | 1.12 | .06 | .33 | 1.02 | 1.12 |
| Vocabulary Test Score | 50.62 | 9.36 | 45.52 | 9.15 | 50.55 | 9.23 | 45.25 | 8.98 |
| Composite Test Score | 53.02 | 8.42 | 46.49 | 7.94 | 52.90 | 8.20 | 46.31 | 7.84 |
| Grade Point Average | 2.84 | .78 | 2.63 | .76 | 2.82 | .77 | 2.61 | .75 |
| Marital Status | .03 | .17 | .04 | .20 | .02 | .14 | .03 | .17 |
| Worked During Base Year | .45 | .50 | .34 | .47 | .50 | .50 | .40 | .49 |
| Length of Residence | 15.31 | 1.20 | 14.86 | 2.43 | 15.34 | 1.13 | 14.88 | 2.42 |
| Father's Length of Residence | 41.68 | 5.20 | 35.69 | 11.77 | 41.75 | 5.02 | 36.06 | 11.64 |
| Mother's Length of Residence | 38.08 | 4.69 | 33.18 | 10.94 | 38.92 | 4.56 | 33.37 | 10.90 |
| Socioeconomic Status | .12 | .69 | -.36 | .72 | .12 | .67 | -.35 | .71 |
| Log-Likelihood | (N=3389) | | (N=2211) | | (N=2613) | | (N=1580) | |

**TABLE 4. EFFECTS OF INDEPENDENT VARIABLES ON LABOR PARTICIPATION/SCHOOL ENROLLMENT STATUS FOR WHITE AND SOPHOMORES**

| | White | | | | | | Hispanic | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LFP1 | | LFP2 | | LFP3 | | LFP1 | | LFP2 | | LFP3 | |
| | b | SE(b) | b | SE(b) | b | SE(b) | b | SE(b) | b | SE(b) | b | SE(b) |
| Sex (1 = male) | .02 | .04 | .20* | .10 | -.06 | .05 | .06 | .05 | .23* | .10 | -.07 | .05 |
| Age | -.19* | .08 | .40 | .24 | -.12 | .09 | -.10 | .07 | .61* | .11 | -.29* | .08 |
| Cuban | ---- | ---- | ---- | ---- | ---- | ---- | .25* | .09 | -.59* | .22 | -.13 | .10 |
| Puerto Rican | ---- | ---- | ---- | ---- | ---- | ---- | -.02 | .12 | .07 | .22 | -.04 | .13 |
| Other Latin American | ---- | ---- | ---- | ---- | ---- | ---- | -.11 | .13 | .42 | .25 | .08 | .14 |
| Bilingual (1= Yes) | -.05 | .23 | .89* | .40 | -.34 | .27 | -.10 | .11 | .26 | .20 | -.07 | .12 |
| Proficiency in non-English Language | -.21 | .25 | -.46* | .54 | .43 | .29 | -.09 | .10 | -.12 | .18 | .02 | .11 |
| Vocabulary Test Score | .01 | .01 | -.02 | .02 | -.01 | .01 | -.01 | .01 | .01 | .02 | .01 | .01 |
| Composite Test Score | -.02 | .01 | -.03 | .02 | .01 | .01 | -.01 | .01 | -.04* | .02 | .002 | .01 |
| Grade Point Average | .08 | .06 | -1.04* | .14 | .25* | .07 | -.17* | .07 | -.85* | .13 | .24* | .03 |
| Marital Status | -1.08* | .13 | .79* | .16 | .08 | .13 | -.72* | .13 | .77* | .15 | -.47* | ---- |
| Worked During Base Year | .14* | .04 | .23* | .09 | -.45* | .05 | .32* | .05 | .13 | .09 | -.45* | .06 |
| Length of Residence | .02 | .05 | .21 | .20 | -.01 | .05 | -.001 | .03 | -.02 | .05 | .02 | .03 |
| Father's Length of Residence | .01 | .01 | -.02 | .02 | -.01 | .01 | .01* | .01 | .003 | .01 | .01 | .01 |
| Mother's Length of Residence | .02 | .01 | .04 | .03 | .002 | .01 | -.01 | .01 | .003 | .02 | .01 | .01 |
| Socioeconomic Status | .05* | .06 | -.52* | .16 | .03* | .07 | .06 | .07 | -.02* | .14 | -.05* | .08 |
| Constant | 2.36 | 1.26 | -6.87* | 2.54 | -.17 | 1.40 | 1.21 | 1.11 | -7.80* | 1.85 | 1.51 | 1.31 |
| Log-Likelihood | (-1990.39) | | (-465.07) | | (-1688.53) | | (-1375.59) | | (-462.90) | | (-1193.78) | |

TABLE 5. EFFECTS OF INDEPENDENT VARIABLES ON LABOR PARTICIPATION/SCHOOL ENROLLMENT STATUS FOR WHITE AND HISPANIC SOPHOMORES

| | White | | | | | | Hispanic | | | | | |
| | EMP1 | | EMP2 | | EMP3 | | EMP1 | | EMP2 | | EMP3 | |
| | b | SE(b) | b | SE(b) | b | SE(b) | b | (SE(b) | b | SE(b) | b | SE(b) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sex (1 = male) | .04 | .05 | .14 | .12 | -.11 | .06 | -.02 | .06 | .15 | .11 | -.03 | .07 |
| Age | -.19 | .11 | .45 | .32 | -.13 | .13 | -.29* | .08 | .57* | .12 | -.07 | .10 |
| Cuban | ------ | ----- | ------ | ------ | ------ | ----- | .23 | .12 | -.44 | .25 | -.01 | .13 |
| Puerto Rican | ------ | ----- | ------ | ------ | ------ | ----- | -.20 | .15 | -.15 | .28 | .22 | .16 |
| Other Latin American | ------ | ----- | ------ | ------ | ------ | ----- | -.02 | .17 | .35 | .30 | .11 | .19 |
| Bilingual (1= Yes) | -.001 | .31 | .95* | .47 | -.78 | .48 | -.08 | .14 | .27 | .23 | .06 | .16 |
| Proficiency in non-Eng. Lang. | -.01 | .37 | -.53 | .61 | .55 | .50 | .01 | .12 | -.10 | .21 | .08 | .14 |
| Vocabulary Test Score | .0003 | .01 | -.03 | .02 | .01 | .01 | -.01 | .01 | .01 | .02 | -.01 | .01 |
| Composite Test Score | .001 | .01 | -.03 | .02 | .002 | .01 | .03* | .01 | -.03 | .02 | -.02 | .01 |
| Grade Point Average | .32* | .08 | -.94* | .16 | -.05 | .09 | .40* | .09 | -.79* | .15 | .02 | .10 |
| Marital Status | -.94* | .16 | 1.38* | .21 | -.26 | .27 | -.67* | .16 | 1.07* | .19 | -.25 | .23 |
| Worked During Base Year | .29* | .05 | .22* | .11 | -.43* | .06 | .37* | .06 | .11 | .11 | -.50* | .08 |
| Length of Residence | -.04 | .07 | .29 | .28 | -.01 | .08 | .0001 | .03 | -.03 | .05 | .01 | .04 |
| Father's Length of Residence | .01 | .01 | -.02 | .02 | -.004 | .02 | .01 | .01 | -.0003 | .01 | -.01 | .01 |
| Mother's Length of Residence | .01 | .02 | .03 | .03 | -.01 | .02 | .001 | .01 | -.006 | .02 | -.003 | .01 |
| Socioeconomic Status | .08 | .08 | .28 | .18 | .07 | .09 | -.003 | .09 | .02 | .17 | .02 | .10 |
| Constant | 3.14* | 1.58 | -7.78* | 2.96 | -1.11 | 1.93 | 2.83* | 1.39 | -6.88* | 2.15 | .13 | 1.63 |
| Log-Likelihood | (-1254.47) | | (-348.53) | | (-1035.52) | | (-887.70) | | (-335.01) | | (-729.08) | |

APPENDIX:  CODING INFORMATION

Respondents are classified as Hispanic on the basis of their answer to the following question from the follow-up questionnaire: "What is your origin or descent? (If more than one, please mark below the one you consider the most important part of your background.)" Under the general heading of "Hispanic or Spanish" were grouped four possible answers: 1) Mexican, Mexican American, Chicano; 2) Cuban, Cubano; 3) Puerto Rican, Puertoriqueno or Boricua; 4) Other Latin American, Latino, Hispanic, or Spanish descent. We label these for simplicity "Mexican American", "Cuban", "Puerto Rican", "Other Latin American". Respondents are considered white if their response is something other than Hispanic to the national origin question and "white" to the question "What is your race?" Respondents are defined as black in a similar fashion. The terms "white" and "black" as used in this paper, then, refers to whites and blacks not of Hispanic origin. We did not differentiate among Hispanics further on the basis of race, because the distinction between concepts of race and ethnicity is blurred in the case of Hispanics. Many of these respondents answered "Other" to the race question, implying that they view their group as a distinct "race" (Nielson and Fernandez, 1982: Table 1.3).

Regarding the measurement of the dependent variables (labor force participation, employment and school enrollment status), respondents' labor force status is classified on the basis of their responses to the following questions. Sophomores were asked two items in the follow-up: 1) "Did you do any work for pay last week, not counting work around the house?" and, 2) "Whether or not you already have a job, were you looking for a job last week?" Response categories of "Yes" and "No" were offered for both questions. Respondents' military enlistment (see Table 2) was determined from an item on the dropout questionnaire, "What were you doing the first week of February 1982?" Among the options offered was "On active duty in the Armed Forces (or service academy)." Youth who chose this option, regardless of their responses on the labor force status items, are counted as enlisted in the military. For the civilian population (i.e., those who did not choose the "On active duty in the military" option), respondents are defined as employed if they answered "Yes" to the first question. Civilian respondents are classified as unemployed if they answered "No" to the first question and Yes" to the second question. Civilians who answer "No" to both questions are defined as out of the labor force. Finally sophomores' school enrollment status is based on whether the respondent is part of the dropout or in-school follow-up samples.

Regarding the measurement of family socioeconomic status, the variable is a linear composite derived from measures of father's occupation, father's and mother's education, family income, and a set of items that ask whether the respondent's family receives a daily newspaper, possess an encyclopedia or other reference books, typewriter, electric typewriter, electric dishwasher, two or more cars

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or trucks, more than 50 books, a pocket calculator, and whether the respondent has his own room. Coding on this variable is based on a linearly-weighted combination of the above 4 family background measures where the weights are derived from the non-missing data. If a case has missing data on any of these background variables, the composite is computed from the non-missing data for that case (see Jones et al., 1983:62).

Grades were measured by the item: "Which of the following best describes your grades so far in high school?" Eight response categories were offered from "Mostly A (a numerical average of 90-100)" to "Mostly below D (below 60)". The variable was recoded on a four-point scale so that "Mostly below D" which is coded ".5".

The standardized test scores used in these analyses are a composite of reading, vocabulary, and mathematics tests administered during the base-year survey (see Heyns and Hilton (1982) for a detailed discussion of the High School and Beyond cognitive tests). Each individual test was standardized within cohort to have a mean of 50 and a standard deviation of 10. The composite was computed by taking the mean of the non-missing test scores (see Jones et al., 1983: Section 6.9).

Regarding the demographic variables (i.e., age, sex, and marital status), age and sex were measured by base-year items. Because sophomores were not asked their marital status directly in either the base-year or follow-up surveys, we use the following question from the follow-up survey to distinguish respondents who have been married from those who have not been married. Respondents were presented a question worded "At what age do you expect to..." Respondents who chose this response to the "Get Married" item are coded 1=ever married versus =never married for those who do not choose this response.

Regarding previous employment, respondents were asked, "Did you do any work for pay last week, not counting work around the house?" Responses of "Yes" and "No" were offered and are coded one and zero, respectively.

Regarding parent's length of U.S. residence, students were asked in the base-year survey how much of their mother's and father's lives have been spent in the U.S. Each variable had five response categories: 1) About 1-5 years; 2) About 6-10 years; 3) About 11-20 years; 4) More than 20 years, but not all; 5) All or almost all. Categories 1 through 3 were recoded to the midpoint (3, 8, and 15.5 years respectively). Categories 4 and 5 presented more of a problem because the categories were imputed by using the model age of mother's childbearing (25) and adding the student's modal age (15 for sophomores) and assigning that to the fifth ("All or almost all") category. Therefore, the value repeated for father's length of residence adding three years to account for a typical three year difference in age between husbands and wives. Thus, the fourth and fifth categories for father's length of residence were recoded to 43

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and 30.5.

Students were also asked to report how much of their lives have
been spent in the United States. The response categories were: 1)
About 1-5 years; 2) About 6-10 years; 3) More than 10 years, but not
all; 4) All or almost all. Since available data included the
student's age, all the categories were well-defined and recoded as
follows: 1) 3 years; 2) 8 years; 3) 10+ student's age) /2; 4)
student's age. If the student's age was not available, it was imputed
for use in the student length of residence variable as the modal age
for sophomores, 15. This had to be done for only a few cases.

"High School and Beyond's" language questions were administered
via a separate questionnaire to all respondents (i.e., not just
Hispanic) who passed a filter of five questions which ask about the
respondent's mother tongue and languages presently spoken at home.
Those students who reported a language other than English in response
to one of the five questions regarding language background were asked
to choose on a four point scale how well they understand, speak, read
and write the non-English language. The response categories are "Not
at all," "Not very well," "Pretty well," and "Very well" and were
coded from zero to four. Exploratory factor analysis of "High School
and Beyond's" pretest data showed that the four items clearly load on
one factor with each of the indicators contributing equally (see
Fernandez, 1980). The composite index was formed by taking the mean
of the four items. Note that the coding is positive ranging from a
low of zero (indicating no proficiency in the other language) to a
high of three indicating high proficiency. Those students who did
not pass the language background filter (i.e., monolinguals) were
assigned a zero on the proficiency in non-English language scale.
When combined with the dummy variable for language background, this
coding has the effect of creating a spline for the proficiency in
other language scale.

English proficiency is measured by the student's performance on
the base-year standardized vocabulary test. The test is standardized
to a mean of 50 and a standard deviation of 10.

1.  Note that detailed coding information on the definition of the comparison groups and both the dependent and independent variables can be found in the Appendix.

2.  Note that replacing the SES composite with measures of father's and mother's education and family income does not change the substantive results reported below. We opt for the summary measure here because of the large numbers of missing values on parental education (15 to 20 percent) and family income (12 to 18 percent).

3.  Note that self-reported measures of language practices have been found to be highly reliable and valid (see Fishman, 1969; Fishman and Cooper, 1969; Fishman and Terry, 1969). Fishman and Terry (1969) attribute these qualities to the fact that respondents are forced to perform a global assessment of their linguistic behavior. Many objective measures capture more fragmentary aspects of language usage and have correspondingly lower validity.

4.  It is worth noting, however, that the pattern of results for analyses using the self-report measure of English proficiency is very similar to the results of using the vocabulary test as a measure of English proficiency.

5.  Note that the standard errors reported in the descriptive analyses have been corrected for the effects of sample design.

6.  Aside from differences in the age groups studies, the discrepancies between the results in past research and the analyses here are probably due to differences in the target population. Note that none of these sources report statistics on out-of-school youth.

7.  Note that we do not estimate models for blacks. This is for two reasons. First, the logistic regression analyses presented in this section are estimated by maximum likelihood techniques and are therefore very expensive. Eliminating blacks from consideration has the advantage of simplifying the number of comparisons that need to be made in the analysis and cuts computation time by a third. Second, a major focus of this analysis is the assessment of the effects of linguistic patterns on labor force and school enrollment status. Although there is evidence that linguistic factors are important in determining black students' school achievement (see Dillard, 1973: Chap. 7; Harber and Bryen, 1976; Labov, 1976), the literature focuses on the use of non-standard English dialects, i.e., "Black English." Since the language data in "High School and Beyond" does not contain any information about dialects but is geared toward the identification of foreign language users, we cannot properly address the language issue for blacks.

8.  As with the descriptive analyses (section 4), we define those who are enlisted in the military as out of the labor force. Therefore,

the equations presented below predict participation in the civilian labor force.

9.  An alternative here would be to use school enrollment status as a predictor of labor force status. However, if it is true that school continuation and labor force participation decisions are made jointly, the results of such a specification would suffer from simultaneity bias (Theil, 1971:429-32).

10. Because the dependent variable are dichotomous, ordinary least squares regressions would produce estimates that are not minimum, variance unbiased estimates because of heteroskedasticity. A logic specification solves this problem (see Theil, 1971:631-3).

11. In subsequent analyses not reported here, I have re- estimated the models presented here using multinominal logic analyses. This technique allows for simultaneous estimation of the four categories of the dependent variable. The results of those analyses are very similar to those presented here.

12. Recall that test performance varies both between and within schools, while grade point average only varies within school. Because grade point average is controlled in these models, test score performance largely taps the effects of between-school variation in scholastic achievement.

13. Note that the latest wave of Cuban immigrants, the Mariel refugees, are not as affluent as early waves (see Bach, 1980). However, our data do not contain any of these refugees because the "High School and Beyond" sample was drawn prior to the Mariel boat lift.

14. Osterman (1980) shows data to support the argument that parents are crucial in helping many youth get started in the job market by providing youth with networks of personal contacts that help youth find jobs. The effects of such job contacts on youth's probability of employment is certain to be positive, but this process is probably only marginally related to these family background factors. Such network variables may account for the significance of mother's and father's presence in the home in increasing youth's labor force participation and employment.

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