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ABSTRACT

This paper presents an empirical analysis of the effect of the Mariel Boatlift on the Miami labor market, focusing on the wages and unemployment rates of less-skilled workers. The Mariel immigrants increased the population and labor force of the Miami metropolitan area by 7 percent. Most of the immigrants were relatively unskilled: as a result, the proportional increase in labor supply to less-skilled occupations and industries was much greater. Nevertheless, an analysis of wages of non-Cuban workers over the 1979-85 period reveals virtually no effect of the Mariel influx. Likewise, there is no indication that the Boatlift lead to an increase in the unemployment rates of less-skilled blacks or other non-Cuban workers. Even among the Cuban population wages and unemployment rates of earlier immigrants were not substantially effected by the arrival of the Mariels.

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One of the chief concerns of immigration policy makers is the extent to which immigrants depress the labor market opportunities of less-skilled natives. Despite the strong presumption that an influx of immigrants will reduce native wages, existing empirical studies suggest that the effect is small.[1] There are two leading explanations for this finding. First, immigrants have on average only slightly lower skill characteristics than the native population.[2] Thus, econometric studies based on the distribution of the existing stock of immigrants probably understate the effect of unskilled immigration on less-skilled natives. Second, the locational choices of immigrants and natives presumably depend on expected labor market opportunities. Immigrants tend to move to cities where the growth in demand for labor can accommodate their supply. Even if new immigrants cluster in only a few cities (as they do in the US), inter-city migration of natives will tend to offset the adverse effects of immigration.[3]

These considerations illustrate the difficulty of using the correlation across cities between wages and immigrant densities to measure the effect of immigration on the labor market opportunities of natives. They also

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[1] See the survey by Greenwood and McDowell (1986), and studies by Grossman (1982), Borjas (1987), Lalonde and Topel (1988) and Altonji and Card (1989).

[2] For example, tabulations from the 1980 Census indicate that in 1980 16.3 percent of natives over age 25 had 4 or more years of college and 67.7 percent were high-school graduates. By comparison, 15.8 percent of immigrants had 4 or more years of college and 53 percent were high school graduates. See U.S. Department of Commerce Bureau of the Census 1980 Census of Population Characteristics of the Population - Detailed Population Characteristics (Volume 1, Chapter D, Part 1, United States Summary: PC80-1-D1-A) Table 255.

[3] See Filer (1988) for a recent attempt to examine this phenomenon.

underscore the value of a natural experiment that corresponds more closely to an exogenous increase in the supply of immigrants to a particular labor market.

The experiences of the Miami labor market in the aftermath of the Mariel Boatlift form one such experiment. From May to September 1980, some 125,000 Cuban immigrants arrived in Miami on a flotilla of privately-chartered boats. Their arrival was the consequence of an unlikely sequence of events, culminating in Castro's declaration on April 20 1980 that Cubans wishing to emigrate to the US were free to leave from the port of Mariel.[4] The available data suggest that 50 percent of the Mariel immigrants settled permanently in Miami. The result of this influx was a 7 percent increase in the overall population and labor force of Miami, and a 20 percent increase in the Cuban population and labor force.

This paper summarizes the effects of the Mariel Boatlift on the Miami labor market, focusing on the effects on wages and unemployment rates of less-skilled workers. The analysis is based on individual micro-data for 1979-85 from the merged outgoing rotation group samples of the Current Population Survey (CPS). Three features of the Mariel incident and the Census data greatly facilitate the analysis. First, the CPS sample of the Miami metropolitan area is relatively large: roughly 1200 individuals per month. Second, a comprehensive picture of the Miami labor market in the months just before the Mariel Boatlift is available from the 1980 Census. (The Census was conducted on April 1). Finally, unlike most other ethnic groups, Cubans are separately identified in the CPS questionnaire. Thus it

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[4]See Masud-Piloto (1988, chapters 6-7) for an overview of the political developments that lead to the Mariel Boatlift.

is possible to estimate wage rates, unemployment rates, and other economic indicators for both Cubans and non-Cubans in the Miami labor market, and to measure the effects of the Mariel immigration on the two groups separately.

Observers in Miami at the time of the Boatlift noted the strain caused by the Mariel immigration. The homicide rate increased nearly 50 percent between 1979 and 1980.[5] On the weekend of May 17, 1980 a three day riot occurred in several black neighborhoods, killing 13. A government-sponsored committee of inquiry identified other longstanding grievances in the black community as the cause of the riot, but cited the labor market competition posed by the Cuban refugees as an important background factor (Governor of Florida's Dade County Citizen's Committee, 1980, pp. 14-15).

A more quantitative assessment is provided by the data in Figure 1, which presents monthly unemployment rates in Miami in the months before and after the start of the Boatlift.[6] The unemployment rate in Miami rose from 5.0 percent in April 1980 to 7.1 percent in July 1980. As the figure makes clear, however, state and national unemployment rates followed a similar pattern, suggesting that the changes in Miami were not solely a response to the Mariel influx. Nevertheless, widespread joblessness of the refugees throughout the summer of 1980 contributed to a perception that labor market opportunities for less-skilled natives were threatened by the Mariel immigrants.[7]

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[5] See Wilbanks (1984) Table 2.1, page 142.

[6] These data are seasonally adjusted, and are taken from Bureau of Labor Statistics Employment and Earnings Table E1 (Table D1 after December 1981) various issues.

[7] For example, an article in Business Week (August 25 1980, pp.86-87) contains quotes from an Florida State Employment Service official and a Department of Labor Wage and Hours Division official noting the downward

Despite this perception, the analysis in this paper gives no indication of any short- or longer-term effect of the Mariel immigration on the wages or unemployment rates of non-Cubans in Miami. Rather, the analysis confirms the conclusion of earlier studies that the effect of immigration is largely confined to members of the immigrant group itself. In the case of the Mariel incident, most of this effect can probably be explained by the characteristics of the new immigrants, who substantially lowered the average skill level of the Cuban labor force in Miami.

I. Overview of the Miami Labor Market Before the Boatlift

For at least a decade prior to the Mariel Boatlift Miami was the most immigrant-intensive city in the US. Tabulations from the 1980 Census indicate that 35.5 percent of residents in the Miami Standard Metropolitan Statistical Area (SMSA) were foreign born.[8] This compares with 22.3 percent in Los Angeles, the major city with the next highest immigrant fraction, and 6.1 percent nationwide. At the time of the Census 56 percent of immigrants in Miami were of Cuban origin. The remaining foreign-born residents, who accounted for 16 percent of the Miami population, included other hispanic groups and a broad selection of Caribbean and European nationals.

Miami also has a significant black population. The fraction of black residents was 15.0 percent in 1970 and had increased to 17.3 percent at the

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pressure on wages and working conditions in the unskilled segment of the Miami labor market.

[8]The Miami SMSA consists of Dade county, and includes Miami City as well as a number of smaller towns and cities. Throughout this paper, I use "Miami" to refer to this broader geographic region.

time of the 1980 Census. This dual concentration of immigrants and blacks makes Miami somewhat unusual among larger US cities, but ideal for studying the effect of increased immigration on the labor market opportunities of black natives.[9]

Table 1 presents a comparative description of the four major groups in the Miami labor force in 1979: white non-hispanics; black non-hispanics; Cubans (foreign-born and native born); and other hispanics. For simplicity I have restricted attention to individuals age 16-61. This group represents roughly 60 percent of the Miami population. A total of 1564 observations are available for 16-61 year olds in the 1979 outgoing rotation group file of the CPS: similar samples are available in subsequent years.

The fractions of Cubans and blacks in the 16-61 age group are 27.2 and 26.3 percent, respectively, while white non-hispanics compose 34.4 percent and non-Cuban hispanics 11.1 percent. Overall, 73 percent of this age group participated in the labor force, with somewhat higher participation rates among whites and Cubans, and lower rates among blacks and other hispanics. Education levels in Miami are somewhat below the national average: the mean of completed education for 16-61 year olds in 1979 was 11.8 years in Miami, compared with 12.2 years nationwide.

The occupation distributions in rows 7-17 of Table 1 give some indication of the degree of labor market competition between the four groups. Cubans and other hispanics have very similar occupation distributions, with both groups having a higher representation in craft and

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[9]Across 121 of the largest cities in the US in 1980 the correlation between the fraction of immigrants and the fraction of native blacks is -.16.

operative occupations than either whites or blacks. Blacks are more highly concentrated in laborer and service-related occupations, and are significantly under-represented in managerial occupations.

One useful summary measure of the overlap in the occupational distributions of the different groups is the average percent increase in labor supply in occupations held by one group that would result from a one percentage point increase in the overall fraction of workers in a second group.[10] This index has the simple form $\Sigma_j s_{1j} s_{2j} / s_j$, where s_{1j} is the fraction of workers of group 1 in occupation j, s_{2j} is the fraction of workers of group 2 in occupation j, and s_j is the fraction of all workers in occupation j. Based on the distributions in Table 1, an inflow of immigrants resulting in a one-point increase in the fraction of Cubans in Miami would lead to a weighted average increase of .95 percent in the supply of labor to occupations held by whites. Under the same conditions the increase would be .99 percent for occupations held by blacks, 1.02 percent for non-Cuban hispanics, and 1.06 percent for Cubans themselves. These calculations suggest that the overlap between the occupational distributions of the four groups is relatively high.

II. The Mariel Immigration

Due to the unauthorized nature of the Boatlift no exact count of the number of Mariel immigrants is available, and there is little precise information on the characteristics and/or final destinations of the immigrants. This section summarizes some of the available information, including data from the March 1985 Mobility Supplement to the Current

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[10] This index is derived in Altonji and Card (1989), pp. 15-16.

Population Survey, which allows Mariel immigrants to be distinguished from other Cubans.

Most sources estimate the number of Mariel immigrants who arrived in 1980 at between 120,000 and 125,000. A recent Census Bureau Current Population Report states that 126,000 refugees entered the US as "Cuban Entrants" (the special immigration status awarded to the Mariel refugees) between April 1980 and June 1981.[11] 104,000 of these arrived between April and June 1980. It is widely assumed that about one-half of these settled permanently in Miami: for example, this assumption is used by the Census Bureau in their "Experimental County Population Estimates" file. Tabulations reported below from the March 1985 CPS confirm this belief.[12]

Table 2 contains estimates of the Miami population for the years 1979 to 1985 from published Census sources and from my own tabulations of the CPS. Census Bureau estimates of the Dade County population show an increase of 80,500 from April 1 to July 1 of 1980, and a relatively slow rate of increase thereafter. Annual counts from the CPS show an increase of some 200,000 in the population of 16-61 year olds between 1979 and 1981, and then a slowly decreasing count from 1981 to 1985. About one-half of this increase was due to an increase in the number of Cubans: their share of the 16-61 age group increased from 27 percent in 1979 to 33 percent in 1981. A similar increase is registered in CPS-based estimates of the Cuban share of the 16-61 year old labor force, which moved from 37.2 percent in

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[11] US Department of Commerce Bureau of the Census Current Population Reports Series P-25, Number 1022, page 9.

[12] It should be noted that population estimates from the CPS rely on the accuracy of Census Bureau weighting procedures, which are themselves based on estimates of local populations.

1979 to 44.8 percent in 1981. Assuming that the Cuban shares of the population and labor force would have remained constant between 1979 and 1981 in the absence of the Boatlift, these figures suggest that the Mariel immigration added 56,000 individuals to the Miami working age population and approximately 45,000 to the Miami labor force: increases of 7 percent.

From the first days of the Boatlift the characteristics of the Mariel immigrants have been a subject of controversy. Among those who were permitted to leave Cuba were several hundred inmates of mental hospitals and jails. Many of these individuals were arrested by immigration officials upon their arrival into the US, and over 1000 were sent to a special prison facility in Atlanta to await deportation back to Cuba.[13] A similar number were arrested for crimes committed in the US and still await a determination of their ultimate immigration status.[14] Contemporary reports indicate that the Mariel immigrants included a relatively high fraction of less-skilled workers, and a high fraction of individuals with low English ability (see the article in Business Week).

Although the questions in the regular Current Population Survey provide insufficient information to identify Mariel immigrants from other foreign and native-born Cubans, the March 1985 Mobility Supplement asks each respondent where he/she lived in March 1980 (one month before the start of the Boatlift). Table 3 presents a descriptive summary of the

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[13] See Masud-Piloto (1988, pp. 100-103). Under a 1984 agreement a total of 2700 Mariel immigrants were to be returned to Cuba.

[14] Mariel immigrants were blamed for and indeed seem to have committed a relatively high number of crimes in the first few months after the boatlift. Wilbanks (1984) reports that 38 of the 574 homicides in Miami in 1980 were committed by Mariel immigrants. Disaffected Mariels were involved in 6 airline highjacking attempts in August 1980. See Masud-Piloto (1988, pp. 95-96).

Cuban population interviewed in the March 1985 CPS, classified by whether the respondent claimed to be living abroad or in the US five years earlier. The sample sizes, particularly of post-1980 entrants, are small.[15] Nevertheless, these data confirm the general impression that on average Mariel immigrants have less education, are somewhat younger, and are more likely to be male than other Cuban immigrants.

The figures in Table 3 also suggest that the Mariel immigrants have lower labor force attachment and lower wage rates than other Cubans. The occupation distributions in rows 8a-8k suggest that the Mariels are more heavily concentrated in laborer and service occupations that other Cubans, and are less likely to hold sales, clerical, and craft jobs. Relative to other Cubans, the occupations of the Mariel immigrants are therefore more similar to those of black workers.

The unadjusted wage gap between Mariels and other Cubans is 34 percent. Part of this differential is attributable to the lower education levels and younger ages of the Mariels. A simple linear regression for the logarithm of average hourly earnings fitted to the sample of Cubans with earnings in 1984 suggests that the Mariels earned 18 percent lower wages than other Cubans, controlling for education, potential experience, and sex (the standard error of this estimate is .08). This gap probably reflects the combination of lower language ability and a shorter assimilation time in the US among the Mariel immigrants, as well as any permanent differences in ability and/or motivation between the earlier and later Cuban immigrants.

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[15] The weighted count of all Cubans in the March 1985 CPS who entered the US after 1980 is 85,800, which is only 69 percent of the estimated 125,000 Mariel refugees.

III. The Effect of the Mariel Immigration of the Miami Labor Market

Tables 4 and 5 present simple averages of wage rates and unemployment rates for whites, blacks, Cubans, and other hispanics in the Miami labor market between 1979 and 1985. In order to provide a comparative perspective for evaluating the changes that took place over this period, I have also assembled similar data for whites, blacks, and hispanics in four "comparison" cities: Atlanta, Los Angeles, Houston, and Tampa-St. Petersburg. These four cities were selected to generate relatively large samples of blacks and hispanics, while at the same time exhibiting a pattern of economic growth similar to that in Miami over the late 1970's and early 1980's. A comparison of employment growth rates (based on establishment-level data) suggests that economic conditions were very similar in Miami and the average of the four comparison cities between 1976 and 1984.

The wage data in Table 4 reveal a number of facts. Perhaps most obvious is that earnings are lower in Miami than in the comparison cities. The differentials in 1979 ranged from 8 percent for whites to 15 percent for blacks. A more surprising result is that real earnings levels of whites in both Miami and the comparison cities were more-or-less constant between 1979 and 1985. This is in contrast to the slight decline in real wages in the overall US economy over this period (see Bound and Johnson (1989), pp. 5-6) and underscores the relatively close correspondence between economic conditions in Miami and the comparison cities.

In contrast to the situation for whites, the trends in earnings for nonwhites and hispanics differ somewhat between Miami and the comparison cities. Black wages in Miami were roughly constant from 1979 to 1981, then

fell in 1982 and 1983 before recovering to their previous level in 1984. Black earnings in the comparison cities, on the other hand, show a steady downward trend between 1979 and 1985. Based on these data there is no evidence of a negative impact of the Mariel immigration on black wages in Miami. The data do suggest a relative downturn in black wages in Miami during 1982-83. It seems likely, however, that this reflects an unusually severe cyclical effect associated with the 1982-83 recession. I return to this issue in Table 7, below.

Wage rates for non-Cuban hispanics in Miami were relatively stable between 1979 and 1985, with only a slight dip in 1983. In contrast, hispanic wage rates in the comparison cities fell about 6 percentage points over this period. Again, there is no evidence of a negative effect in Miami, either in the immediate post-Mariel period or over the longer run.

Table 4 does provide some indication of a decline in Cuban wage rates relative to other groups in Miami. Relative to whites, for example, Cuban wages fell by 6-7 percentage points between 1979 and 1981. Assuming that the wages of earlier Cuban immigrants were constant, this decline is consistent with the addition of 40,000 Mariel workers to the pool of Cubans in the Miami labor force, and with the 34 percent wage differential between Mariels and other Cubans noted in Table 3. A more thorough analysis of Cuban wages is presented in Table 8, below.

The unemployment rates in Table 5 lead to the same general conclusions as the wage data in Table 4. There is no strong evidence of an adverse effect of the Mariel influx on the unemployment rates of either whites or blacks. The unemployment rates suggest a severe cyclical downturn in the black labor market in Miami in 1982-83. Black unemployment rates in Miami,

which had been 2-4 points lower than those in the comparison cities from 1979 to 1981, equalled or exceeded those in the comparison cities from 1982 to 1984. The 1985 data indicate a return to the pre-1982 pattern, although the sampling errors are large enough to prevent precise inferences.

In contrast to the pattern for whites and blacks, there was a sizeable increase in Cuban unemployment rates in Miami following the Mariel immigration. This is illustrated in Figure 2, which plots unemployment rates of Cubans in Miami against those of non-hispanics (white and black) over the 1979-85 period. The graph indicates that Cuban unemployment rates were perhaps 3 percentage points higher during 1980-1981 than would have been expected on the basis of earlier (and later) patterns. Assuming that the unemployment rates of other Cubans were not affected by the Mariel influx, this effect is consistent with unemployment rates of around 20 percent among the Mariels themselves. While far from conclusive, this simple calculation suggests that the increase in Cuban unemployment rates could easily be explained as a result of the addition of the Mariel refugees to the Cuban population, with little or no effect on earlier immigrants.

The simple averages of wages and unemployment rates in Tables 4 and 5, which combine workers of all ages and education levels, do not directly address the question of whether the Mariel immigration reduced the earnings of less-skilled natives in Miami. A more direct answer is provided by the data in Table 6. In order to identify "less-skilled" workers, I fit a linear regression equation for the logarithm of hourly earnings to workers in the comparison cities. The explanatory variables in this regression included education, potential experience, squared potential experience,

indicator variables for each sex and race group, and interactions of the sex-race indicators with potential experience and squared potential experience. I then used the estimated coefficients from this equation to form a predicted wage for each non-Cuban worker in Miami, and sorted the sample from each year into quartiles on the basis of predicted wage rates.

This procedure gives a simple way to identify more- and less-skilled workers in the Miami labor market. Means of actual log wages for each quartile and year are presented in the first four columns of Table 6. The difference in mean wages between the first and fourth quartiles, which provides an index of the spread in the wage distribution, is presented in the fifth column of the table.

If the Mariel immigration reduced the wages of less-skilled natives, one would expect to observe a decline in the wage of workers in the lowest skill quartile, at least relative to workers in the upper quartile. The actual averages show no evidence of this effect. Apart from a temporary increase in relative wages of workers in the lowest quartile between 1979 and 1981, the distribution of non-Cubans wages in the Miami labor market was remarkably stable between 1979 and 1985. Taken together with the data in Table 4, there is little evidence of a negative effect of the Mariel influx on the earnings of natives.

A final check is provided by Table 7, which contains more detailed information on wages, employment rates, and unemployment rates for blacks in Miami between 1979 and 1985. I have separately analyzed the set of all blacks and the set of blacks with less than 12 years of education, to isolate any differential effect on the less-skilled segment of the black population. For both groups I have calculated the differential in wages

between Miami and the comparison cities (both the unadjusted difference in mean log wages, and a regression-adjusted differential that controls for education, sex, marital status, part-time status, private/public employment, and potential experience), and the differentials in the employment-population rate and the unemployment rate between Miami and the comparison cities.

As indicated in Table 4, the wage differential for blacks in Miami relative to those in the four comparison cities decreased slightly between 1979 and 1981. The differential increased substantially in 1982, but then began a steady downward trend after 1983. By 1985, the wage gap was less than 5 percent for all black workers, and was actually positive for less-educated blacks. The magnitudes of the regression-adjusted wage differentials are not significantly different from the unadjusted differentials, reflecting the similarity of the black populations in Miami and the comparison cities. Like the unadjusted differentials, the adjusted wage gaps show no evidence of any effect of the Mariel immigration on black wages.

A similar conclusion emerges from the pattern of differentials in employment-population rates and unemployment rates.[16] Among all blacks, there is some evidence of a relative decline in the employment-to-population ratio in Miami between 1979 and 1885. This effect seems to have started in 1982, but is less pronounced among low-education blacks. The series of unemployment rate differentials indicate a worsening of relative

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[16] I have also computed regression-adjusted employment-population and unemployment gaps, using linear probability models. The explanatory power of the statistical models is so low, however, that the adjusted differentials are almost identical to the unadjusted differentials.

unemployment for blacks in Miami, also starting in 1982, although the unemployment gap closed in 1985. Given the two year lag between the arrival of the Mariels and the emergence of this unemployment gap, it seems more likely a result of the 1982 recession than a reaction to the influx of less-skilled immigrants.

The effects of the Mariel immigration on Cuban labor market outcomes are examined in detail in Table 8. The first column of the table reproduces the means of log wages in each year from row 3 of Table 4. The second column gives predicted log wages of Cubans in Miami, using estimated coefficients from a regression equation fit to hispanics in the four comparison cities. The gap between actual and predicted wages is presented in the third column of the table. These series show that the 9 percentage point decline in Cuban real wage rates in Miami between 1979 and 1985 was a result of two complementary factors: a 6 percent relative decline in the "quality" of the Cuban labor force in Miami, as measured by the decline in their predicted wages; and a 3 percentage point increase in the quality-adjusted wage gap between Cuban workers in Miami and hispanic workers in the comparison cities. Two-thirds of the wage decline is therefore attributed to the changing productivity characteristics of the Cuban labor force, and only one-third to a decrease in the return to skills for Cubans in the Miami labor market.

The next four columns of Table 8 give the means of log wages for Cuban workers in each quartile of the distribution of predicted wages (using the same prediction equation as was used to form the means in column 2). These means suggest that real wage rates of Cubans in the lowest quartile of the wage distribution declined by 11-12 percentage points between 1979 and

1985. The decline is smaller for workers in the higher quartiles, but there is some variation between 1984 and 1985, and in light of the sampling errors it is difficult to draw precise inferences. The difference between the means of the first and fourth quartiles is 9 percentage points higher in 1984 than 1979, but the relative difference narrows to only 2 points in 1985. These figures are consistent with a larger decline in earnings at the low end of the Cuban wage distribution after the Mariel immigration, as might be expected from the addition of a large group of relatively unskilled workers to the pool of Cubans. The extent of the decline, however, is not precisely measured.

An alternative method of assessing the effect of the Mariel immigration on the earnings of Cubans in the Miami labor market is to compare Cuban wages in Miami to the wages of Cubans elsewhere in the US. Since the fractions of Mariels in the Cuban labor force is roughly the same inside and outside Miami, this comparison controls for any unobservable differences in skill between the Mariels and other Cubans (due to language ability, for example).[17] The ninth and tenth columns of Table 8 contain estimates of the wage differential for Cubans in Miami relative to those elsewhere in the US, both unadjusted and adjusted for education, sex, part-time status, private sector/public sector employment, marital status (interacted with sex) and potential experience.

The earnings differentials computed in this way are roughly constant between 1979 and 1984. The 1982 unadjusted wage differential is 10 percentage points larger than earlier or later ones, but the regression-

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[17] This is strictly true only if the unobservable differences have a constant proportional effect on all Mariels, independent of the level of observed skills or location choice.

adjusted differential is not significantly different from any of the other differentials. The 1985 data also indicate a slightly higher Cuban wage rate outside Miami. In any case, a comparison of Cuban wages inside and outside the Miami labor market shows no evidence of a widening gap in the years immediately following the Mariel immigration. On the assumption that the Mariel influx had no effect on the wage rates of other Cuban outside Miami, this suggests that the observed downturn in Cuban wages in Miami can be attributed solely to the "dilution" of the Cuban labor force with less-skilled Mariel workers.

IV. Interpretation of the Findings

The data in tables 4-8 point to two conclusions. First, there was essentially no effect of the Mariel immigration on the wages or employment outcomes of non-Cuban workers in the Miami labor market. Second, and perhaps even more surprising, there was no strong effect of the Mariel immigration on the wages of other Cubans. The observed decline in average Cuban wage rates in Miami after 1980 is no larger than would be expected by simply adding the Mariel immigrants to the pool of Cuban workers, assuming that the Mariels earned about one-third less than other comparable Cubans (as the March 1985 data suggest). This conclusion is confirmed by a comparison of Cuban wage rates inside and outside Miami, which shows no relative change over the period.

These conclusions lead naturally to the question of how the Miami labor market was able to absorb a 7 percent increase in population and labor force with no adverse effects. One possible answer is that the Mariels displaced other immigrants and natives who would have moved to Miami in the

early 1980's had the Boatlift not occurred. The population data in Table 2 lend some credence to this explanation: 80 percent of the population growth that occurred between 1979 and 1984 in Miami took place between April and July 1980.

A broader perspective on this potential explanation is provided by comparing population growth rates in Miami and other Florida cities between 1970 and 1986. From 1970 to 1980, Miami population grew at an annual rate of 2.5 percent per year while the rest of Florida grew at a rate of 3.9 percent. After April 1, 1980 the growth rate in Miami slowed to 1.4 percent per year while that in the rest of the state decreased to 3.4 percent.[18] The larger relative slowdown in Miami suggests that the Boatlift may have actually deterred long-run population growth in Miami. The population of Dade county in 1986 was about equal to the pre-Boatlift projection of the University of Florida Bureau of Economic and Business Research under their "low population growth" scenario.[19]

Nevertheless, data from the March 1985 Current Population Survey suggest that Miami continued to attract new foreign-born immigrants after 1980. A total of 2.7 percent of all non-Cuban immigrants who arrived in the US after March 1980 were living in Miami in March 1985. By comparison, only 1.8 percent of all non-Cuban immigrants in the US at the time of the 1980 Census lived in Miami. Therefore, Miami attracted "more than its

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[18] These figures are obtained from 1970 population counts in US Bureau of the Census 1970 Census of Population - Number of Inhabitants (PC(1)-A1), Table 32, and 1980 and 1986 counts in US Bureau of the Census Current Population Reports - Local Population Estimates (P-26, No. 86-2-SC), Table 1.

[19] See Florida Statistical Abstract 1981 (Table 1.24). The population growth projections were formed using population growth data for the 1970's.

share" of new non-Cuban immigrants to the US in the five-year period after the Mariel immigration. The implication is that the slow-down in the rate of growth of the Miami SMSA after June 1980 occurred because of a change in the net migration rate of natives and older cohorts of immigrants, rather than because of a change in the inflow rate of new immigrants. This finding is consistent with the pattern of domestic migration between 1970 and 1980 identified by Filer (1988), who finds a strong negative correlation across SMSA's between the net in-migration rate of natives and the in-migration rate of immigrants.

A second potential explanation for the rapid absorption of the Mariel immigrants is the expansion of industries that utilize relatively unskilled labor. Altonji and Card's (1989) tabulations from the 1970 and 1980 Censuses indicate that a small number of industries employ a large fraction of immigrants, and that these industries expanded more rapidly between 1970 and 1980 in cities with large immigrant populations. The immigrant-intensive industries identified in their analysis include apparel and textiles, agriculture, furniture, private household services, hotels and motels, eating and drinking establishments, and business services. These are all relatively low-wage industries that employ large numbers of semi-skilled operatives and laborers.

Tabulations of the industry distributions of employment in Miami and the entire US before and after the Mariel Boatlift are presented in Table 9. The "before" tabulations are based on reported industry of the main job last year for respondents in the March 1979 and March 1980 Current Population Surveys, while the "after" tabulations are based on similar data

from the March 1984 and March 1985 CPS.[20] The relative importance of each industry in the Miami labor market is indicated by the ratio of employment shares in the third and seventh columns of the table. Finally, the fractions of Cuban workers in each industry in the Miami labor market are presented in the fourth and eighth columns of the table. In light of the relatively small sample of Miami workers I have grouped the low-wage service industries identified by Altonji and Card (1989) (building services, private household services, hotels and motels, and laundries and cleaning services) into a single industry category. Nevertheless, the numbers of workers in individual industries in the Miami labor market are small, and the sampling errors associated with the Cuban percentages are relatively large.

The tabulations for 1978-79 indicate that Miami had relatively high employment shares in textile and apparel industries, transportation (notably air transport), wholesale trade, less-skilled service industries, and other personal service industries. The high employment share of textiles and apparel is especially remarkable in light of the relatively low concentration of other manufacturing industries in Miami. The data in the fourth column of the table show that most of the textile and apparel workers in Miami, and almost one-half of all other manufacturing workers, were Cubans. Cubans were also over-represented in wholesale trade and other personal service industries, but under-represented in transportation, communication, and utility industries.

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[20]The Census industry coding scheme used in the CPS was changed in 1983. For most of the industry groups identified in Table 10 there was little change in the coding scheme.

The employment tabulations from 1983-84 show a similar pattern to the earlier data, with little evidence of a relative expansion of employment in textiles, eating and drinking establishments, or less-skilled service industries. The largest relative change occurred in the employment share of agriculture, which increased from .83 percent to 2.33 percent in Miami, while remaining relatively constant in the US as a whole. In view of the relative stability in the fraction of Cubans in this industry, however, it seems unlikely that this expansion was driven by the Mariel immigration. The largest increase in the fraction of Cubans occurred in less-skilled services, which moved from 14 percent Cuban before the Boatlift to about one-third after. There is no evidence of a similar expansion in the fraction of Cubans in textiles and apparel or other manufacturing.

On balance the data in Table 9 give little indication of a shift in the industry distribution of employment in Miami between 1978 and 1984. On the other hand the data suggest that the industry distribution in Miami in the late 1970's was well-suited to handle an influx of unskilled immigrants. In 1979 over one-third of the Miami labor force was made up of immigrants: approximately one-third of these had arrived in the previous decade.[21] As a result, immigrant-intensive industries such as textiles and apparel and less-skilled service industries were well-established. Many of the Mariel immigrants may have simply displaced earlier immigrants in these industries, as older cohorts of immigrants moved to more attractive jobs.

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[21] Tabulations from the 1980 Census show that of the 578,055 foreign-born residents of Miami on April 1 1980, 205,887 (35.6 percent) arrived after 1970. Of 324,976 foreign-born Cubans, 91,514 (28.2 percent) arrived after 1970.

V. Conclusions

The experiences of the Miami labor market in the aftermath of the Mariel Boatlift provide a natural experiment with which to evaluate the effect of unskilled immigration on the labor market opportunities of native workers. The Mariel immigrants increased the population and labor force of the Miami metropolitan area by 7 percent. Most of these immigrants were relatively unskilled: as a result, the proportional increase in labor supply to less-skilled occupations and industries was much greater. An analysis of wage rates for less-skilled non-Cuban workers, however, suggests that the influx of Mariel immigrants had virtually no effect. Likewise, there is no evidence of an increase in unemployment among less-skilled blacks or other non-Cuban workers. Rather, the data analysis suggests a remarkably rapid transition of the Mariel immigrants into the Miami labor force, with negligible effects on other groups. Even among the Cuban population there is no indication that wages or unemployment rates of earlier immigrants were substantially effected by the arrival of the Mariels.

Despite the clear-cut nature of these findings some caution is required in their interpretation. The Miami labor market is atypical of other local labor markets in the US. In the two decades before the Mariel Boatlift Miami had absorbed a continuing flow of Cubans and other immigrants. The Mariel immigration can be seen as part of a long-run pattern: one that may have recently re-emerged with the arrival of Nicaraguans and other Central Americans.

Three factors may have been especially important in facilitating the absorption of the Mariel immigrants. First, a comparison of population

growth rates in Miami and the rest of Florida suggests that the net migration of natives and earlier cohorts of immigrants into the Miami area slowed considerably after the Boatlift. To some extent the Mariels displaced other migrants from within the US who would have moved to Miami in the early 1980's. Second, the industry structure of the Miami labor market was well-suited to make use of an influx of relatively unskilled workers. This structure, and in particular the high concentration of textile and apparel industries, evolved over the previous two decades in response to earlier waves of immigration, and may have allowed the Mariel immigrants to move into unskilled jobs as earlier cohorts of immigrants moved into better jobs. Finally, because of the high concentration of Spanish-speakers in Miami, the lack of English-speaking ability among the Mariels may have had relatively smaller effects than could be expected for other immigrant groups in other cities.

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Figure 1

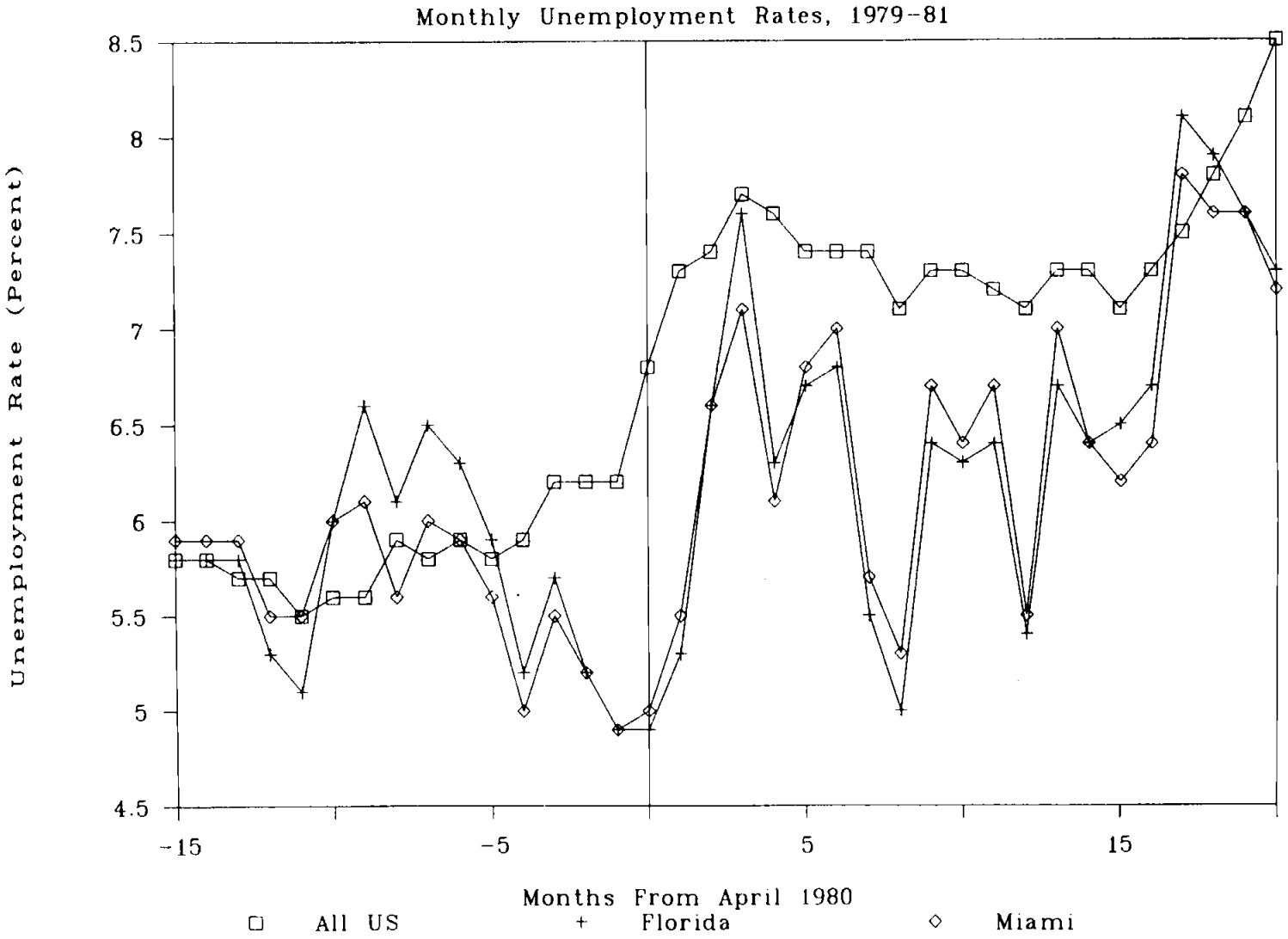
Monthly Unemployment Rates, 1979-81
Unemployment Rate (Percent)
8.5
8
7.5
7
6.5
6
5.5
5
4.5
-15
-5
5
15
Months From April 1980
All US
Florida
Miami

Figure 2

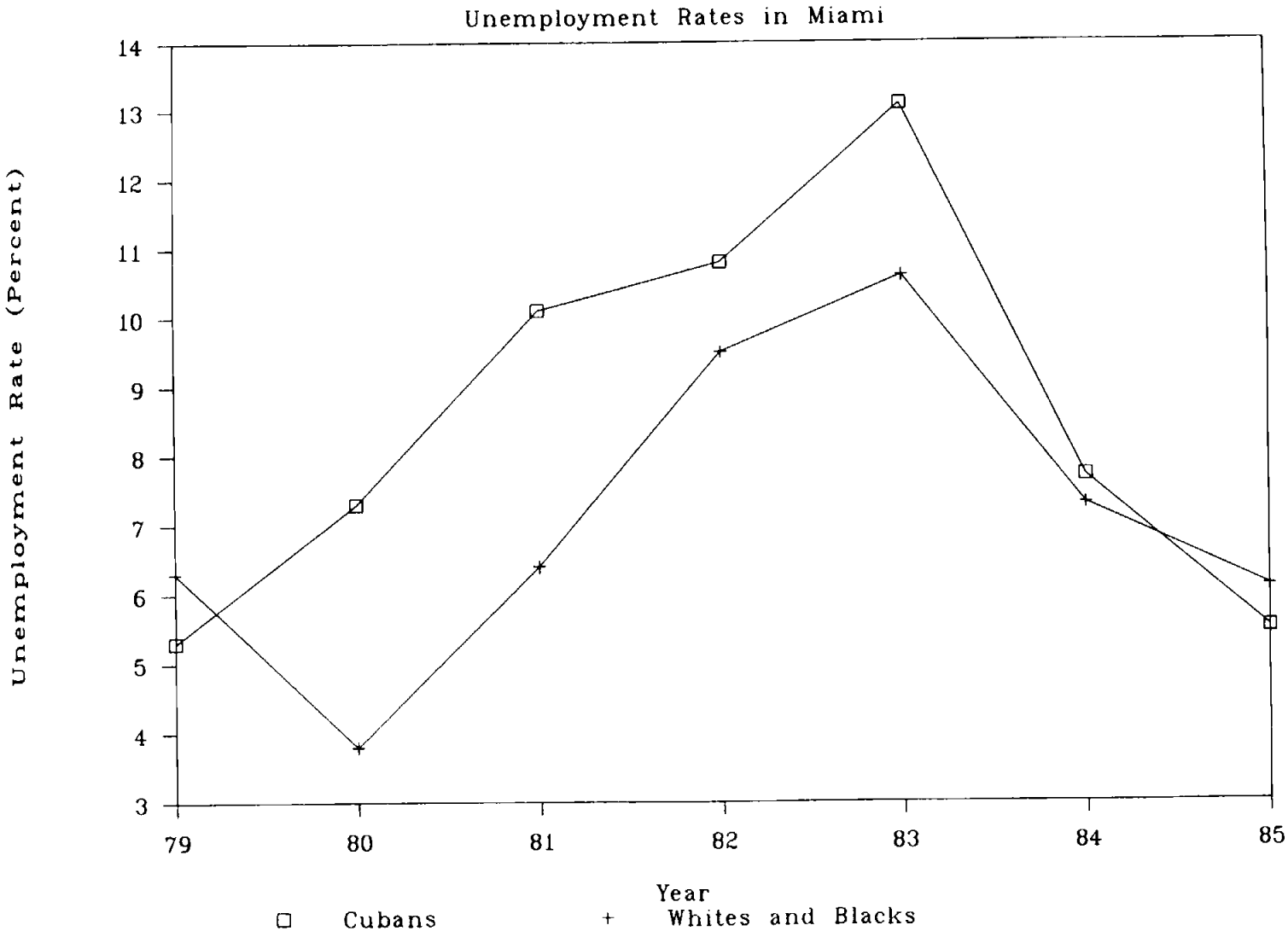
Unemployment Rates in Miami
Unemployment Rate (Percent)
14
13
12
11
10
9
8
7
6
5
4
3
79
80
81
82
83
84
85
Year
Cubans
Whites and Blacks

Table 1

Characteristics of 16-61 Year-Olds in Miami, 1979

	Whites	Blacks	Cubans	Hispanics	All
Characteristics of Population Age 16-61					
1. Estimated Number (1000's)	319.3	244.1	252.4	102.9	928.4
2. Mean Education	12.8	11.4	11.0	11.6	11.8
3. Percent in Labor Force	75.6	68.3	77.2	68.8	73.1
Characteristics of Those in Labor Force					
4. Estimated Number (1000's)	241.3	166.6	194.7	70.8	678.2
5. Mean Education	13.1	11.8	11.3	11.9	12.1
6. Percent Age 16-24	21.1	24.1	22.0	26.0	22.8
Occupation Distribution (Percent of Employed)					
7. Professional and Technical	19.1	10.9	9.5	10.1	13.2
8. Managers	15.7	2.8	8.6	8.1	9.4
9. Sales	6.2	4.4	7.8	7.6	6.5
10. Clerical	21.9	21.0	19.1	20.9	20.9
11. Craftsmen	13.3	9.4	15.1	12.7	12.8
12. Operatives	4.4	8.4	19.4	16.7	11.1
13. Transportation Operatives	2.6	8.1	5.4	5.9	5.2
14. Laborers	5.1	10.5	4.7	4.0	6.3
15. Farm Workers	1.1	0.1	0.4	0.8	0.6
16. Less-Skilled Service Workers	5.0	13.3	6.1	10.2	8.0
17. More-Skilled Service Workers	5.7	10.9	4.0	3.0	6.2

Notes: White and black groups exclude hispanics. Hispanic group includes all hispanics other than Cubans. Less-skilled service workers include cleaning and food service workers. More-skilled service workers include health service, personal service, and protective service workers. Data are based on samples of employed workers in the outgoing rotation groups of the Current Population Survey in 1979.

Table 2

Estimated Population and Labor Force in Miami, 1979-85

	Census Bureau Estimates for July 1[a]		CPS-Based Estimates for Entire Year[b]		
	Total Population	Population 16-61	Population 16-61	Cubans 16-61	Labor Force 16-61
1979			928,400	252,400	678,200
1980	1,706,269	1,049,738	998,700	278,200	734,000
1981			1,135,600	372,000	830,400
1982	1,715,306	1,053,556	1,104,200	345,300	803,300
1983			1,128,000	343,500	853,300
1984	1,727,155	1,052,167	1,124,200	327,300	839,400
1985			1,192,200	321,900	867,000

Notes: [a] Drawn from U.S. Bureau of the Census Experimental County Population Estimates data file. Population age 16-61 is estimated from 5-year interval population counts assuming a uniform age distribution within intervals. 1980 estimates include estimated Mariel immigrants as of that date. Miami population on Census Day (April 1 1980) was 1,625,781, of which 989,975 were age 16-61.

[b] Weighted counts from 12 monthly samples of outgoing rotation groups in Current Population Survey.

Table 3

Characteristics of Mariel Immigrants and Other Cubans:
Tabulations from March 1985 CPS

	Mariel Immigrants	All Other Cubans
1. Educational Attainment Percent of Population		
(a) No High School	56.5	25.4
(b) Some High School	9.1	13.3
(c) Completed High School	9.5	33.4
(d) Some College	6.8	12.0
(e) Completed College	18.1	15.8
2. Percent Male	55.6	50.7
3. Percent Under 30 in 1980	38.7	29.6
4. Mean Age in 1980 (Years)	34.9	38.0
5. Percent In Miami in 1985	53.9	52.4
6. Percent Worked in 1984	60.6	73.4
7. Mean Log Hourly Earnings	1.37	1.71
8. Occupation Distribution (Percent of Employed)		
(a) Professional/Managers	19.3	21.0
(b) Technical	0.0	1.5
(c) Sales	4.5	11.2
(d) Clerical	2.5	13.5
(e) Craftsmen	9.5	19.9
(f) Operatives	19.1	13.8
(g) Transportation Ops.	3.8	4.3
(h) Laborers	10.8	3.3
(i) Farm Workers	0.0	1.8
(j) Less-Skilled Service	26.0	7.4
(k) More-Skilled Service	4.6	2.3
9. Sample Size	50	528
Weighted Count	42,300	476,900

Note: Sample consists of all Cubans in March 1985 Current Population Survey age 21-66 (i.e., age 16-61 in 1980). Mariel immigrants are identified as those Cubans who stated that they lived outside the U.S. 5 years previously.

Table 4
Logarithms of Real Hourly Earnings of Workers Age 16-61
In Miami and Four Comparison Cities: 1979-85

(standard errors in parentheses)

	1979	1980	1981	1982	1983	1984	1985
Miami:							
1. Whites	1.85	1.83	1.85	1.82	1.82	1.82	1.82
	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)	(.05)
2. Blacks	1.59	1.55	1.61	1.48	1.48	1.57	1.60
	(.03)	(.02)	(.03)	(.03)	(.03)	(.03)	(.04)
3. Cubans	1.58	1.54	1.51	1.49	1.49	1.53	1.49
	(.02)	(.02)	(.02)	(.02)	(.02)	(.03)	(.04)
4. Hispanics	1.52	1.54	1.54	1.53	1.48	1.59	1.54
	(.04)	(.04)	(.05)	(.05)	(.04)	(.04)	(.06)
Comparison Cities:							
5. Whites	1.93	1.90	1.91	1.91	1.90	1.91	1.92
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
6. Blacks	1.74	1.70	1.72	1.71	1.69	1.67	1.65
	(.01)	(.02)	(.02)	(.01)	(.02)	(.02)	(.03)
7. Hispanics	1.65	1.63	1.61	1.61	1.58	1.60	1.58
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)

Note: Entries represent means of log hourly earnings (deflated by the Consumer Price Index 1980=100) for workers age 16-61 in Miami and four comparison cities: Atlanta, Houston, Los Angeles, and Tampa-St. Petersburg. See note to table 1 for definitions of groups. Data are based on samples of employed workers in the outgoing rotation groups of the Current Population Survey in 1979-1985. Due to a change in SMSA coding procedures in 1985, the 1985 sample is based on individuals in outgoing rotation groups for January-June of 1985 only.

Table 5
Unemployment Rates of Individuals Age 16-61
In Miami and Four Comparison Cities, 1979-85

(standard errors in parentheses)

	1979	1980	1981	1982	1983	1984	1985
Miami:							
1. Whites	5.1	2.5	3.9	5.2	6.7	3.6	4.9
	(1.1)	(0.8)	(0.9)	(1.1)	(1.1)	(0.9)	(1.4)
2. Blacks	8.3	5.6	9.6	16.0	18.4	14.2	7.8
	(1.7)	(1.3)	(1.8)	(2.3)	(2.5)	(2.3)	(2.3)
3. Cubans	5.3	7.2	10.1	10.8	13.1	7.7	5.5
	(1.2)	(1.3)	(1.5)	(1.5)	(1.6)	(1.4)	(1.7)
4. Hispanics	6.5	7.7	11.8	9.1	7.5	12.1	3.7
	(2.3)	(2.2)	(3.0)	(2.5)	(2.1)	(2.4)	(1.9)
Comparison Cities:							
5. Whites	4.4	4.4	4.3	6.8	6.9	5.4	4.9
	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)
6. Blacks	10.3	12.6	12.6	12.7	18.4	12.1	13.3
	(0.8)	(0.9)	(0.9)	(0.9)	(1.1)	(0.9)	(1.3)
7. Hispanics	6.3	8.7	8.3	12.1	11.8	9.8	9.3
	(0.6)	(0.6)	(0.6)	(0.7)	(0.7)	(0.6)	(0.8)

Note: Entries represent means of unemployment indicator variable for individuals age 16-61 in Miami and four comparison cities: Atlanta, Houston, Los Angeles, and Tampa-St. Petersburg. Samples are based on individuals in the labor force. See note to Table 4 for definitions of groups and data sources.

Table 6

Means of Log Wages of Non-Cubans in Miami
By Quartile of Predicted Wages, 1979-85

(standard errors in parentheses)

	Mean of Log Wage by Quartile of Predicted Wage				Difference of Means: 4th-1st
	1st Quart.	2nd Quart.	3rd Quart.	4th Quart.	
Year					
1979	1.31	1.61	1.71	2.15	.84
	(.03)	(.03)	(.03)	(.04)	(.05)
1980	1.31	1.52	1.74	2.09	.77
	(.03)	(.03)	(.03)	(.04)	(.05)
1981	1.40	1.57	1.79	2.06	.66
	(.03)	(.03)	(.03)	(.04)	(.05)
1982	1.24	1.57	1.77	2.04	.80
	(.03)	(.03)	(.03)	(.04)	(.05)
1983	1.27	1.53	1.76	2.11	.84
	(.03)	(.04)	(.03)	(.05)	(.06)
1984	1.33	1.59	1.80	2.12	.79
	(.03)	(.04)	(.04)	(.04)	(.05)
1985	1.27	1.57	1.81	2.14	.87
	(.04)	(.04)	(.04)	(.05)	(.06)

Note: Predicted wage is based on a linear prediction equation for the log wage fitted to individuals in four comparison cities: see text. The sample consists of non-Cubans (male and female, white, black, and hispanic) between the ages of 16 and 61 with valid wage data in the earnings supplement of the Current Population Survey. Wages are deflated by the Consumer Price Index 1980=100.

Table 7

Comparison of Wages, Unemployment Rates, and
Employment Rates for Blacks in Miami and Comparison Cities

(standard errors in parentheses)

	All Blacks:				Low-Education Blacks:			
	Difference in Log Wages Miami - Comparison		Difference in Emp/Unemp Miami - Comparison		Difference in Log Wages Miami - Comparison		Difference in Emp/Unemp Miami - Comparison	
	Actual	Adjusted	Emp-Pop Rate	Unemp Rate	Actual	Adjusted	Emp-Pop Rate	Unemp Rate
Year:								
1979	-.15	-.12	.00	-2.0	-.13	-.15	.03	-.8
	(.03)	(.03)	(.03)	(1.9)	(.05)	(.05)	(.04)	(3.8)
1980	-.16	-.12	.05	-7.1	-.07	-.07	.03	-8.2
	(.03)	(.03)	(.03)	(1.6)	(.05)	(.05)	(.04)	(3.5)
1981	-.11	-.10	.02	-3.0	-.05	-.11	.04	-7.7
	(.03)	(.03)	(.03)	(2.0)	(.05)	(.05)	(.04)	(4.2)
1982	-.24	-.20	-.06	3.3	-.17	-.20	-.04	.6
	(.03)	(.03)	(.03)	(2.4)	(.05)	(.05)	(.04)	(4.7)
1983	-.21	-.15	-.02	.1	-.13	-.11	.04	-3.3
	(.03)	(.03)	(.03)	(2.7)	(.06)	(.05)	(.04)	(4.7)
1984	-.10	-.05	-.04	2.1	-.04	-.03	.05	.1
	(.03)	(.03)	(.03)	(2.4)	(.06)	(.05)	(.04)	(4.7)
1985	-.05	-.01	-.06	-5.5	.18	.09	.00	-4.7
	(.04)	(.04)	(.04)	(2.6)	(.07)	(.07)	(.06)	(5.6)

Notes: Low education blacks include those with less then 12 years of completed education. Adjusted differences in log wages between blacks in Miami and comparison cities are obtained from a linear regression model that includes education, potential experience, and other control variables: see text. Wages are deflated by the Consumer Price Index (1980=100). Emp-Pop Rate refers to the employment population ratio. Unemp Rate refers to the unemployment rate among those in the labor force.

Table 8

Means of Log Wages of Cubans in Miami:
Actual and Predicted, And By Quartile of Predicted Wages

(standard errors in parentheses)

	Mean of Log Wages in Miami:			Mean of Log Wages By Quartile of Predicted Wages:				Mean Log Wage of Cubans	Difference in Cuban Wages Miami - Rest-of-US	
	Actual	Predicted	Actual-Predicted	1st	2nd	3rd	4th	Outside Miami	Actual	Adjusted
Year:										
1979	1.58	1.73	-.15	1.31	1.44	1.64	1.90	1.71	-.13	-.10
	(.02)	(.02)	(.03)	(.02)	(.03)	(.04)	(.05)	(.04)	(.04)	(.04)
1980	1.54	1.68	-.14	1.25	1.49	1.59	1.81	1.66	-.12	-.06
	(.02)	(.02)	(.03)	(.02)	(.05)	(.04)	(.05)	(.03)	(.04)	(.03)
1981	1.51	1.68	-.17	1.23	1.43	1.55	1.80	1.63	-.13	-.09
	(.02)	(.02)	(.03)	(.03)	(.03)	(.04)	(.05)	(.03)	(.04)	(.03)
1982	1.49	1.68	-.19	1.27	1.43	1.50	1.77	1.71	-.22	-.12
	(.02)	(.02)	(.03)	(.03)	(.04)	(.04)	(.06)	(.03)	(.04)	(.03)
1983	1.48	1.65	-.17	1.16	1.41	1.56	1.80	1.62	-.14	-.08
	(.03)	(.02)	(.03)	(.02)	(.04)	(.04)	(.06)	(.03)	(.04)	(.03)
1984	1.53	1.69	-.17	1.20	1.40	1.65	1.88	1.63	-.10	-.08
	(.03)	(.02)	(.03)	(.03)	(.04)	(.05)	(.06)	(.03)	(.04)	(.03)
1985	1.49	1.67	-.18	1.19	1.43	1.53	1.80	1.77	-.27	-.19
	(.04)	(.03)	(.05)	(.06)	(.06)	(.08)	(.09)	(.06)	(.07)	(.05)

Notes: Predicted wage is based on a linear prediction equation for the log wage fitted to individuals in four comparison cities: see text. Predicted wages for Cubans in Miami are based on coefficients for Hispanics in comparison cities. The adjusted wage gap between Cubans in Miami and Cubans in the rest of the US are obtained from a linear regression model that includes education, potential experience, and other control variables: see text. Wages are deflated by the Consumer Price Index 1980=100.

Table 9
Industry Distributions in Miami and All US:
Based on March CPS Data for 1978-79 and 1983-84

	Average of 1978 and 1979				Average of 1983 and 1984			
	Percent in Ind:		Ratio:	Percent Cuban in	Percent in Ind:		Ratio:	Percent Cuban in
	Miami	All US	Miami/US	Miami	Miami	All US	Miami/US	Miami
1. Agriculture	0.83	2.28	0.36	33.6	2.54	2.33	1.09	27.7
2. Mining	0.00	0.90	0.00	0.0	0.30	0.96	0.31	0.0
3. Construction	7.33	6.08	1.21	31.0	6.69	6.15	1.09	35.6
4. Textiles & Apparel	5.53	2.27	2.44	76.0	4.60	2.17	2.12	60.7
5. Other Mfg.	10.47	21.42	0.49	45.0	9.59	18.42	0.52	40.7
6. Transportation	7.33	3.63	2.02	14.2	7.93	3.30	2.40	14.3
7. Communication	1.34	1.41	0.95	0.0	1.59	1.56	1.02	0.0
8. Utilities	1.43	1.36	1.05	7.0	2.07	1.44	1.44	0.0
9. Wholes. Trade	6.35	3.67	1.73	41.8	6.02	3.95	1.52	41.0
10. Eating & Drinking	5.46	5.33	1.02	22.5	6.43	5.80	1.11	13.7
11. Other Retail Trade	15.76	12.21	1.29	30.7	12.36	11.90	1.04	31.4
12. FIRE	5.76	5.48	1.05	31.7	6.81	6.11	1.11	44.8
13. Less-Skilled Services	4.36	3.07	1.42	14.2	4.91	3.43	1.43	31.8
14. Other Business Services	2.81	3.07	0.92	27.2	3.78	4.23	0.89	20.7
15. Other Personal Services	2.56	1.88	1.36	41.3	2.04	2.13	0.96	24.2
16. Professional Services	16.96	20.35	0.83	18.5	16.96	20.52	0.83	22.0
17. Public Admin.	5.70	5.57	1.02	16.1	5.35	5.42	0.99	8.1

Note: Samples consist of all workers age 16-61 with positive earnings and weeks worked in the previous year from 1979, 1980, 1984 and 1985 March CPS. Industry refers to industry on main job last year. Less-Skilled service industries include services to dwellings (part of business services); and private households, hotels and motels, and laundries and garment services (part of personal services). Entertainment industries are included with personal services. Sample sizes are 1,033 (Miami, 1978-79); 1,070 (Miami, 1983-84); 147,989 (All US, 1978-79); and 142,676 (All US, 1983-84).