THE LABOR MARKET STATUS OF IMMIGRANTS: EFFECTS OF THE UNEMPLOYMENT RATE AT ARRIVAL AND DURATION OF RESIDENCE

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Combining Current Population Survey samples from November 1979, April 1983, June 1986, and June 1988, all of which included data on country of birth and year of immigration, the authors examine patterns of immigrant employment and unemployment. Human capital was less strongly linked to employment status for immigrant men than for native-born white men, probably because human capital acquired outside the United States was only imperfectly transferable to the U.S. labor market. Immigrants had some initial difficulty finding work, but their employment and unemployment rates quickly attained levels comparable to those of the native-born. There is no evidence that immigrants who arrived in a recession were subjected to a long-term "scarring" effect. Immigrants' labor market status appears to have been somewhat more sensitive to cyclical changes in economic activity than was that of the native-born.

The literature on immigrant adjustment has focused primarily on earnings, with very little attention given to the issue of labor market status.[1] Yet one of the major policy concerns of immigrant receiving countries is the employment and unemployment of immigrants. The higher the employment ratio and the lower the unemployment rate among adult male immigrants, all else equal, the easier will be their adjustment in the destination labor market, and hence the higher their annual earnings, the smaller their use of public income transfers, and the more favorable their overall economic impact. There is little doubt that public attitudes toward immigration, and ultimately political responses to it, are more favorable the higher

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[1]The contemporary literature on immigrant adjustment began with a study of earnings by Chiswick (1978). For recent surveys of this literature, see Borjas (1994) and Chiswick (1994).

Additional tables, and copies of the computer program used to generate the results, can be obtained from Yinon Cohen, Department of Labor Studies, Tel Aviv University, Ramat Aviv, Israel.

the employment ratio and the lower the unemployment rate among immigrants.

Of particular interest for policy makers is whether the timing of immigration with respect to the business cycle matters for the successful adjustment of immigrants. Does immigration in a period of high unemployment raise the likelihood the immigrant will experience employment problems in the future? Some countries, such as Canada and Australia, explicitly change annual immigration quotas on the basis of the state of the economy. Some others, such as the United States, may implicitly do so through administrative tightening of criteria for labor market (occupational category) visas, although this is a minor source of U.S. immigration. Yet others, such as Israel, appear to pay no attention to short-term labor market conditions in their immigration policies and practices.

It has not been possible to test for the effect of unemployment conditions at arrival on the employment and unemployment experiences at the time of a census or survey using data from a single cross-section.[2] The problem is separating the effects of period of arrival from duration of residence. To circumvent this problem, in this study data are combined over a period of 10 years from four separate cross-sectional Current Population Surveys (CPS's) that included questions on nativity and year of immigration for the foreign-born.

Existing Evidence on Immigrants' Labor Market Status

There has been some research on the labor market status of immigrants in the United States. Cross-sectional studies using microdata from the 1970 and 1990 Censuses of Population and from the 1976 Survey of Income and Education (SIE) examined both the employment and unemployment experiences of immigrants (Chiswick

1982; Chiswick and Hurst 1996).[3] These studies found a consistent pattern across the three data sources. In particular, during their first few years in the United States, immigrants had lower rates of employment and higher rates of unemployment than the native-born, but their employment rates increased and unemployment rates decreased with duration of residence, and reached a plateau (employment) or a floor (unemployment) after a few years, with no statistically significant pattern by duration thereafter. The similarity in the pattern of employment and unemployment with respect to duration of residence across the three periods studied suggests that there has been no change in the unmeasured dimensions of the quality of immigrants over time, or that if there has been a change, it has been offset by other unmeasured factors.[4]

Several other findings emerged from these studies of labor market status. Refugees, particularly recent refugees, experienced lower employment ratios and higher unemployment rates than did other immigrants. In addition, higher levels of schooling, more pre-immigration labor market experience, greater English language fluency, and U.S. citizenship were all associated with higher employment ratios and lower unemployment rates.

Although the present study provides evidence pertinent to a variety of determinants of immigrants' labor market success, a question of particular focus is whether and to what extent cyclical economic conditions in the receiving country at the time of immigration affect the immigrants' subsequent employment and unemployment experiences. As noted above, the United

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[2]The issue of whether a single cross-section gives biased estimates of the longitudinal adjustment process of immigrants was first developed and analyzed in Chiswick (1980).

[3]Two earlier studies that did not have access to microdata and multivariate analysis are Fields (1935) and Rubin (1947).

[4]For a survey of the literature and the most recent analyses of the issue of changes over time in the measured and unmeasured dimensions of immigrant quality, see Cohen, Zach, and Chiswick (1997), Duleep and Regets (1996), and Funkhouser and Trejo (1995). The debate on this issue continues in the literature.

States is not among those countries that explicitly link their immigration controls to economic conditions. Furthermore, although apparently there has been no systematic empirical research on whether immigration flows have responded to cyclical changes in economic activites, an examination of the data on annual immigration flows to the United States since World War II suggests that the volume of immigrants has been affected little if at all by the U.S. business cycle (U.S. Immigration and Naturalization Service 1996, Table 1).

Given the visa backlog linked to the rationing of U.S. immigration visas for much of the postwar period, which could be expected to produce a fairly measured, even flow, an absence of cyclical sensitivity would not be surprising. One exception is employment-based visas, which depend on employer applications and Department of Labor certifications and might, therefore, be expected to exhibit cyclical fluctuations. These visas, however, accounted for only about 5% of all visas in the 25 years prior to 1990 (see, for example, Chiswick 1988). Moreover, many of the recipients of employment-based visas received an "adjustment of status," meaning that they were already in the United States, often under student or temporary worker visas or in an illegal status, when they received their immigrant visa. Furthermore, given the often long period from initial application to final approval of an immigrant visa, the relatively short duration and shallow depth of recessions in the postwar period may have had little impact on the timing of immigration, particularly if there are no adverse long-term effects from immigrating in a recession.

Apart from the question of whether immigration flows to the United States are responsive to cyclical economic changes is the question of whether immigration policy should be explicitly procyclical. The effect of economic conditions on immigrants' later employment and unemployment experience is clearly relevant to public policy on immigration, as well as to potential immigrants' decisions concerning whether and when to enter the country.

Hypotheses[5]

The process of adapting to a new labor market is not without travail for new immigrants. For those who anticipate a strong attachment to the labor market, employment is the desired objective, although school enrollment to enhance the transferability of previously acquired skills or to obtain new skills may be an intermediate step in this process. Unemployment or the absence of employment may arise as a result of difficulties in the process of adjustment or the failure of this adjustment.

As they engage in job search, new immigrants, like other new labor market entrants and re-entrants, acquire varied labor market information; in particular, they may learn how they need to adjust their skills in order to have opportunities for better-paying jobs. With less information than the native-born, *ceteris paribus,* regarding employers, jobs, and occupations, new immigrants would be expected to engage in more experimenting with jobs and hence experience more job change. This would result in greater job turnover and hence, at any point in time, a lower employment ratio (percent of the population employed) and a greater frequency of unemployment (percent of the labor force unemployed) than among the native-born.

Some employer-side considerations also lead to an expectation of initially unstable employment among immigrants. Employers have less information about the credentials and characteristics of new immigrant applicants—their ability, skills, reliability, collegiality, and other work-related characteristics—than about those of native-born workers (Stark 1991). It is therefore to be expected that employers will make more hiring errors or mismatches when hiring new immigrants than when hiring native-born workers. Employers will also finance fewer investments in the job market skills of

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[5]With the exception of the discussion of the effect of period of arrival on subsequent employment, the discussion in this section is a thumbnail sketch of the theoretical model in Chiswick (1982).

new immigrant workers. More hiring errors will result in more discharges, other things equal, for immigrant workers than for native-born workers. Less firm-specific training will, similarly, result in higher layoff and quit rates. Moreover, all else equal, new immigrant workers will have less seniority and, therefore, will be more likely than native-born workers to be subject to lay-offs if the demand for the firm's product declines for cyclical, structural, or firm-specific reasons.

With the passage of time following their arrival, immigrants will acquire labor market information, credentials, and skills specific to industries and firms in their adopted country, and employers will be better able to identify the work-related characteristics of immigrant job applicants. In addition, once pre-immigration skills have been made transferable to the destination labor market, the rate of occupational mobility and job change will diminish. The result will be a decrease in quits, layoffs, and discharges as immigrants acquire experience in the U.S. labor market.

During their initial period in the United States, immigrants will also be making investments in skills that are specific to the United States but are general with respect to U.S. employers (Hashmi 1987). These investments will include enrollment in English-as-a-second-language programs, as well as in training programs to increase the transferability of previously acquired skills or to acquire new skills. These investments in human capital may be made in school rather than on the job. School enrollment would tend to decrease employment but not necessarily to increase unemployment, since it often serves as a substitute for labor force participation.

One factor that would tend to reduce new immigrants' unemployment by comparison with the native-born is their eligibility for unemployment insurance (UI) benefits. UI benefits are available only to those who have been employed in a "covered" job in the past year, and foreign employment does not qualify. Moreover, for those who are eligible, weekly benefits are higher (up to a state ceiling) for those who received higher weekly wages in covered employment. It is well established that the incidence of unemployment is positively correlated with eligibility for and weekly benefits from unemployment compensation programs.[6]

These points suggest the hypothesis that, all else equal, except for the effect of unemployment compensation benefits, new immigrants will have a lower employment ratio (employed as a percent of the population) than the native-born, and the employment ratio for immigrants will increase with duration of residence, but at a diminishing rate until an asymptote is approached. The steepness of the curve and the point at which it levels out are empirical issues. It is also expected that the employment ratio of immigrants will rise and fall with employment conditions in the economy as a whole, although with a greater amplitude for recent immigrants than for the native-born.

With regard to the unemployment rate (unemployed as a percent of the labor force), a higher unemployment rate for immigrants than for the native-born is expected in the period immediately following immigration, followed by a decline in that rate with duration of residence until an asymptote is reached. It is also expected that immigrants' unemployment rates, like their employment ratios, will respond to cyclical economic changes, and with greater amplitude for recent immigrants than for the native-born.

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[6]Chiswick and Hurst (1996) provided an analysis of the receipt of unemployment compensation benefits among immigrants and in comparison to the native-born. They found that the foreign-born received fewer benefits than the native-born in 1989; that this difference was large in the early years after immigration but diminished with duration of residence; and that it was statistically insignificant after two decades of residence. The foreign-born who were naturalized citizens and who were fluent in English received fewer benefits than aliens and those not fluent in English. The lower benefits were largely due to a lower probability of receiving any unemployment compensation. The total benefits and the weekly benefits obtained by recipients who were foreign-born were either the same as or greater than those of native-born recipients.

Immigrants with more schooling and more labor market experience would be expected to have a higher employment ratio and a lower unemployment rate than other immigrants, for the same reasons that are operative in the case of the native-born.

What is less obvious, however, is whether the timing of immigration has a permanent effect. Does arriving in the United States in a period of high unemployment, in which prospects for good jobs for new immigrants are slim, place the immigrant in an unfavorable long-term employment situation? Or, expressed differently, does arriving in a tight labor market provide not merely a temporary advantage but also a permanent advantage because of a better initial placement? If initial conditions have permanent consequences, that is, if there is a "scarring effect" from arriving in a recession, policy makers and the immigrants themselves need to take these longer-term consequences into account when making immigration decisions, particularly decisions regarding the timing of immigration.

A question that arises is whether the selectivity of immigrants, controlling for schooling, experience, and country of origin, varies over the business cycle. Are the immigrants who arrive in a recession more favorably selected, perhaps because only the most able migrate when jobs are scarce? Alternatively, are those who arrive in a recession less favorably selected, perhaps because a larger proportion of the migration is based on family rather than labor market considerations?[7]

The "scarring" effect can be measured by including in the analysis a variable for the unemployment rate in the economy just after the immigrant's arrival in the United States or entry into the U.S. labor market. The cyclical indicator used in this study is the average unemployment rate of men age 20 and over. One measure is the unemployment rate in the year of arrival or entry into the U.S. labor market. An alternative measure is the unemployment rate during the immigrant's first three years in the United States. Both measures are used in this analysis, as there are advantages and disadvantages to each of the two measures of the unemployment rate after arrival. The one-year measure reflects labor market conditions at entry, but it may be sensitive to problems of immigrant selectivity as a function of the business cycle. The three-year measure is less sensitive to the effect of the business cycle on immigrant characteristics (selectivity), but is less appropriate as a measure of labor market conditions at entry than is the one-year measure.

The three central issues to be explored in this study are the time path of immigrant employment and unemployment with respect to duration of residence, the effect of the current level of unemployment on immigrant employment and unemployment, and the effect of unemployment at the time of arrival on subsequent employment and unemployment.

Data and Variables

The empirical analysis is based on a merging of data on the foreign-born from four separate Current Population Surveys (CPS's). The four surveys, conducted in November 1979, April 1983, June 1986, and June 1988, were selected because their special supplements included questions on immigration, in particular, region of birth and period of immigration to the United States.[8]

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[7]Nakamura and Nakamura (1992) found that a higher national unemployment rate in the year of entry into the labor market was significantly associated with a lower current hourly wage among both immigrant and native-born workers, in both Canada and the United States. Steward and Hyclak (1984) found that a higher annual growth rate in real GNP in the period of entry was associated with higher immigrant earnings among the foreign-born in the 1970 Census. These findings may arise either from a less favorable selectivity of immigrants in a recession or from a long-term depressing effect on wages from arriving in a poor labor market.

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[8]The seasonally adjusted unemployment rates for these months and their respective years for men age 20 and over were as follows:

The CPS is a stratified random sample of approximately 60,000 non-institutional households conducted monthly by the U.S. Bureau of the Census for the Bureau of Labor Statistics. From each of the four CPS samples, two subsamples were extracted, one of foreign-born and one of native-born male respondents. The foreign-born sample consists of men age 25–64 in the survey year who immigrated to the United States at age 18 or older. Immigrants from Africa were excluded from the study because of their small number (100 observations, or 1.9% of the sample) and substantial heterogeneity in race and region of origin. Also excluded were observations with either year of immigration or country of birth not reported (3.6% of the sample). The native-born sample is a 10% sample of white men born in the United States age 25 to 64 in the survey year.

By combining the data sets from the four samples for each of the two nativity groups, it is possible to estimate the separate effects on current employment and unemployment of (a) unemployment at arrival and (b) duration of residence. The dependent variables in the analysis are EMPLOYED and UNEMPLOYED. EMPLOYED is a dichotomous variable equal to one if the adult male respondent is employed and zero if he is unemployed or not in the labor force, and UNEMPLOYED is a dichotomous variable equal to one for members of the labor force who are unemployed. For new immigrants in particular, school enrollment that assists in the transferability to the U.S. labor market of previously acquired skills or that creates new skills may be an important productivity-enhancing activity. Following Wilson

(1987), we may define an "activity rate" as the proportion of the population that is either employed or enrolled in school or engaged in both activities. This measure is also studied.

The explanatory variables include the following:

EDUC: Years of schooling completed.

EXP: Years of potential work experience (age – education – 5).

SAMPLYR: Survey year, in particular, dichotomous variables SMPL79, SMPL83, SMPL86, SMPL88, with survey year 1979 serving as the benchmark.

UNEMP-AR: Average unemployment rate of men age 20 and over in the United States in the immigrant's year of arrival or year of completion of schooling in the United States, whichever comes later, or the native-born respondent's completion of schooling.[9] The age at completion of schooling is assumed to be the number of years of schooling plus 6 years, that is, it is assumed that there were no interruptions in the course of schooling for labor market or other reasons. UNEMP-AR(3) uses the average unemployment rate in the first three years after completion of schooling in the United States. For those who had been in the United States less than three years at the time of the survey, the unemployment rate at arrival is calculated across the years the respondent was actually in the United States.

YRS SINCE MIG: Years Since Migration, coded as a series of dichotomous variables representing the various durations of residence in the United States:

YRS SINCE MIG –1:   up to and including one year in the United States

	Month	Year
November 1979	4.4	4.2
April 1983	9.7	8.9
June 1986	6.2	6.1
June 1988	4.6	4.8

Source: Council of Economic Advisers, *Economic Report of the President* (U.S. GPO, various years).

For other studies using these four samples, see Cohen, Zach, and Chiswick (1997), Bachu and O'Connell (1984), Passel (1985, 1986), Passel and Woodrow (1987), and Funkhouser and Trejo (1995).

[9]The unemployment data are from the *Economic Report of the President* (1990), Table C–39, p. 338. Other than current enrollment status, data are not available in the CPS on the post-migration schooling of immigrants. It has been shown, however, that adult immigrants have, on average, very little post-immigration schooling (Hashmi 1987).

YRS SINCE MIG 1–2:   over one year and up to and including two years

YRS SINCE MIG 2–3:   over two years and up to and including three years

YRS SINCE MIG 3–5:   over three years and up to and including five years

YRS SINCE MIG 5–10:   over five years and up to and including ten years

YRS SINCE MIG 10–15:   over ten years and up to and including fifteen years

YRS SINCE MIG 15+:   over fifteen years in the United States

The benchmark category in the foreign-born analysis is YRS SINCE MIG 10–15.

ORIGIN: Dichotomous variables for Europe and Canada (the benchmark), ASIA, MEXICO, and OTHER AMER (other Latin American countries, including those in the Caribbean).

Analysis

Table 1 reports the means and standard deviations of the variables used in the primary analysis of the determinants of employment in the reference week. The immigrants had a lower employment ratio across the four samples than did white native-born men (85.1% versus 91.7%). At the time of interview, the immigrants were, on average, older by seven years than the native-born white men, and they had two fewer years of schooling, for a total of nine additional years of potential labor market experience.

Among the immigrants, 24% were born in Europe or Canada, 36% in Asia, 18% in Mexico, and 22% in other parts of the Americas. The immigrants varied in their duration in the United States. Thirteen percent had lived in the United States for two years or less, another 13% for two to five years, 30% for 5 to 10 years, 20% for 10 to 15 years, and nearly one-quarter (24%)

Table 1. Means and Standard Deviations of Variables for Foreign-Born and White Native-Born Men Aged 25–64.

Variable	Native Born (1)	Foreign Born (2)
Dependent Variables:		
EMPLOYED	.917	.851
	(.273)	(.356)
UNEMPLOYED	.049	.063
	(.216)	(.243)
Explanatory Variables:		
EDUC	13.744	11.601
	(2.548)	(4.868)
EXP	14.622	23.539
	(5.693)	(11.406)
EXP-SQR	246.214	684.145
	(178.879)	(616.786)
SMPL–79[a]	.179	.216
	(.406)	(.412)
SMPL–83	.251	.237
	(.434)	(.425)
SMPL–86	.284	.295
	(.451)	(.456)
SMPL–88	.286	.252
	(.452)	(.434)
UNEMP-AR[b]	4.080	4.818
	(1.387)	(1.557)
YRS SINCE MIG –1		.059
		(.237)
YRS SINCE MIG 1–2		.070
		(.256)
YRS SINCE MIG 2–3		.097
		(.295)
YRS SINCE MIG 3–5		.031
		(.173)
YRS SINCE MIG 5–10		.295
		(.456)
YRS SINCE MIG 10–15[a]		.211
		(.408)
YRS SINCE MIG 15+		.237
		(.425)
EUR/CAN[a]		.239
		(.426)
ASIA		.358
		(.479)
MEXICO		.184
		(.387)
OTHER AMER		.219
		(.413)
Sample Size:	6,434	5,365

Note: The means and standard deviations of the explanatory variables are for the variables used in the employment analysis. The sample sizes in the unemployment analysis are 6,201 for the native-born and 4,874 for the foreign-born, the difference being those not in the labor force. The differences in the means of the explanatory variables in the two analyses are trivial.

[a]Benchmark category in regression analysis for the foreign-born.
[b]Unemployment rate of men age 20 and over in the year of arrival in the U.S. labor market.
Source: CPS (November 1979, April 1983, June 1986, and June 1988).

Table 2. Determinants of Employment
for Foreign-Born and White Native-Born
Men Aged 25–64, OLS Model.
(Standard Errors in Parentheses)

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
EDUC	.016***	.004***	.008***	.008***
	(.001)	(.001)	(.001)	(.0009)
EXP	.013***	.012***	.012***	.010***
	(.003)	(.002)	(.002)	(.001)
EXP–SQR	–.0004***	–.0003***	–.0003***	–.0002***
	(.0001)	(.00003)	(.00003)	(.00002)
SMPL–83	–.066***	–.087***	–.082***	–.077***
	(.011)	(.017)	(.017)	(.009)
SMPL–86	–.035***	–.052***	–.046***	–.045***
	(.011)	(.017)	(.017)	(.009)
SMPL–88	–.016	–.049***	–.042**	–.034***
	(.011)	(.018)	(.018)	(.010)
UNEMP–AR	.006*	.007	.007	.007***
	(.003)	(.005)	(.005)	(.002)
YRS SINCE MIG –1		–.154***	–.152***	–.173***
		(.025)	(.025)	(.019)
YRS SINCE MIG 1–2		–.104***	–.094***	–.112***
		(.026)	(.026)	(.018)
YRS SINCE MIG 2–3		–.063***	–.059**	–.082***
		(.024)	(.024)	(.016)
YRS SINCE MIG 3–5		–.057	–.055	–.082***
		(.036)	(.036)	(.026)
YRS SINCE MIG 5–10		–.031**	–.026*	–.044***
		(.016)	(0.15)	(.010)
YRS SINCE MIG 10–15		(a)	(a)	–.014
				(.011)
YRS SINCE MIG 15+		.018	.009	–.001
		(.015)	(.015)	(.011)
ASIA		(a)	–.064***	(a)
			(.013)	
MEXICO		(a)	.011	(a)
			(.017)	
OTHER AMER		(a)	–.030**	(a)
			(.014)	
CONSTANT	.594***	.746***	.731***	.732***
	(.041)	(.038)	(.041)	(.022)
R SQR	.029	.045	.050	.044
Sample Size	6,434	5,365	5,365	11,799

ªVariable not entered.

*Statistically significant at the .10 level; **at the .05 level; ***at the .01 level (two-tailed tests).

Source: CPS (November 1979, April 1983, June 1986, and June 1988).

born in the year the immigrants and the native-born entered the U.S. labor market—4.8% versus 4.1%—reflecting higher immigration rates and unemployment rates in the more recent decades.

Tables 2–5 report OLS and logit model estimations of the employment and unemployment equations separately for the foreign-born and the native-born men, as well as for the two groups together. In these tables, the figures in column (1) are from the equation for the native-born, those in columns (2) and (3) are from the equation for the foreign-born, and those in column (4) are from the equation for the pooled regression. Tables 2 and 3 show the results for employment and Tables 4 and 5 for unemployment. The logit equations (Tables 3 and 5) also report the derivatives evaluated at the sample mean of the dependent variable. Table 6 reports the partial effects of the current unemployment rate on the individual's employment to test for differences in sensitivity to cyclical changes in economic activity. Table 7 reports the effects of duration of residence on the "activity rate."

Employment Ratio

Regardless of nativity or statistical procedure (OLS or logit), education has a highly significant positive effect on employment, although the effect is significantly smaller in the immigrant equation than in the native-born equation (in the t-test for the difference in coefficients in Table 2, columns (1) and (2), t-ratio = 8.6). Since the analysis is limited to those who immigrated at age 18 and older, and since immigrants acquire relatively little schooling in the United States, the schooling variable largely reflects pre-immigration schooling (Hashmi 1987). Total labor market experience also has a smaller partial effect on employment among the foreign-born than among the native-born, although the coefficient for the native-born has a large standard error in the logit analysis. Controlling for duration in the United States, total experience measures the effect of pre-immigration labor market experience. The finding that

for more than 15 years. The adult male unemployment rate was higher, on average, for immigrants than for the native-

pre-immigration human capital (schooling and pre-immigration experience) among the foreign-born has a smaller effect on employment than does human capital among the native-born is consistent with the hypothesis that skills acquired outside the United States are only imperfectly transferable to the U.S. labor market, as found in previous studies of earnings and employment (for example, Chiswick 1978, 1979, 1982; Chiswick and Hurst 1996).

The sample year variables reflect differences in employment opportunities in the four survey periods. Employment rates were highest in November 1979 (the benchmark), a period of very low unemployment, and lowest in April 1983, a period of high unemployment. In the OLS analysis (Table 2), the negative coefficients are always larger in the immigrant than in the native-born equations, although the differences by nativity are not statistically significant. The pattern is less clear in the logit analysis, although the coefficient is more negative in two of the three time periods (Table 3).

The employment equations were recomputed with a linear unemployment rate variable replacing the survey year dichotomous variables (Table 6). Two measures of the unemployment rate were used: the seasonally adjusted rate in the survey month, and the annual rate in the survey year. The partial effect of the current unemployment rate on employment is, as expected, negative and highly statistically significant. What is at issue, however, is whether the partial effect is larger for the foreign-born than for the native-born. The partial effect has a larger negative magnitude in the foreign-born equation, although the difference in partial effects is not statistically significant. The data provide weak support for the hypothesis that the employment ratio among immigrants is more cyclically sensitive than is the employment ratio among the native-born.

In the analysis limited to the foreign-born, Mexican immigrants have the same employment ratios as European/Canadian immigrants, *ceteris paribus* (column 3 in Tables 2 and 3). Immigrants from Asia and

Table 3. Determinants of Employment for Foreign-Born and White Native-Born Men Aged 25–64, Logit Model.

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
EDUC	.221***	.035***	.058***	.071***
	(.019)	(.010)	(.011)	(.008)
	0.017	0.004	0.007	0.007
EXP	.193***	.078***	.077***	.082***
	(.049)	(.014)	(.014)	(.011)
	0.015	0.010	0.010	0.008
EXP–SQR	–.005***	–.002***	–.002***	–.002***
	(.002)	(.0002)	(.0002)	(.0002)
	–0.0004	–0.0003	–0.0003	–0.0002
SMPL–83	–.888***	–.834***	–.799***	–.863***
	(.153)	(.158)	(.159)	(.109)
	–0.068	–0.106	–0.101	–0.086
SMPL–86	–.558***	–.562***	–.511***	–.573***
	(.162)	(.159)	(.159)	(.111)
	–0.042	–0.071	–0.065	–0.057
SMPL–88	–.269	–.533***	–.476***	–.438***
	(.172)	(.168)	(.169)	(.117)
	–0.020	–0.068	–0.060	–0.044
UNEMP–AR	.080*	.067	.069*	.068***
	(.042)	(.041)	(.041)	(.027)
	0.006	0.008	0.009	0.007
YRS SINCE MIG –1		–1.105***	–1.088***	–1.338***
		(.191)	(.192)	(.151)
		–0.140	–0.138	–0.134
YRS SINCE MIG 1–2		–1.019***	–.931***	–1.204***
		(.228)	(.229)	(.178)
		–0.129	–0.118	–0.121
YRS SINCE MIG 2–3		–.562***	–.514***	–.777***
		(.191)	(.192)	(.146)
		–0.071	–0.065	–0.078
YRS SINCE MIG 3–5		–.558*	–.531*	–.871***
		(.295)	(.296)	(.249)
		–0.071	–0.067	–0.087
YRS SINCE MIG 5–10		–.308**	–.260*	–.502***
		(.133)	(.134)	(.097)
		–0.039	–0.033	–0.050
YRS SINCE MIG 10–15		(a)	(a)	–.216*
				(.112)
				–0.022
YRS SINCE MIG –15+	.154	.075	–.139
	(.134)	(.135)	(0.118)
			–0.014
ASIA		(a)	–.532***	(a)
			(.113)	
			–0.067	
MEXICO		(a)	.035	(a)
			(.143)	
			0.004	
OTHER AMER		(a)	–.277**	(a)
			(.124)	
			–0.035	

Continued

Table 3. Continued

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
CONSTANT	−1.929***	1.226***	1.152***	.915***
	(.569)	(.311)	(.336)	(.229)
	−0.147	0.155	0.146	0.092
Goodness of Fit	6453.03***	5251.54***	5306.36***	11,505.33***
Sample Size	6,434	5,365	5,365	11,799

ªVariable not entered.

For each variable, the first row is the logit coefficient, the second row is its standard error in parentheses, and the third row is the partial derivative of the dependent variable with respect to the explanatory variable. The derivatives are evaluated at the sample mean of the dependent variable.

*Statistically significant at the .10 level; **at the .05 level; ***at the .01 level (two-tailed tests).

Source: CPS (November 1979, April 1983, June 1986, and June 1988).

other parts of the Americas have employment ratios significantly lower than European/Canadian immigrants, by a statistically significant 6 percentage points and 3 percentage points, respectively, in the OLS analysis. The lower employment ratio among Asian immigrants but not among other Latin American immigrants is, in part, due to their higher school enrollment rate. When an "activity rate" is used, that is, if those without jobs who are enrolled in school are included among the employed, the Asian coefficient decreases in absolute value and is at the margin of statistical significance, while the Latin American coefficient hardly changes.[10]

Among the foreign-born, duration in the United States has an important impact on employment ratios (Tables 2 and 3, columns 2 and 3). Compared with the employment ratio for the benchmark group, immigrants with 10 to 15 years' residence in the country, the ratio for those who have been in the United States less than one year is about 15 percentage points lower (OLS analysis)—a highly statistically significant difference; those in the United States 1 to 2 years have employment ratios that are lower by about 10 percentage points; and those in the United States 2 to 3 years have employment ratios that are lower by 6 percentage points. For longer durations the coefficients are smaller and generally not significant at the 5% level. Similar patterns emerge in the logit analysis.

In the pooled native-born/foreign-born equations, in both the OLS and logit analyses, those in the United States for one year or less have lower employment ratios than the native-born—for example, in the OLS analyses, the employment ratio is 17.3 percentage points (t = −9.1) lower, other things the same. For longer durations of residence, however, the absolute values of the coefficients decline sharply, and they are not statistically significant beyond 10 years' residence. This pattern is similar to the one found in earlier studies using the 1970 and 1990 Censuses of Population and 1976 SIE data (Chiswick 1982; Chiswick and Hurst 1996).

The lower employment ratio for recent immigrants is in part due to their school enrollment. As remarked above, those without a job who are currently enrolled in school can be combined with the employed to create an "activity rate." When the activity rate is used as the dependent variable, the only duration group that shows a significant difference at the 1% level from the benchmark duration group (the foreign-born with 10 to 15 years' U.S. residence in the foreign-born analysis and the native-born in the pooled analysis) is those who have been in the United States for less than one year (Table 7). For all other immigrant arrival groups the coefficient is small and not statistically significant at even the 5% level.

The coefficient of the variable UNEMP-AR

[10]The partial effect of Asian and Other Latin American origin on the "activity rate" variable (employed or enrolled in school):

	OLS	Logit
ASIA	−0.25	−.232
	(0.12)	(0.12)
OTHER AMER	−0.29	−.288
	(0.13)	(0.13)

Standard errors are in parentheses.

tests whether, *ceteris paribus,* the unemployment rate shortly after entry into the U.S. labor market affects the respondent's current (time-of-survey) employment. The coefficients for the foreign-born and the native-born are positive and have a similar magnitude, but except for the pooled equation the coefficients are not significant at the 5% level. If anything, there is weak support for the hypothesis that those (whether foreign-born or native-born) who enter the U.S. labor market during a period of high unemployment have *higher* employment ratios. Perhaps, as speculated above, those who enter the labor market during recessions tend to have better work-related characteristics, on average, than those who enter the labor market in more favorable economic times, even after controlling for other variables. In any event, this result does not support the hypothesis that joining the labor market at times of high unemployment produces a permanent scarring effect.

An alternative procedure is to use the average unemployment rate during the immigrant's first three years in the U.S. labor market as the measure of labor market conditions after arrival. When this substitution is made, for alternative specifications the variable for average unemployment in the first three years is not statistically significant in the OLS or logit analyses for the foreign-born or the native-born equations. Thus, the three year measure also shows no evidence of a scarring effect.

Unemployment Rate

Tables 4 and 5 report the OLS and logit analyses for adult men of the unemployment status of labor force participants. An additional year of schooling lowers the unemployment rate of adult men, and the effect is significantly larger among the native-born than among the foreign-born. Labor market experience, on the other hand, has no significant effect on the unemployment of either foreign-born or native-born men in this age group. In both the OLS and logit analyses, men from Mexico and other parts of Latin America

Table 4. Determinants of Unemployment for Foreign-Born and White Native-Born Men Aged 25–64, OLS Model. (Standard Errors in Parentheses)

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
EDUC	−.009***	−.005***	−.004***	−.006
	(.001)	(.0009)	(.001)	(.0007)
EXP	.001	.0003	.0003	−.0008
	(.003)	(.001)	(.001)	(.0009)
EXP–SQR	−.00009	−.00001	−.00001	−.000003
	(.00009)	(.00002)	(.00002)	(.00002)
SMPL–83	.052***	.078***	.077***	.062***
	(.008)	(.012)	(.012)	(.007)
SMPL–86	.029***	.028**	.026**	.028***
	(.009)	(.012)	(.012)	(.007)
SMPL–88	.008	.009	.007	.006
	(.009)	(.013)	(.013)	(.007)
UNEMP–AR	−.0002	−.0007	−.0009	−.0006
	(.002)	(.004)	(.004)	(.002)
YRS SINCE MIG −1		.041**	.044**	.050***
		(.019)	(.019)	(.015)
YRS SINCE MIG 1–2		.001	−.002	.003
		(.019)	(.019)	(.014)
YRS SINCE MIG 2–3		−.009	−.006	−.0003
		(.018)	(.018)	(.014)
YRS SINCE MIG 3–5		.040	.040	.044**
		(.026)	(.026)	(.020)
YRS SINCE MIG 5–10		.003	.004	.010
		(.011)	(.011)	(.007)
YRS SINCE MIG 10–15		(a)	(a)	.011
				(.008)
YRS SINCE MIG 15 +		−.012	−.011	.004
		(.011)	(.011)	(.008)
ASIA		(a)	.013	(a)
			(.009)	
MEXICO		(a)	.030**	(a)
			(.012)	
OTHER AMER		(a)	.033***	(a)
			(.010)	
CONSTANT	.162***	.092***	.062**	.126***
	(.033)	(.028)	(.030)	(.017)
R SQR	.021	.024	.026	.022
Sample Size	6,201	4,874	4,874	11,075

aVariable not entered.
*Statistically significant at the .10 level; **at the .05 level; ***at the .01 level (two-tailed tests).
Source: CPS (November 1979, April 1983, June 1986, and June 1988).

have higher unemployment rates than European/Canadian and Asian-origin men.

Only those foreign-born men who had

Table 5. Determinants of Unemployment for Foreign-Born and White Native-Born Men Aged 25–64, Logit Model.

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
EDUC	-.217***	-.074***	-.057***	-.112***
	(.026)	(.014)	(.018)	(.012)
	-0.010	-0.004	-0.003	-0.006
EXP	.048	.003	.003	-.025
	(.072)	(.024)	(.024)	(.017)
	0.002	0.0002	0.0002	-0.001
EXP–SQR	-.003	-.0002	-.0001	.00009
	(.002)	(.0004)	(.0004)	(.0003)
	-0.0001	-1E-05	-6e-06	5e-06
SMPL.–83	1.123***	1.1331***	1.314***	1.197***
	(.205)	(.235)	(.236)	(.153)
	0.052	0.067	0.078	0.062
SMPL.–86	.760***	.663***	.635***	.691***
	(.215)	(.244)	(.245)	(.160)
	0.035	0.039	0.037	0.036
SMPL.–88	.181	.256	.212	.176
	(.237)	(.247)	(.275)	(.177)
	0.008	0.015	0.013	0.009
UNEMP–AR	.005	-.055	-.059	-.030
	(.054)	(.065)	(.065)	(.038)
	0.0002	-0.003	-0.003	-0.002
YRS SINCE MIG –1		.658**	.697**	.685***
		(.310)	(.311)	(.240)
		0.039	0.041	0.036
YRS SINCE MIG 1–2		.152	.174	.128
		(.407)	(.409)	(.339)
		0.009	0.010	0.007
YRS SINCE MIG 2–3		-.026	.003	.005
		(.301)	(.303)	(.235)
		-0.002	0.0002	0.0003
YRS SINCE MIG 3–5		.905**	.913**	.914***
		(.437)	(.439)	(.351)
		0.053	0.054	0.048
YRS SINCE MIG 5–10		.130	.142	.185
		(.193)	(.194)	(.137)
		0.008	0.008	0.010
YRS SINCE MIG 10–15		(a)	(a)	.177
				(.152)
				0.009
YRS SINCE MIG 15+		-.245	-.225	.048
		(.195)	(.196)	(.175)
		-0.014	-0.013	0.002
ASIA		(a)	.279	(a)
			(.191)	
			0.016	
MEXICO		(a)	.526**	(a)
			0.031	
			(.211)	
OTHER AMER		(a)	.613***	(a)
			(.188)	
			0.036	
CONSTANT	-.747	-2.308***	-2.868***	-1.641***
	(.800)	(.498)	(.547)	(.342)
	-0.035	-0.136	-0.169	-0.085

Continued

Table 5. Continued

Variable	Native-Born (1)	Foreign-Born (2)	Foreign-Born (3)	Pooled (4)
Goodness of Fit	6010.41***	4830.88***	4848.85***	10,861.23***
Sample Size	6,201	4,874	4,874	11,075

ᵃVariable not entered.

For each variable the first row is the logit coefficient, the second row is its standard error in parentheses, and the third row is the partial derivative of the dependent variable with respect to the explanatory variable. The derivatives are evaluated at the sample mean of the dependent variable.

*Statistically significant at the .10 level; **at the .05 level; ***at the .01 level (two-tailed tests).

Source: CPS (November 1979, April 1983, June 1986, and June 1988).

been in the U.S. less than one year at the time of the interview had a higher unemployment rate (by about 4 percentage points in the OLS analysis) than the benchmark group (those who immigrated 10 to 15 years ago), although in the logit analysis the 3-to-5-year immigrant cohort also has a marginally higher rate (t = 2.1 in Table 5, columns 2 and 3). For the other durations, the coefficients and t-ratios are very low. Moreover, compared with the native-born, only immigrants who had been in the United States less than one year and those who had been there 3–5 years had higher unemployment rates, although in the OLS analysis the coefficient on the 3–5-year duration variable is close to the margin of significance (t = 2.2).

Logit analysis was also used to compute the effect of the current unemployment rate (in the survey month or the survey year) on the unemployment status of the respondent (Table 6). The current unemployment rate has a highly significant positive effect on the respondent's unemployment, which is to be expected. The partial effect of the explanatory variable evaluated at the mean of the dependent variable is larger in the foreign-born equation, although the difference is not statistically significant. This provides weak support for the hypothesis that unemployment among the foreign-born is more cyclically sensitive than is unemployment among the native-

Table 6. Logit Coefficients for the Effect of Current Unemployment Rates on Employment and Unemployment, Foreign–Born and White Native–Born Men Aged 25–64.[a]

	Employment		Unemployment	
Current Unemployment Rate	Native-Born	Foreign-Born	Native-Born	Foreign-Born
Survey Month	−0.136	−0.091	0.181	0.218
	(0.021)	(0.020)	(0.026)	(0.028)
	−0.0104	−0.0115	0.0084	0.0129
	(0.0016)	(.0025)	(.0012)	(.0017)
Survey Year	−0.165	−0.114	0.219	0.264
	(0.025)	(0.024)	(0.032)	(0.034)
	−0.0126	−0.0145	0.0102	0.0156
	(.0019)	(.0030)	(.0015)	(.0020)

[a]Current unemployment rate is for men age 20 and over in the CPS survey month or in the survey year. Controlling for EDUC, EXP, EXPSQ, UNEMP–AR and, in the foreign-born equations, period of immigration, and region of origin.

For each variable, the first row is the logit coefficient, the second row is its standard error in parentheses, the third row is the partial derivative of the dependent variable with respect to the explanatory variable, and the fourth row is its standard error. The derivatives are evaluated at the sample mean of the dependent variable.

Source: Regressions computed from CPS (November 1979, April 1983, June 1986, and June 1988).

born.

In both the OLS and logit analyses, the variable for the unemployment rate at arrival is negative in the foreign-born equations, but consistently has a t-ratio less than unity. It is also statistically insignificant when the three-year measure is used. The unemployment rate at entry into the U.S. labor market has no effect on the subsequent unemployment experience of either the foreign-born or the native-born.

Summary and Conclusions

This paper has analyzed the employment and unemployment experience of adult (age 25–64) immigrants to the United States by combining data from four separate CPS samples that included information on country of birth and year of immigration for the foreign-born. It finds that schooling and total labor market experience had a smaller positive effect on the employment of immigrants than on the employment of native-born white men, and schooling had a smaller negative effect on unemployment, suggesting that pre-immigration skills are less relevant in the U.S. labor market than are the skills acquired by the native-born. There is weak support for the hypothesis

that immigrants' employment and unemployment experience is more sensitive to cyclical changes in economic activity than is that of native-born adult white men.

Recent immigrants had a lower employment ratio and a higher unemployment rate than those with a longer duration in the country, but the effect is short-lived. The employment differential declines sharply with duration and disappears by 10 years' residence in the United States. The unemployment difference disappears even sooner—by the end of the first year or, at latest, by the third year. Similar patterns have been found in the large cross-sectional data sets from the 1970 and 1990 Censuses and the 1976 Survey of Income and Education, suggesting that there has been no change over time in the effect of duration of residence on employment and unemployment status.

Compared with European/Canadian immigrants, Asian immigrants had a lower employment ratio (by 6 percentage points) but the same unemployment rate. Mexican immigrants, on the other hand, had the same employment ratio but a higher unemployment rate. These patterns imply a higher labor force participation rate for Mexican immigrants and a lower rate for

Table 7. Partial Effect on the "Activity Rate" of Period of Arrival,
Foreign-Born and White Native-Born Men Aged 25–64, OLS and Logit.

	OLS		Logit	
Period of Arrival	Foreign-Born	Pooled	Foreign-Born	Pooled
YRS SINCE MIG −1	−.08***	−.075***	−.739***	−.633***
	(.023)	(.019)	(.201)	(.189)
			−0.094	−0.063
YRS SINCE MIG 1–2	−.034	−.006	−.441*	−.255
	(.023)	(.019)	(.259)	(.242)
			−.056	−0.026
YRS SINCE MIG 2–3	−.003	−.010	−.076	.092
	(.022)	(.017)	(.223)	(.199)
			−0.010	0.009
YRS SINCE MIG 3–5	−.025	−.019	−.304	−.273
	(.032)	(.025)	(.314)	(.290)
			−0.039	−0.027
YRS SINCE MIG 5–10	−.019	−.022*	−.219	−.063
	(.015)	(.012)	(.144)	(.142)
			−0.028	−0.006
YRS SINCE MIG 10–15		.012		.076
	(a)	(.012)	(a)	(.146)
				0.008
YRS SINCE MIG 15 +	.020	0.20	.170	.110
	(.014)	(.012)	(.136)	(.142)
				0.022	0.011

Note: Also controlling for EDUC, EXP, EXPSQ, SAMPL–83, SAMPL–86, SAMPL–88, and UNEMP–AR. Pooled analysis includes region of origin variables for the foreign-born.
aVariable not entered.
The first row is the regression coefficient, the second row is the standard error, and the third row in the logit analysis is the partial derivative of the dependent variable with respect to the explanatory variable, evaluated at the sample mean of the dependent variable.
*Statistically significant at the .10 level; **at the .05 level; ***at the .01 level (two-tailed tests).
Source: Regressions computed from CPS (November 1979, April 1983, June 1986, and June 1988).

Asian immigrants than for European/Canadian immigrants. For the Mexican immigrants, relatively low school enrollment and a high propensity to return to the origin country rather than remain out of the labor force in the United States may explain the higher participation rate. Among the Asian immigrants, higher school enrollment may be responsible for the lower labor force participation rate.

These findings on employment and unemployment augment findings from the research on the rise in weekly or hourly earnings with duration of residence in the United States, which has dominated the immigrant adjustment literature. Employment ratios increase with duration of residence in the first decade and thereafter

reach a plateau, while unemployment rates decrease with duration and reach a level comparable to that of the native-born after one to three years. Thus the increase in annual earnings with duration of residence is even steeper in the first decade after arrival than would be suggested by the literature on earnings, which typically studies hourly wages or weekly earnings. This implies that the "catch up" with the native-born in hourly and weekly earnings in the second decade that has been found in other research would also be found for annual earnings (Chiswick 1978, 1979, 1980).

There is no support for the hypothesis that arriving in the United States during a period of high unemployment (a reces-

sion) has an adverse long-term effect on employment opportunities or the incidence of unemployment among the foreign-born. Perhaps the postwar recessions have been too mild and too short-lived to have significant effects on immigration flows and the long-term labor market adjustment of im-

migrants. These findings suggest that immigration policy need not be based on a concern that those who enter during recessions like those experienced during the postwar period will suffer a permanent disadvantage ("scarring") in their employment status.

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