Job losses among Hispanics in the recent recession

Hispanic workers, particularly immigrants, incurred more involuntary separations during the 1990–92 recession than did non-Hispanic workers; lower levels of education accounted for some of this difference

Johanne Boisjoly
and
Greg J. Duncan

Assessments of job losses during the recent recession consistently show that Hispanics were the biggest losers. For example, data from the 1992 Worker Displacement Survey reveal that the job displacement rate during the 5 years preceding the January 1992 interview was considerably higher for Hispanic workers (11.8 percent) than for either black (8.8 percent) or white (7.9 percent) workers.[1]

Among the reasons for this disparity were differences in the qualifications and skills of Hispanic, as opposed to non-Hispanic, workers. For example, in 1992, the fraction of 25- to 34-year-olds who had failed to complete high school was 3 times as high among Hispanics than within the population as a whole (41.5 percent versus 13.5 percent). Compared with non-Hispanics, Hispanic workers were more likely to be younger, to work in less skilled occupations, and to be employed in industries that might make them more prone to experience job losses.[2]

In this article, we investigate the reasons for the higher rate of job losses incurred by Hispanics using a new data source on the longitudinal labor market experiences of Hispanic workers: the Panel Study of Income Dynamics. Gathered in annual interviews between 1990 and 1992, the data in this study provide information on job losses among representative samples of both Hispanic and non-Hispanic workers. Compared with the Worker Displacement Survey, the Panel Study of Income Dynamics' annual interviewing cycle shortens the recall period over which job losses are reported, resulting in a greater likelihood of providing much more accurate reports of job losses. The Panel Study also affords a well-measured set of demographic and employment conditions prior to possible job loss, as well as yielding information on the immigration status of Hispanic workers.

Johanne Boisjoly is a professor of sociology at the University of Quebec, Rimouski, Quebec, and Greg J. Duncan is a research scientist at the Survey Research Center, University of Michigan, Ann Arbor, Michigan.

Data

Our data on Hispanics come from the Hispanic supplement to the Panel Study. In 1990, the study added a dwelling-based sample of Latino households interviewed in the summer of 1989 as part of the Latino National Political Survey.[3] The geographic areas covered by the sample included at least 90 percent of the populations of the three major Hispanic subgroups—Puerto Rican, Cuban, and Mexican American—with an oversampling of Cuban and Puerto Rican households.[4] Panel Study interviews with the sample from the Latino Survey, focusing on economic and demographic concerns, have been conducted every year from 1990 through 1994. We use data gathered in 1990, 1991, and 1992. (See box for further information on the Hispanic supplement to the Panel Study of Income Dynamics.)

Data on non-Hispanics come from the "core" Panel Study sample. Since 1968, the Panel Study

has followed and interviewed annually a national sample that began with about 5,000 families. Low-income families were oversampled in the original design, and more than one-quarter of the families are black. When weighted, however, the sample is representative of the nonimmigrant population as a whole. Sample-following rules produce an unbiased sample of families each year, as new families formed by children leaving home or formed through divorce mirror similar changes taking place in the entire population. Thus, the panel continues to be representative with respect to its basic sampling design.

Immigrants to the United States are not represented in this dynamic sampling scheme, unless they become part of households included in the U.S. population prior to 1968. It was for this reason, as well as to supplement the relatively small numbers of nonimmigrant, native U.S. Hispanics in the original Panel Study sample, that the Hispanic supplement was added in 1990. Interviews are taken with the nominal head of each family, who is asked to provide extensive information about the family, including him- or herself. In roughly 25 percent of the cases, the head refuses to be interviewed or is inaccessible, and the interview is taken with the spouse.

Method

We treated the longitudinal data over the 1990–92 interval as if they came from two separate 2-year panels. The first panel included individuals who, at the time of the spring 1990 interview, were working at a job they had held for at least 12 months, had worked at least 1,000 hours in calendar year 1989,[5] were not self-employed, and were between 25 and 59 years of age. To determine whether a job loss subsequently occurred, we examined information taken in the spring 1991 interview to see whether the individual was not working at the time of the interview or was working at a job different from that reported roughly 1 year earlier. In either case, we examined the reported reason for the job change. In the Panel Study of Income Dynamics, respondents are asked this question in open-ended form, and responses are coded in the central office into categories that include "company folded/changed hands/moved out of town; employer died/went out of business;" and "laid off, fired." Our definition of "job displacement" is based on reports coded into either of these two categories.[6] We also tabulated "job retention," defined as continuing to work at the same job between the 1990 and 1991 pair of interviews. Retentions and displacements sum to less than 100 percent, owing to voluntary job changes and voluntary withdrawals from the labor market.

To determine whether a job loss occurred between 1991 and 1992, we drew a second panel from the Panel Study, defining our sample as consisting of individuals who, at the time of the spring 1991 interview, were working on a job they had held for at least 12 months, had worked at least 1,000 hours in calendar year 1990, were not self-employed, and were between 25 and 59 years of age. We then examined the spring 1992 interview to see whether the individual was not working at the time of the interview or was working at a job different from that reported roughly 1 year earlier.

This shorter recall period ought to improve the accuracy of reporting episodic events such as job losses. Validation studies have shown that underreporting of unemployment is a serious problem,

The Hispanic Supplement to the Panel Study of Income Dynamics

The Panel Study of Income Dynamics is a 26-year study of a representative sample of U.S. households conducted by the Survey Research Center, University of Michigan, that allows researchers and policymakers to address various dynamic issues. As of 1992, the study had collected information about more than 38,000 individuals spanning as many as 25 years of their lives. In 1989, the Ford Foundation funded a study of political participation that allowed the addition of a nationally representative sample of 2,000 Hispanic households to the core Panel Study sample. The dwelling-based Hispanic supplement was carefully drawn to include all three of the major Hispanic subgroups: Puerto Ricans, Cubans, and Mexican-Americans. It oversamples Puerto Ricans and Cubans, but has probability-of-selection weights available to provide representative national estimates. Funding from the Ford Foundation, the Employment and Training Administration of the U.S. Department of Labor, and the Assistant Secretary for Planning and Evaluation of the U.S. Department of Health and Human Services has been used to collect four waves of Panel Study interviews (1990–93) from this sample. Additional details on the sample's political affiliations and activities, ethnic identifications, languages, and immigration histories are available from the 1989 interviews. Data from the 1990–92 waves are available from the InterUniversity Consortium for Political and Social Research.

Table 1. **Annual job displacement and retention rates, 1990–92**

Category	Percent		Unweighted *N*
	Displacement	Retention	
Total	3.4	88.5	9,817
Hispanic men:			
Nonimmigrant	6.4	87.9	249
Immigrant	6.6	87.0	792
Mexican	6.2	87.5	668
Puerto Rican	2.9	90.0	134
Cuban	7.3	86.9	174
Hispanic women:			
Nonimmigrant	3.7	87.4	205
Immigrant	7.0	86.0	567
Mexican	7.2	83.8	393
Puerto Rican	7.9	89.8	106
Cuban	2.4	90.2	180
Non–Hispanic white men	3.6	88.7	3,043
Black men	3.3	90.4	1,263
Non–Hispanic white women	2.6	87.7	2,334
Black women	2.7	92.1	1,364
Age:			
25–34 years	3.9	84.1	3,672
35–49 years	2.9	90.8	4,873
50–59 years	3.6	90.0	1,272
Education:			
Less than 12 years	5.4	88.3	1,598
12 years	3.2	88.2	3,756
13–15 years	3.6	87.9	2,239
16 or more years	2.5	89.7	2,082
Region:			
Northeast	3.7	90.3	1,526
North Central	2.2	89.4	2,057
South	3.9	87.4	4,350
West	4.0	87.0	1,795
Size of city:			
500,000 or more	3.6	89.9	2,078
100,000–499,999	3.3	88.3	2,958
50,000–99,999	3.0	86.8	996
25,000–49,999	3.5	87.4	1,062
10,000–24,999	4.2	88.3	1,263
Less than 10,000	2.6	90.0	1,407
Occupation:			
Professional, technical, and kindred workers	2.1	90.3	1,823
Managers and administrators	3.9	89.1	1,210
Sales workers	4.2	80.4	358
Clerical and kindred workers	2.8	88.3	1,695
Craft and kindred workers	3.0	88.4	1,416
Operatives, except transport	5.9	88.1	1,206
Transport equipment operatives	4.9	88.8	437
Laborers	5.6	85.3	459
Service workers	2.8	88.6	1,208
Industry:			
Agriculture, forestry, fishing, and mining	5.9	84.8	245
Construction	6.4	86.6	470
Manufacturing	3.7	90.3	2,430

especially when the time between the job loss and the interview is more than 1 year.[7]

Demographic characteristics

In this section, we present some descriptive information on the annual incidence of involuntary job loss and of job retention. The 1990–91 and 1991–92 samples are pooled together for this purpose.

As in the 1992 Worker Displacement Survey, the Panel Study of Income Dynamics shows considerably higher rates of displacement for Hispanic workers.[8] (See table 1.) Displacement rates for both immigrant and nonimmigrant Hispanic men and for immigrant Hispanic women were between 6 percent and 7 percent, compared with rates of less than 4 percent for other groups. A regression-based analysis presented in the next section shows that, statistically, these differences are highly significant. Reversing the focus, to show which workers managed to retain their jobs during the recessionary period, reveals somewhat lower retention rates among Hispanic workers.

Somewhat surprising in the Panel Study data is the fact that the displacement rate for black men (3.3 percent) is lower than the comparable rate for white men (3.6 percent). An examination of data for the 1988–90 period showed higher rates for black men (5.9 percent, compared with 2.5 percent for white men), so it may be that those blacks who met or exceeded the 1990 selection criteria for participation in the sample (especially for job tenure) were more permanent job holders. Both white and black women had lower rates of job loss than did white men.[9]

Tabulations of displacement rates among various subsets of Hispanic workers showed that the most frequent job losses occurred among immigrant Hispanic women[10] and among Puerto Rican and Mexican women, relative to Cuban women. Surprisingly, Puerto Rican men had quite low rates of displacement. One possible explanation for this is that, as with black men, the most marginally attached Puerto Rican workers may not have passed the 1,000-hour, more-than-1-year job tenure criteria used to select the sample. It may also be that large-scale displacements of Puerto Rican men are less likely now than in past decades.

Table 1 also shows the displacement and retention rates of the entire (weighted) sample, by other demographic characteristics. Job losses varied most by industry and occupation, with the highest rates occurring for those in construction and primary and extraction industries and among the least skilled workers. Job losses were especially infrequent among government workers and, despite publicity to the contrary, profes-

sional workers. Other characteristics associated with higher rates of job loss were a younger age, less schooling, a short job tenure, and low pay.

Regression analysis

We attempted to account for the different rates of job loss among Hispanic and non-Hispanic workers with a series of logistic regression analyses. (See table 2.) The first two columns show the coefficients and standard errors obtained from a logistic regression in which job displacement is the dependent variable and various categories of sex and ethnicity are the independent variables. White males are the omitted group, so the coefficients indicate differences in the logarithm of the odds of displacement between the given group and white men. Standard errors were calculated using the SUDAAN procedure and account for the complex nature of the design of the Panel Study of Income Dynamics.

Before adjustment for other differences (model 1 in table 2), the regressions show that Hispanic men—both immigrant and nonimmigrant—as well as immigrant Hispanic women, have significantly higher displacement rates than white men. Rates for both white and black women were significantly lower than those of white men.

Various characteristics of Hispanic workers in general and immigrant Hispanics in particular might be expected to lead to greater vulnerability to job loss. Compared with non-Hispanic white and black men, Hispanic men are more likely to be young, have less education, live in the Western region of the United States, and have less job tenure. (See table 3.) Differences in schooling are especially pronounced for immigrant Hispanic men, of whom 57 percent are estimated to have failed to complete high school. Ethnic differences are somewhat less pronounced among women workers.

Adjustments for differences in the completed schooling of Hispanic and non-Hispanic workers (model 2 in table 2) reduce the differences in job losses considerably. Specifically, the difference between nonimmigrant Hispanic men and non-Hispanic white men falls by one-fourth and is no longer statistically significant. Proportionate reductions are even larger for immigrant Hispanic men and women. Thus, the lower average levels of educational attainment among immigrant Hispanic men and women are one important factor behind their higher likelihood of being displaced. Interestingly, in this and the other models that control for education, adjusted displacement rates among non-Hispanic women are lower than among non-Hispanic men.

Adjustments for other demographic characteristics (model 3 in table 2; see also chart 1) reduce the ethnic differences further.[11] As with the results in model 2, the displacement rates of none of the Hispanic groups differ significantly from that of white men in the presence of these additional demographic adjustments. Among the demographic variables themselves, schooling and region show significant differences in patterns of job losses. Taken together, these results indicate that lower levels of educational attainment and geographic location in the West are important factors behind the higher rates of displacement among Hispanics.

The fourth model presented in table 2 (see also chart 1) introduces controls for various characteristics of the job just prior to its possible loss. Adjustments for these factors have the biggest effect on immigrant Hispanics, who tend to have jobs that render them especially vulnerable to involuntary loss.

Table 1. **Continued—Annual job displacement and retention rates, 1990–92**

Category	Percent		Unweighted *N*
	Displacement	Retention	
Transportation and communications	3.3	90.4	826
Wholesale and retail trades	5.0	83.3	1,395
Finance, insurance, and real estate	3.2	86.9	581
Business, personal, and entertainment services	5.0	82.6	673
Professional and related services	2.2	89.7	2,236
Public administration	.2	94.0	920
Tenure:			
Less than 5 years	5.0	81.8	3,805
5–10 years	3.5	89.6	2,390
10 or more years	1.7	94.3	3,622
Annual wages (1992 dollars):			
Less than $15,000	5.8	80.1	2,269
$15,000–$29,999	2.9	89.9	3,969
$30,000 or more	2.8	90.7	3,579
Hourly wages (1992 dollars):			
Less than $7.50	5.9	80.9	2,295
$7.50–$14.99	3.2	88.8	4,265
$15.00 or more	2.4	91.5	3,257
Union:			
Job covered by a union contract	2.0	93.2	2,188
Job not covered by a union contract	3.8	87.2	7,313
Calendar year:			
1991	3.6	87.5	5,063
1992	3.1	89.5	4,754

Reemployment following the loss

Our longitudinal data also provide us with a crude measure of the duration of the involuntary job loss. Specifically, we can look at information

Table 2. **Logistic regression coefficients (β) and standard errors for various models of job displacement, 1990–92**

Category	Model 1		Model 2		Model 3		Model 4	
	β	Standard error	β	Standard error	β	Standard error	β	Standard error
Hispanic men (non–Hispanic white men omitted):								
Nonimmigrant	0.60	0.31	[0.45]	0.33	[0.37]	0.34	[0.42]	0.36
Immigrant	.63	.19	[.36]	.22	[.28]	.27	[.12]	.30
Hispanic women:								
Nonimmigrant	[.01]	.50	[–.13]	.51	[–.21]	.52	[–.18]	.58
Immigrant	.69	.25	[.49]	.27	[.41]	.31	[.19]	.35
Black men	[–.09]	.28	[–.19]	.27	[–.30]	.29	[–.36]	.34
Non–Hispanic white women	[–.33]	.18	–.37	.18	–.40	.18	–.46	.21
Black women	[–.32]	.30	[–.38]	.30	[–.49]	.29	[–.48]	.30
Education (less than 12 years omitted:								
12 years	. . .	. . .	[–.37]	.22	[–.34]	.24	[–.07]	.22
13–15 years	. . .	. . .	[–.28]	.24	[–.28]	.26	[.10]	.28
16 or more years	. . .	. . .	–.67	.26	–.66	.26	[–.13]	.36
Age (25–34 years omitted):								
35–49 years	. . .	. . .	. . .	. . .	[–.24]	.17	[.06]	.17
50–59 years	. . .	. . .	. . .	. . .	[–.07]	.22	[.36]	.23
Region (Northeast omitted):								
North Central	. . .	. . .	. . .	. . .	–.56	.22	–.59	.22
South	. . .	. . .	. . .	. . .	[.04]	.17	[–.03]	.19
West	. . .	. . .	. . .	. . .	[–.06]	.26	[–.12]	.27
Size of city (500,000 or more omitted):								
100,000–499,999	. . .	. . .	. . .	. . .	[–.09]	.24	[–.11]	.27
50,000–99,999	. . .	. . .	. . .	. . .	[–.12]	.34	[–.21]	.34
25,000–49,999	. . .	. . .	. . .	. . .	[–.01]	.25	[–.11]	.26
10,000–24,999	. . .	. . .	. . .	. . .	[.20]	.26	[.09]	.26
Less than 10,000	. . .	. . .	. . .	. . .	[–.30]	.26	[–.50]	.26
Occupation (craft and kindred workers omitted):								
Professional, technical, and kindred workers	. . .	. . .	. . .	. . .	. . .	. . .	[.00]	.32
Managers and administrators	. . .	. . .	. . .	. . .	. . .	. . .	[.18]	.28
Sales workers	. . .	. . .	. . .	. . .	. . .	. . .	[–.12]	.40
Clerical and kindred workers	. . .	. . .	. . .	. . .	. . .	. . .	[.17]	.30
Operatives, except transport	. . .	. . .	. . .	. . .	. . .	. . .	.66	.29
Transport equipment operatives	. . .	. . .	. . .	. . .	. . .	. . .	[.34]	.34
Laborers	. . .	. . .	. . .	. . .	. . .	. . .	[.29]	.39
Service workers	. . .	. . .	. . .	. . .	. . .	. . .	[–.08]	.33
Industry (wholesale and retail trade omitted):								
Agriculture, forestry, fishing, and mining	. . .	. . .	. . .	. . .	. . .	. . .	[.03]	.43
Construction	. . .	. . .	. . .	. . .	. . .	. . .	[.41]	.26
Manufacturing	. . .	. . .	. . .	. . .	. . .	. . .	[–.22]	.24
Transportation and communications	. . .	. . .	. . .	. . .	. . .	. . .	[–.09]	.32
Finance, insurance, and real estate	. . .	. . .	. . .	. . .	. . .	. . .	[–.27]	.32
Business, personal, and entertainment services	. . .	. . .	. . .	. . .	. . .	. . .	[.12]	.29
Professional and related services	. . .	. . .	. . .	. . .	. . .	. . .	[–.41]	.27
Public administration	. . .	. . .	. . .	. . .	. . .	. . .	–2.74	.61
Tenure (less than 5 years omitted):								
5–10 years	. . .	. . .	. . .	. . .	. . .	. . .	[–.27]	.17
10 or more years	. . .	. . .	. . .	. . .	. . .	. . .	–.88	.21
Hourly wages, 1992 dollars (less than $7.50 omitted):								
$7.50–$14.99	. . .	. . .	. . .	. . .	. . .	. . .	–.51	.17
$15.00 or more	. . .	. . .	. . .	. . .	. . .	. . .	–.56	.23
Job covered by a union contract—	. . .	. . .	. . .	. . .	. . .	. . .	[–.28]	.21
1991	. . .	. . .	. . .	. . .	. . .	. . .	[–.17]	.16
Intercept	–3.28	.11	–2.88	.20	–2.56	.30	–2.02	.41

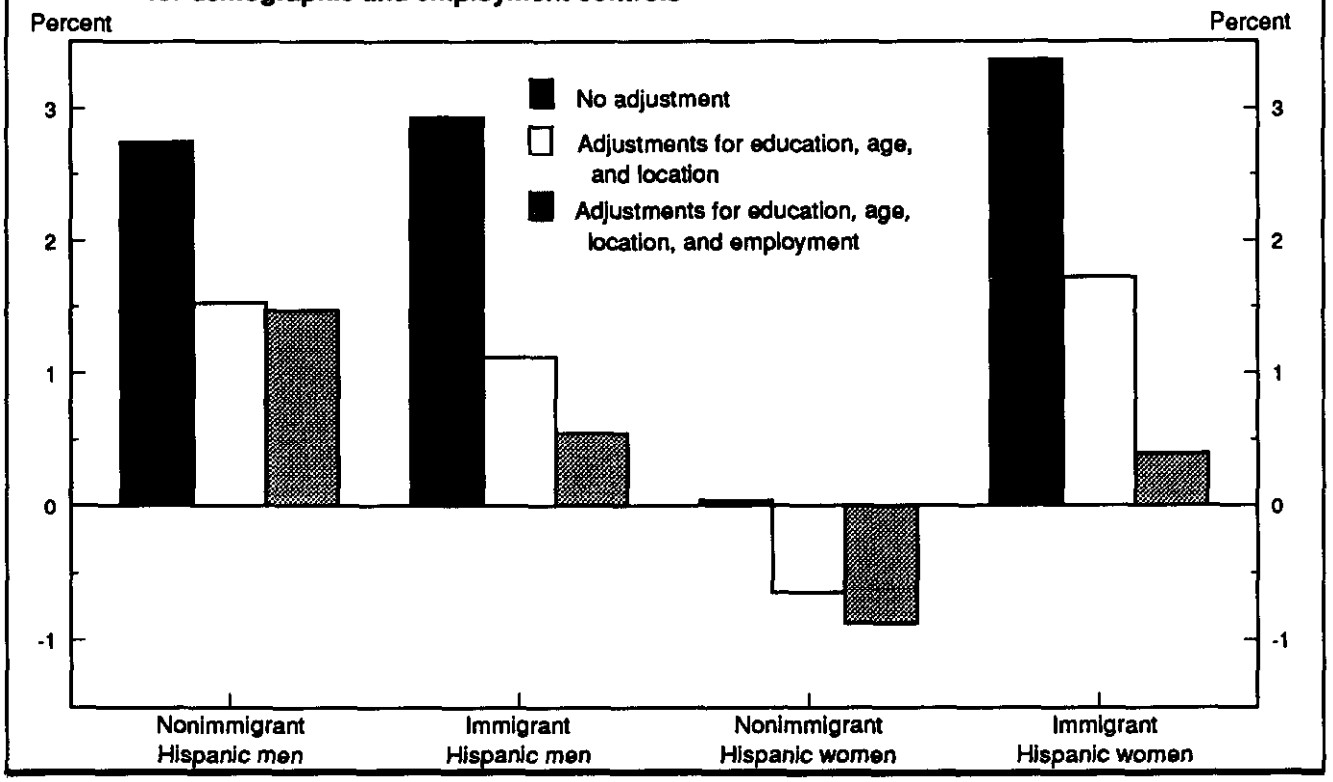
Note: Brackets indicate that entries enclosed are not significant at $p < .05$.

Table 3. **Various demographic and employment measures, by ethnic group, 1990–92**

[Percent, except for unweighted *N*]

Category	Hispanic men		Hispanic women		Non-Hispanic white men	Black men	Non-Hispanic white women	Black women
	Non-immigrant	Immigrant	Non-immigrant	Immigrant				
Age:								
25–34 years	40	36	31	35	33	35	30	36
35–49 years	46	52	54	51	52	48	52	49
50–59 years	13	12	15	14	15	18	18	16
Education:								
Less than 12 years	37	54	29	46	9	18	7	11
12 years	31	26	46	33	34	47	41	46
13–15 years	24	13	19	17	23	23	23	28
16 or more years	8	7	5	5	34	12	28	14
Region:								
Northeast	16	7	8	5	25	16	25	16
North Central	13	9	11	9	30	16	29	17
South	26	26	29	31	28	60	29	61
West	45	58	51	55	17	8	17	7
City size:								
500,000 or more	25	39	17	30	15	28	13	31
100,000–499,999	38	39	56	48	25	31	26	29
50,000–99,999	5	1	4	3	13	8	12	10
25,000–49,999	21	12	14	12	14	6	15	5
10,000–24,999	3	1	5	2	16	15	18	14
Less than 10,000	9	7	3	5	17	13	16	11
Occupation:								
Professional, technical, and kindred workers	11	6	9	7	23	9	28	19
Managers and administrators	6	3	14	7	21	11	14	5
Sales workers	5	2	6	3	6	2	4	1
Clerical and kindred workers	11	6	30	24	5	7	32	31
Craft and kindred workers	17	23	7	5	23	19	3	2
Operatives, except transport	20	22	12	24	8	16	6	15
Transport equipment operatives	8	7	5	3	6	11	1	1
Laborers	11	17	0	7	4	12	1	1
Service workers	11	14	18	19	5	12	12	25
Industry:								
Agriculture, fishing, forestry, and mining	5	10	5	6	3	3	1	0
Construction	6	7	0	0	8	6	1	0
Manufacturing	31	34	17	26	30	32	15	20
Transportation and communications	16	10	6	5	12	11	5	6
Wholesale and retail trade	15	18	23	16	15	12	14	10
Finance, insurance, and real estate	5	2	6	4	5	1	10	7
Business, personal, and entertainment services	5	8	5	14	6	10	6	9
Professional and related services	7	6	21	19	13	11	41	37
Public administration	11	5	17	9	10	14	7	11
Tenure:								
Less than 5 years	34	36	36	45	34	31	43	35
5–10 years	31	30	30	31	23	18	24	22
10 or more years	35	34	34	25	43	51	33	43
Annual wages (1992 dollars):								
Less than $15,000	12	24	36	55	6	16	27	34
$15,000–$29,999	50	51	46	38	29	45	44	53
$30,000 or more	38	24	18	7	66	39	29	13
Hourly wages (1992 dollars):								
Less than $7.50	15	28	34	55	8	20	23	31
$7.50–$14.99	48	50	46	38	36	47	47	50
$15.00 or more	37	22	20	7	56	34	30	19
Union:								
Job covered by a union contract	36	31	30	28	24	31	17	26
Job not covered by a union contract	64	69	70	72	76	69	83	74
Unweighted *N*	249	792	205	567	3,043	1,263	2,334	1,364

Chart 1. Differences in annual job displacement probabilities among various ethnic and gender groups relative to non-Hispanic white men, 1990-92, with and without adjustments for demographic and employment controls



from the interview conducted after the loss and determine whether the worker reported working at a job at that point.

The sample provides us with some 391 individuals who reported an involuntary job loss either during 1990–91 or during 1991–92. In all, a little more than half of these persons were reemployed, one-third were unemployed, and a smaller fraction (less than one-twelfth) had dropped out of the labor force altogether as of the interview following the loss. (See table 4.)

The small size of the subsample precludes a breakdown of the data into anything other than very crude demographic categories. Hispanic workers were somewhat less likely than either white or black workers to be reemployed, although a regression analysis (the results of which are not shown) indicated that the difference does not pass a conventional test of statistical significance. Women were considerably less likely than men to be reemployed and more likely to react to the loss by dropping out of the labor force. An examination of the other demographic and job characteristics shows few striking differences.

IN SUM, Hispanic workers—particularly immigrants—suffered more involuntary job losses in the recent recession than did non-Hispanic workers. Demographic differences such as lower schooling levels account for most of the differences. The occupations and industries in which immigrants work place them in an especially vulnerable position.

Footnotes

ACKNOWLEDGMENT: We are grateful to Peter Cattan, who provided many helpful comments on an earlier draft of this article.

[1] See Jennifer M. Gardner, "Recession swells count of displaced workers," *Monthly Labor Review*, June 1993, pp. 14–23. The Worker Displacement Survey is a supplement to the Current Population Survey that is conducted biennially by the Employment and Training Administration.

[2] Jesus M. Garcia, "The Hispanic Population of the United States: March 1992," *Current Population Reports*, Series P20–465RV (Bureau of the Census, 1993), table 1, p. 12.

[3] The Latino National Political Survey, a study of political affiliation and participation, was funded by the Ford, Rockefeller, Spencer, and Tinker Foundations. Rodolfo de la Garza, of the University of Texas, was principal investigator; co-principal investigators were Angelo Falcon, presi-

dent of the Institute for Puerto Rican Policy, F. Chris Garcia, of the University of New Mexico, and John Garcia, of the University of Arizona.

[4] The overall response rate to the Latino National Political Survey was 73.9%, with response rates across subgroups as follows: Mexican, 75.3 percent; Cuban, 73.7 percent; and Puerto Rican, 70.5 percent.

[5] Full-year work at 20 hours or more per week or half-year work at 40 hours per week will produce work years in excess of 1,000 hours. We used this cutoff to exclude workers who were not strongly attached to their jobs prior to being laid off.

[6] The inclusion of "fired" in the second coding category is unfortunate; however, an examination of questionnaires revealed that the requirements for participation in the sample (more than 1 year of job tenure, age 25 years or older) produced very few instances in which the workers reported being fired.

[7] Nancy Mathiowetz, "The Problems of Omissions and Telescoping Error: New Evidence from a Survey of Unemployment," Proceedings, Social Statistics Section, American Statistical Association, 1985, compared reports of unemployment in a telephone survey whose sample was a single company's work force with that same company's records. Overall, she found that only about one-third of the unemployment episodes appearing in the records were reported in the interview. She also found that the likelihood of an accurate report diminished sharply as the recall period lengthened: accurate reports of roughly half of the unemployment spells occurring 8 or fewer months prior to the interview were obtained in the interview, compared with only one-quarter of spells occurring more than 19 months prior to the interview.

[8] Note that the Worker Displacement Survey incorporates a 5-year recall period, while the Panel Study of Income Dynamics has an annual recall period. The displacement rates cited in the opening paragraph of this article were calculated over the entire 5-year period on samples of workers who reported 3 or more years of tenure in their jobs prior to the loss.

[9] A more complete accounting of job losses in the 1990–91 recession is given in William Goodman, Stephen Antczak, and Laura Freeman, "Women and jobs in recessions: 1969–92," *Monthly Labor Review*, July 1993, pp. 26–35.

[10] Throughout this article, Commonwealth-born Puerto Ricans are included in the "immigrant" category.

[11] Differences in job loss probabilities shown in chart 1 that adjust for education, age, and location are obtained by subtracting the probability of white men losing their jobs from the estimated probability associated with each Hispanic subgroup. These estimated probabilities are calculated using

$$P_i = P_w e^{\beta}/[(1-P_w) + P_w e^{\beta}],$$

where P_i is the estimated probability of an individual from a given Hispanic subgroup losing his or her job, P_w is the probability of a white man's losing his job, and β is the logistic regression coefficient obtained for the Hispanic subgroup, controlling for education, age, and location. (The coefficients β are shown in model 3, table 2.)

The same procedure has been followed to calculate the differences after introducing controls for the various employment variables and using the logistic regression coefficients presented in model 4, table 2.

The differences shown in chart 1 are reported in percentages.

Table 4. Employment status of displaced workers, 1 year after job displacement, 1990–92

Category	Percent		Out of labor force	Unweighted *N*
	Employed	Unemployed		
Total	55.8	37.0	7.2	391
Men	59.3	40.7	.0	234
Women	50.5	31.3	18.1	157
Hispanic	49.0	44.5	6.5	110
Black	55.0	41.7	3.3	102
White	57.1	35.1	7.8	179
Age:				
25–34 years	55.7	37.8	6.5	162
35 years or older	55.9	36.5	7.6	229
Education:				
Less than 12 years	57.0	39.1	3.9	93
12 years	51.1	39.1	9.8	149
13 or more years	58.8	35.3	5.9	140
Occupation:				
White collar	57.4	33.0	9.6	174
Blue collar	54.1	41.3	4.5	217
Industry:				
Manufacturing	46.3	46.7	7.0	107
Others	59.2	33.5	7.3	284
Tenure:				
Less than 5 years	55.6	35.5	8.9	225
5 or more years	56.1	38.8	5.1	166
Annual wages:				
Less than $15,000	50.2	36.2	13.6	132
$15,000–$29,999	54.9	41.1	4.0	165
$30,000 or more	61.5	33.9	4.6	94
Hourly wages:				
Less than $7.50	51.7	35.9	12.4	138
$7.50–$14.99	57.5	36.2	6.3	179
$15.00 or more	58.0	39.0	3.0	74