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**A Comparative Analysis of  
the Underlying Dimensions of  
Unemployment among Blacks,  
Hispanics, and Whites in Boston**

by

**Jeremiah Cotton, Ph.D.**

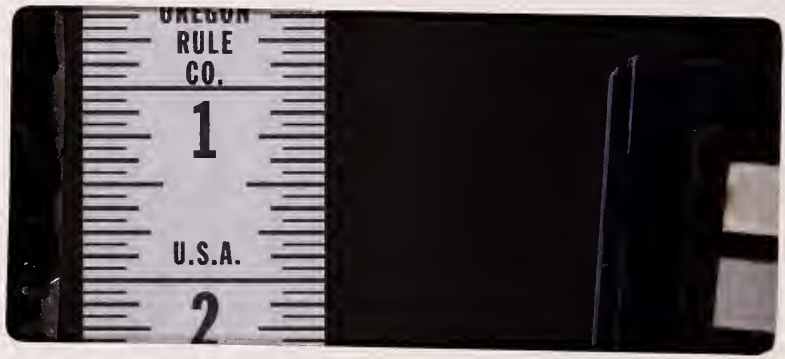
**RESEARCH REPORT**

**WILLIAM MONROE TROTTER INSTITUTE**

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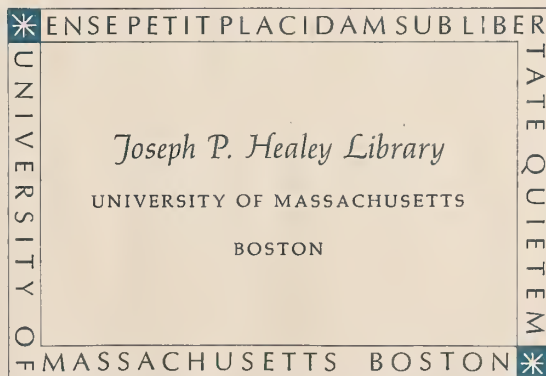


**Preliminary Report on  
A Comparative Analysis of  
the Underlying Dimensions of  
Unemployment among Blacks,  
Hispanics, and Whites in Boston**

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**Jeremiah Cotton, Ph.D.**

**William Monroe Trotter Institute**

**June, 1987**



**Jeremiah Cotton, the principal investigator for this report, is an assistant professor in the Department of Economics at the University of Massachusetts at Boston and a research associate of the William Monroe Trotter Institute.**

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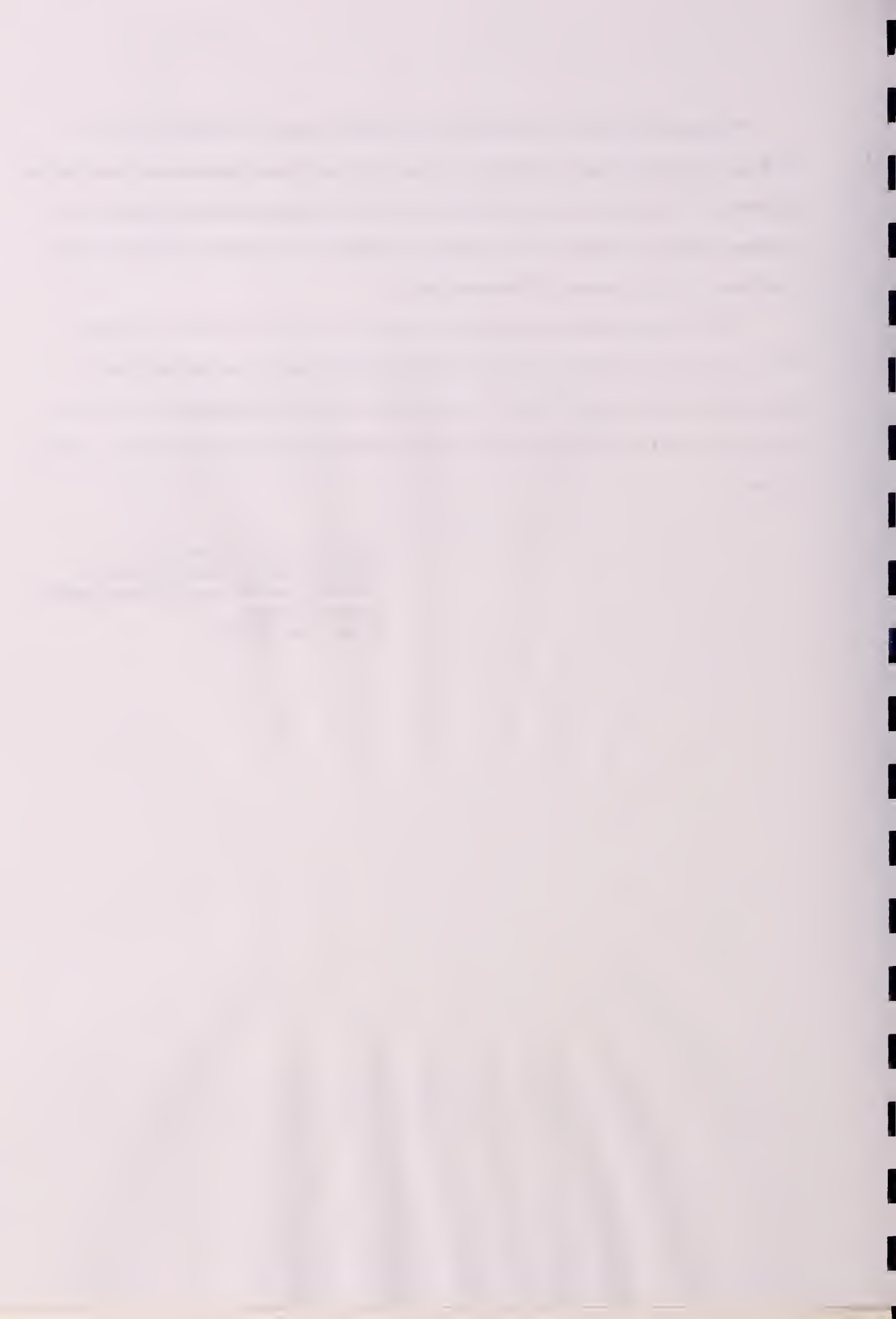
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## Purpose of the Research

There are four major objectives of this research. The first objective is to determine whether and to what extent differences in unemployment rates in Boston among black, Hispanic, and white workers are due to the following: (1) the differences in the percentage of individuals in each group who experience a spell of unemployment at one time or another during the year, that is the incidence of unemployment; or (2) the differences in the average number of spells of unemployment during the year, that is the frequency of unemployment; or (3) the differences in the average length of time a spell of unemployment lasts, that is the duration of unemployment.

The second objective is to ascertain whether a systematic relationship exists between duration and frequency of unemployment and the immediate causes for the occurrence of a spell of unemployment. Four such causes are recognized: (1) involuntary job loss; (2) voluntary job leaving or quitting; (3) new entry into the labor market; and (4) reentry into the market after a period of withdrawal.

The third objective is to determine what proportion of the differences in the incidence or probability of black, Hispanic, or white unemployment can be accounted for by differences in the labor market characteristics that are assumed to determine employability and what proportion cannot be so accounted for and may therefore be due to labor market discrimination.

The fourth objective is to assess the changes that occur in these dimensions of unemployment over time, particularly those that occur over the business cycle's periods of recession and recovery.

The major research on these topics is not yet completed inasmuch as a richer data base has recently become available and is in the process of being made ready for use. Nevertheless, some preliminary results are in hand and are reported herein. This is the first of several reports in this ongoing research. The results reported here

## Introduction

The purpose of this study is to investigate the effects of

the implementation of a new software system on the productivity and satisfaction of employees in a large organization.

The study is structured as follows:

In the first chapter, the background and motivation for the study are discussed.

The second chapter describes the research methodology, including the selection of participants and the data collection process.

The third chapter presents the results of the study.

The fourth chapter discusses the implications of the findings and provides recommendations for future research.

The fifth chapter concludes the study and summarizes the main findings.

The sixth chapter provides a detailed analysis of the data, including statistical tests and the interpretation of the results.

The seventh chapter discusses the limitations of the study and the potential for generalization of the findings.

The eighth chapter provides a summary of the study and a final conclusion.

The ninth chapter discusses the ethical considerations of the study.

The tenth chapter provides a detailed description of the data analysis process, including the use of statistical software.

The eleventh chapter discusses the practical implications of the study for the organization and for other organizations in the same industry.

The twelfth chapter provides a final summary of the study and a list of references.

The thirteenth chapter provides a detailed description of the data analysis process, including the use of statistical software.



are based primarily on data from the Current Population Survey files for 1980, 1982, and 1985, and on previously unpublished geographic survey data for the same period compiled by the Bureau of Labor Statistics. The data used is for the Boston Standard Metropolitan Statistical Area (SMSA) rather than for the city of Boston itself.

Whereas the population of the Boston SMSA is in excess of 2 million persons, the city of Boston is just over one-fourth that amount, around 600,000. Thus, the data reflects economic activity in the entire area of which Boston is the hub. When Boston is referred to hereinafter it is to be understood as the Boston SMSA.

### **Summary of Preliminary Results**

The most notable result thus far is the finding that both the Boston black adult and teenage unemployment rates and incidence rose by greater amounts at the beginning of the 1981-82 recession than those for Hispanics or whites. And this occurred among blacks in all occupations—white-collar, blue-collar, and service. Moreover, the results indicate that both white adults and teenagers benefited more from the economic recovery that followed the recession than did either blacks or Hispanics. Indeed, the white unemployment advantage over blacks and Hispanics increased between 1980 and 1985, the period during which the severe 1981-82 recession took place. Thus, it appears that black employment was hit hardest by the recession but benefited only modestly from the recovery.

### **Dimensions of Unemployment**

The results also indicate that in Boston over the 1980-1985 period the unemployment rate along with incidence, frequency, and duration of unemployment were greater absolutely among blacks than among whites, and greater among Hispanics than among blacks.



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Between 1980 and 1985, as the economy passed through the deep 1981-82 recession, each of the underlying components of the unemployment rate first rose and then declined for all three groups. However, with regard to the variation in incidence, blacks appeared to have fared somewhat worse than the other two groups. For although the increase in incidence during the period when the economy was on the downside between 1980 and 1982 was slightly greater for whites than for blacks, the decrease in incidence during the recovery from 1982 to 1985 was greater for both whites and Hispanics than for blacks.

Blacks also experienced a relatively greater increase in the number of spells of unemployment than whites or Hispanics between 1980 and 1982, and the relative decline in spells between 1982 and 1985 appeared to be greater for Hispanics than for blacks and greater than for whites.

The duration of a spell of unemployment also rose by a greater amount for blacks than for whites or Hispanics between 1980 and 1982. However, it fell for blacks by a greater amount between 1982 and 1985 than for either of the other two groups.

The black and Hispanic performance on these unemployment indicators appears to support the views of those who have suggested that the relatively high turnover rates for these two groups (frequency and incidence) stems from their being routed in disproportionate numbers into low-skill occupations and hence into the low-wage, high-turnover sector of the labor market. The career dissatisfactions associated with working in this sector result in a high number of voluntary and involuntary separations.

As for the unemployment rate itself, it increased at a faster rate for blacks than for whites or Hispanics as the recession began and decreased at a slower rate for blacks than for whites and at about the same rate as for Hispanics when the economy



was recovering. This would appear to be consistent with the well-known "first-fired, last-hired" hypothesis.

The Boston unemployment rates were uniformly lower than the national rates for all three groups over the 1980 to 1985 period. Moreover, while the black-white unemployment ratio in Boston was considerably lower than that nationally, the Hispanic-white was not as severe in Boston as it was at the national level. Hispanics appeared to fare worse in Boston than they did nationally.

### **Reasons for Unemployment Spells**

Among the immediate causes for the occurrence of a spell unemployment are: (1) losing one's job involuntarily, that is a job loser; (2) quitting one's job voluntarily, that is a job leaver; (3) recently returning to the labor force after having worked full-time and dropping out, that is a reentrant; (4) a first time job seeker, that is a new entrant. Generally the major proportion of the unemployed are job losers with reentrants, new entrants, and job leavers following behind in that order.

A greater percentage of the Hispanic than white unemployed and a greater percentage of white than black unemployed were job losers over the 1980 to 1985 period. Whether or not job loss is a serious problem depends to a great extent on how long the spell of unemployment lasts. Those for whom the duration of the spell is, say, less than five weeks have less of a problem than those who are to be unemployed for five weeks or more. And the longer the duration of the spell, the more serious one's problem becomes. The average number of weeks a spell of unemployment lasted was greater for blacks than for Hispanics and greater for Hispanics than whites. Thus, it would appear that job loss is a relatively more serious problem for blacks than for the other two groups for although blacks had lower job loss percentages than either Hispanics or whites, the proportion of blacks unemployed for 27 weeks or more,



along with the average duration of a spell, was greater for blacks than for the other two groups.

A greater percentage of the black than white and of the white than Hispanic unemployed were reentrants. This is no doubt due in part to the relatively large number of black discouraged workers that have been observed dropping in and out of the labor force in response to the conditions of the economy. Indeed, the decrease in the percentage of reentrants over the 1980 to 1982 period was greater for blacks than for whites and Hispanics.

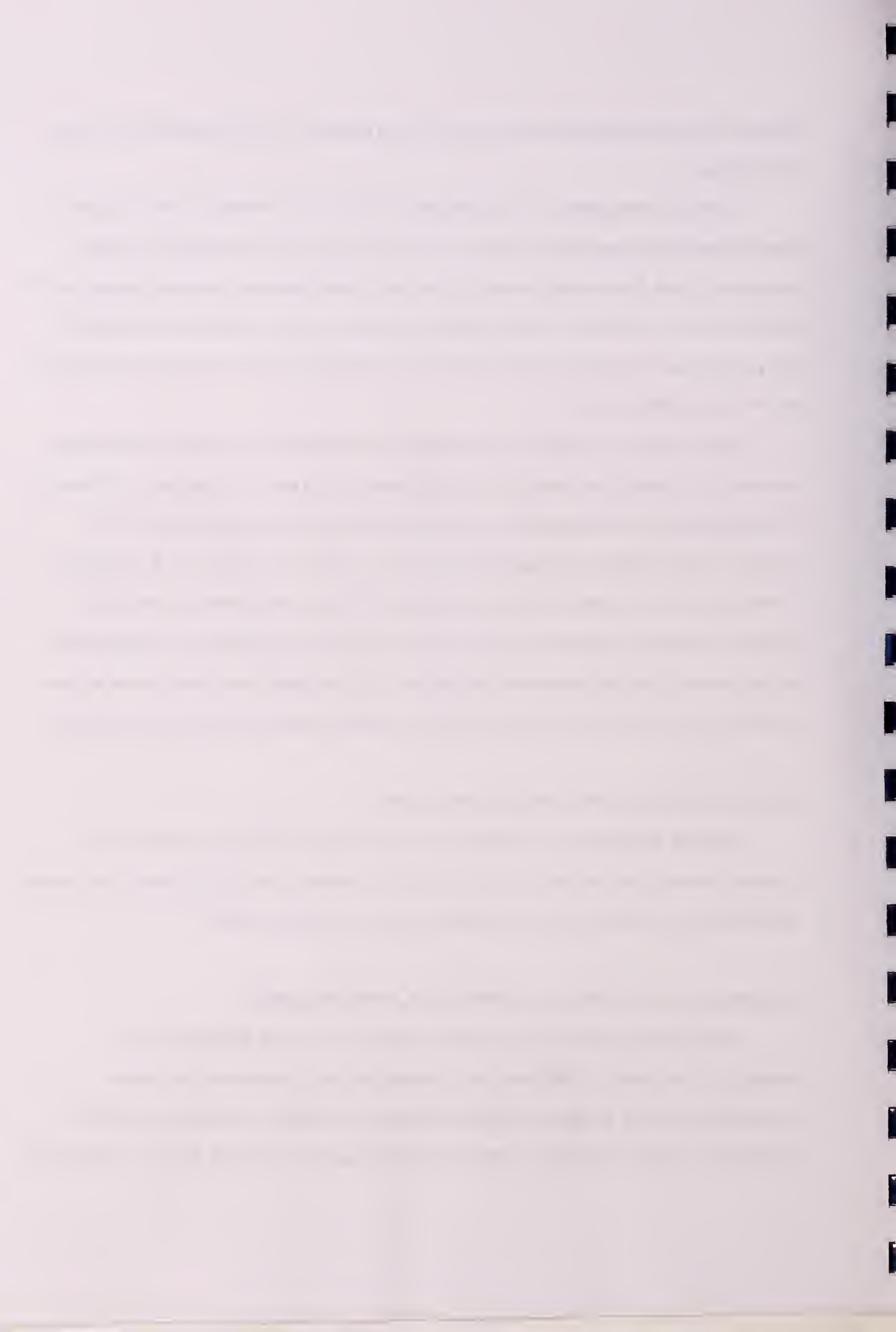
Some of the early results from attempts to model and estimate a relationship between the immediate causes of unemployment spells and the frequency or duration of such spells have yielded quite ambiguous results, and it must await the full research report before anything definitive can be said on this score. It does appear, however, that the unemployment rate among job losers and leavers is nearly the same for blacks and whites and that most of the black disadvantage is concentrated in the new entrant and reentrant categories. This suggests that blacks have a more difficult time returning to the job market and finding employment for the first time.

### **Estimates of Labor Market Discrimination**

Nothing useful can yet be said about this subject until the results from the regression analyses currently underway with the newly available data set mentioned previously are in hand. Thus, this must too await the final report.

### **Unemployment by Sex, Age, Education, and Occupation**

Unlike females nationally, Boston females of all three groups (with the exception of whites in 1980) had lower unemployment rates than their male counterparts. Both Hispanic males and females had higher unemployment rates than black males and females, who in turn had higher rates than whites. This is also





contrary to what is observed at the national level where black males and females have the highest rates.

Unemployment among black teenagers in Boston was greater than that among Hispanics, and the latter had higher rates than white teens. However, except for Hispanics in 1982 and 1985, the unemployment rate for Boston teenagers was considerably lower than the national rates. At the same time, the ratio of teen-to-adult unemployment was greater in Boston than it was at the national level.

As might be expected, those with the least education had the highest unemployment rates. Hispanics had higher unemployment rates at all levels of education than blacks or whites, and the black rates exceeded the white rates.

Unemployment in the blue-collar occupations was higher than that in either white-collar or service occupations for both blacks and whites (data on Hispanics was unavailable). Moreover, it appears that the white-collar/blue-collar and the service/blue-collar unemployment gaps are widening. This would be in consonance with recent studies that have found significant growth in the service sector and decline in the manufacturing sector in recent years. It is also in keeping with the white-collar bias of the Boston labor force.

### **The Conceptual Basis and Empirical Evidence of the Dimensions of Unemployment**

The unemployment rate is usually expressed as a single percentage or number, but it is actually made up of three separate dimensions. It is not just a matter of how many people are unemployed on any particular date, it is also a matter of how many people become unemployed at one time or another during the course of the year and of how long the average person stays unemployed. And even when the same number of people are determined to be unemployed by the monthly census surveys, they are not the same people. Some of those who were counted as unemployed in last month's



survey will have found jobs by the time this month's survey is undertaken; others will have become discouraged and dropped out of the labor force, and their places will have been taken by others who were laid off or quit their jobs or left school to find work or returned to the job market after having been out of the labor force for some time.

The percentage of different individuals who become unemployed at some time during a given period is termed the incidence of unemployment. As table 1 shows, the annual incidence of unemployment is generally about three or four times greater than the unemployment rate itself. In 1985, for example, while an average of 6.5% of the black Boston labor force was reported unemployed in the Current Population Survey, nearly 20% of the black labor force experienced unemployment at one time or another during the year.

Another important aspect of unemployment is its frequency or the number of spells of unemployment per unemployed person in a period. Long periods of unemployment are not always the result of a single uninterrupted spell. For many, unemployment is a constantly recurring problem. Many individuals suffer long duration of unemployment in the form of a succession of spells of alternating work and idleness. Nearly 60% of the workers in Boston who became unemployed in 1980 reported at least two spells of unemployment, and even in the relatively prosperous 1985 over 25% of those who became unemployed reported three or more spells of unemployment during the year.

The third crucial dimension of unemployment is its duration or the average number of weeks a given unemployment spell lasts. There is a substantial difference between the difficulties encountered by a worker who is laid off and called back to work after a week or two and those of a worker who remains out of work for six months or more.



## **Racial and Ethnic Differences in the Dimensions of Unemployment**

As the discussion above suggests, the differences in unemployment rates among racial and ethnic groups may be the result of a larger number of different members of one group than another having a spell of unemployment that lasts for only a short time, or different groups having a relatively few members who remain unemployed for long stretches. And because the underlying problems of the former problem differ from those of the latter, labor market policies designed to address the one problem will differ from those required for the other.

A number of analysts have argued that high turnover rates among blacks and Hispanics are due to their concentration in the secondary labor market where the jobs and occupations require little or no skills and pay low wages. Job satisfactions and, therefore, job attachments are low in this sector, and both employers and employees expect only a short-term relationship with workers, moving on in search of other opportunities, hopefully in the primary sector. The benefits from working in the secondary sector do not greatly exceed the costs of being unemployed, and many individuals shuttle frequently between working and not working.

High black and Hispanic turnover rates may also be observed in the primary or high-wage sector of the labor market because, whatever the sector, blacks and Hispanics typically experience high layoff rates during periodic business downturns—the “first-fired, last-hired” phenomenon. This too is due to the unfavorable occupational distribution of blacks and Hispanics. For even within relatively skilled occupational categories, blacks and Hispanics are concentrated at the lower ends of the categories in jobs that are more sensitive to changes in business activity. Labor market policies aimed at promoting occupational advancement and intersectoral mobility such as affirmative action, fair employment legislation, and job skill training should address this aspect of differential unemployment.



Differences among groups in the duration of unemployment spells tend to reflect differential returns to job search activity of members of a given group. Some groups, white males for example, are more successful than others at finding jobs. They have better access to information about job markets and more extensive and influential contacts and networks of employed relatives and friends who can bring them to the attention of a prospective employer. They also receive more favorable evaluation of their skills and potential productivity than other groups. Here policies aimed at improvements in employment and job placement services are recommended along with better labor market information both for job seekers and employers.

### **Unemployment Differentials in the Boston SMSA**

Since unemployment is strongly related to the business cycle, observations in this research were made during the selected years of 1980, 1982, and 1985, a period that spanned the severe 1981-1982 recession. As table 1 shows, Hispanics suffered the highest overall rates of unemployment for each year observed. They also had the highest unemployment incidence and frequency and thus the highest turnover rates. Blacks had the longest average duration of unemployment per spell and fared relatively worse than Hispanics and whites at the start of the recession. Between 1980 and 1982 the black unemployment rate rose by 3.5 percentage points from 8.6% to 12.1%, as compared to an increase of 2.4 points for Hispanics and 2.2 points for whites. The recovery between 1982 and 1985 was relatively more pronounced for Hispanics whose rates dropped by 6.4 points from 13.6% to 7.2% than for either blacks or whites. The black rate fell by 5.6 percentage points and the white rate by 4.1 points.

The unemployment ratios are comparative measures that give the black or Hispanic unemployment rate as a percentage of the white rate. The black/white ratio rose between 1980 and 1985, indicating that black unemployment relative to white





unemployment grew worse over the business cycle. Blacks appeared to be worse off after the 1981-82 recession than they were prior to it. The Hispanic/white ratio remained about the same over the period. It fell significantly (and surprisingly) between 1980 and 1982, but by 1985 was restored to the 1980 level.

By comparison with the Boston experience, at the national level the black and Hispanic positions were reversed with respect to the unemployment rate. As table 2 shows, the black unemployment rates exceeded those of Hispanics in each year under consideration. However, just as did the Boston black rates, the national black rates also rose more sharply at the start of the business cycle than did the Hispanic or white rates. It should be noted that the national unemployment rates of all three groups were higher than the Boston rates.

There was more variability in the incidence and duration of unemployment than in frequency for all three groups. Thus, most of the variation in the turnover rate was due to changes in incidence. For all three groups frequency rose but slightly as the recession began and except for Hispanics fell more or less back to prerecession levels. Both incidence and duration rose moderately for all groups at the outset of the downturn and then fell somewhat sharply to lower levels than existed in the pre-recession period.

Although the incidence of unemployment was higher for Hispanics than for blacks or whites in each year studied, the black incidence rose by a greater amount at the start of the recession than either the Hispanic or white rates and declined by a smaller amount between 1982 and 1985 than did the rates of the other two groups.

It is clear that most of the unemployment disadvantage suffered by Hispanics is due to their high turnover rates or flows into unemployment. They have both higher incidence and more frequent spells than the other two groups. In 1980 a Hispanic worker stood a 64% chance of being unemployed, by 1982 this chance had risen to 71%, and it was still high, at 47%, in the relatively good year of 1985.



On the other hand, duration of unemployment was a more serious problem for blacks than for Hispanics or whites. As table 3 shows, in good times and bad, blacks had substantially longer lasting periods of unemployment than either Hispanics or whites—this was true for Boston and the nation. For example, whereas in 1980 in Boston nearly 46% of the white and 43% of the Hispanic unemployed were unemployed for less than 5 weeks, only 40% of the black unemployed were in that category. In the same year 14% of the black unemployed were unemployed for 27 or more weeks, compared to 13% of the Hispanic and 10% of the white unemployed in that category. Blacks also had higher percentages among those unemployed five to 14 weeks and 15 or more weeks.

In sum, on all of the unemployment indicators whites not only do better than blacks and Hispanics but also appear to have increased their prerecession advantage in the postrecession period. Whites appear to have benefited much more in both the Boston and national recovery than did blacks or Hispanics.

### **Racial and Ethnic Differences in the Reasons for Unemployment**

There are four immediate causes for the occurrence of a spell of unemployment: (1) job loss, (2) job leaving, (3) new entry into the labor market, and (4) reentering the labor market. Job losers are persons who lost their jobs involuntary or are on layoff. They account for the majority of the unemployed. Job losers in the primary labor market sector are most often adult, prime-age males with strong attachments to the labor market. Thus, their numbers are quite sensitive to the business cycle, rising during recession and falling during recovery. Job loss in the secondary labor market is mainly among the young, minorities, and women; and the separations that occur there are as much due to the unstable nature of employment in that sector as to the business cycle. One would expect, therefore, that primary sector job losers will most

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likely remain unemployed for longer periods of time than job losers in the secondary sector since the turnover rate in the latter exceeds that of the former.

Younger workers and females are most likely to be unemployed because of being first time job seekers or reentrants to the labor market after a period of withdrawal. Reentrants are the second largest group of the unemployed, and their numbers are also sensitive to business conditions. Unlike job losers, however, reentry falls with recession and rises with recovery. Groups with particularly high rates of discouraged workers (those who have dropped out of the labor force and are no longer looking for work because they do not believe they can or will find any) can be expected to have many reentrants among their unemployed since such workers are more apt to drop out during recession and drift back in during recovery.

It is not as easy predicting the behavior of new entrants during recession as it is during recovery. Their ranks might decrease in the downturn because of lack of job opportunities, or their ranks might increase if many of them are attempting to replace a job loser in the family by dropping out of school and seeking work. In such distress one might expect them to take whatever work that is available at whatever wage and thus to have short spells of unemployment. An upswing in business activity will naturally attract new entrants; one would expect their numbers to rise during recovery.

Generally, job leavers, those who quit or terminate their employment voluntarily, are the smallest of the categories. And as might be expected their numbers decline during the fall off in business activity and increase during the recovery. They make up a fairly significant portion of what is called the frictionally unemployed, that is workers who are between jobs (usually leaving a lower-paying job) or who are seasonal workers.

As table 4 indicates, a greater proportion of the Hispanic unemployed were job losers and new entrants than either blacks or whites both in Boston and nationally.



Blacks, on the other hand, had a greater proportion of reentrants than the other two groups, while whites had a greater proportion of job leavers. And in each case the Boston figures were mirrored at the national level.

The high rate of Hispanic job loss is in keeping with their high turnover rates pictured in table 1. Since Hispanics are disproportionately clustered in the secondary labor market most of their job loss can be assumed to derive from that sector. In table 4 note that the increase in Hispanic job loss between 1980 and 1982, the recession period, was smaller than either the black or white increase. This would seem to be consistent with the notion of relative cyclical insensitivity of secondary market job loss rates.

Both in Boston and nationally blacks had a lower proportion of job losers among their unemployed than either Hispanics or whites. I do not have a ready explanation for this finding. The fact that blacks, like Hispanics, have high turnover rates and are heavily represented in the secondary labor market and are also concentrated in jobs in the primary sector that are most prone to layoff when recession begins would lead one to expect job loss to be somewhat more significant a contributor to black unemployment. Despite their relatively low job-loss rates, blacks can be assumed to suffer relatively more from job loss than the other groups since their spells of unemployment are generally of longer lasting duration. Job loss is not nearly as serious a problem for someone who is unemployed for a short period of time as it is for someone whose spell is of long duration.

Blacks had a substantially greater proportion of reentrants among their unemployed than did either Hispanics or whites. The high black reentrant rate may stem from the large number of discouraged workers in their ranks. (Note that both in Boston and nationally the number of black reentrants fell off at a greater rate than the numbers of white or Hispanic reentrants during the 1980 to 1982 recession period.)

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While nationally blacks had the greatest proportion of new entrants, in Boston Hispanics had the greatest proportion. This might well coincide with the relatively higher Hispanic school dropout rates in Boston and be an indirect consequence of the high job-loss rates among Hispanic adults.

Whites had the greatest proportion of job leavers and blacks the lowest. In the former case it no doubt reflects the greater job mobility and discretion whites enjoy, and in the latter case the fewer job options open to blacks. These results, however, fly in the face of the popular, derogatory image of blacks as frequent job quitters seeking voluntary idleness.

Table 5 further confirms the relationship between the unemployment rate and the immediate reasons for unemployment. When the unemployment rates are decomposed by reason of unemployment a greater proportion of the rates are due to job loss than to any other cause, with reentrants a distant second.

### **Unemployment by Sex**

A comparison of tables 2 and 6 shows that women in Boston, unlike those at the national level, had generally lower unemployment rates than men. This is no doubt due to the fact that the Boston economy is less blue-collar and thus less male-oriented than the national economy. The Boston economy is more service, professional, and technically oriented, and this somewhat favors female employment. Another difference between the Boston and national labor markets is that black males and females nationally have higher unemployment rates than Hispanics whereas in Boston their situations are reversed. This too might reflect the nature of the Boston economy with its emphasis on occupations that require some facility with the English language. This would tend to route Hispanics into jobs where such skills are not necessarily essential. Such jobs are overwhelmingly located in the high unemployment, secondary labor market sector.



As the recession got underway black male unemployment in Boston and nationally increased significantly more than Hispanic or white male unemployment. The Boston black male rate jumped nearly five percentage points, from 9.2% to 14.1% between 1980 and 1982, while the Hispanic male rate increased by 2.9 points and the white male rate by 3.4 (see table 6). On the other hand, black females experienced only a modest 1.7 percentage point increase in their unemployment rate over the period as compared to a three point, Hispanic female increase and a lower, 1.3 point increase for white females.

In Boston the black/white male and female and Hispanic/white female unemployment ratios all increased over the 1980-1985 period (see table 6). Only the Hispanic/white male ratio decreased. In 1980, for example, the black male unemployment rate was 84% higher than the white male rate. By 1985 the black male rate was 106% higher. By the same token, in 1980 the Hispanic male rate was 152% higher than the white male rate, and by 1985 this had fallen to 100%.

### Unemployment by Age

Teenage unemployment for blacks and whites in Boston was lower than it was at the national level (see table 7). In 1980 and 1982 the rates of Boston's Hispanic teens were higher than the national rates. As tables 7 and 8 show, the national rates for black teenagers was 48% higher than the Boston rates in 1980 and 80% higher in 1985. By comparison, the national rates for Hispanic teens was 7% lower than the Boston rates in 1980 and just 12% higher by 1985. For white teens in 1980 the national rate was 7% higher than the Boston rates but by 1985 they had shot up to 65% higher.

Just as it was for black and Hispanic adults, the black/white and Hispanic/white teen unemployment ratios in Boston and nationally increased over



Table 5

Unemployment Rates by Reason of Unemployment, for Blacks and Whites:  
The Boston SMSA, 1980, 1982, and 1985

Category	Blacks			Whites		
	1980	1982	1985	1980	1982	1985
Job Losers	3.6	5.1	2.1	2.3	4.0	1.5
Job Leavers	0.7	0.9	0.7	0.8	0.9	0.5
Reentrants	2.7	2.9	1.7	1.5	1.8	1.0
New Entrants	1.6	1.6	1.0	0.7	0.8	0.4
Total Unemployment Rate	8.6	10.5	5.5	5.3	7.5	3.4

Source: Calculated from data given in United States Department of Labor, Bureau of Labor Statistics, unpublished geographic statistics for 1980, 1982, and 1985.



Table 6

Unemployment Rates by Sex:  
The Boston SMSA, 1980, 1982, and 1985

Category	1980	1982	1985
<u>Both Sexes</u>			
Blacks	8.6	12.1	6.5
Hispanics	11.2	13.6	7.2
Whites	5.3	7.5	3.4
Black/white Unemployment Ratios	1.60	1.61	1.91
Hispanic/White Unemployment Ratios	2.11	1.81	2.12
<u>Males</u>			
Blacks	9.2	14.1	7.4
Hispanics	12.6	15.5	7.2
Whites	5.0	8.4	3.6
Black/White Male Unemployment Ratios	1.84	1.67	2.06
Hispanic/White Male Unemployment Ratios	2.52	1.85	2.00
<u>Females</u>			
Blacks	7.8	9.5	5.5
Hispanics	9.7	12.7	6.9
Whites	5.7	7.0	3.1
Black/White Female Unemployment Ratios	1.37	1.36	1.77
Hispanic/White Female Unemployment Ratios	1.70	1.81	2.23

Source: United States Department of Labor, Bureau of Labor Statistics, unpublished geographic statistics for 1980, 1982, and 1985; Current Population Survey Summary Tapes Nos. 1A, 3, and 16 from the annual demographic files; and the United States Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1980, 1982, and 1985. Bulletins No. 619, 2111, 2255.





Table 7

Unemployment Rates by Age:  
The Boston SMSA, 1980, 1982, and 1985

Category	1980	1982	1985
<u>Blacks</u>			
16 years and over	8.6	12.1	6.5
16 to 19 years	26.1	35.5	22.3
20 years and over	7.2	10.3	5.3
Black/White Teen Unemployment Ratios	1.66	1.52	2.35
<u>Hispanics</u>			
16 years and over	11.2	13.6	7.2
16 to 19 years	24.3	31.4	21.7
20 years and over	9.7	12.1	6.0
Hispanic/White Teen Unemployment Ratios	1.55	1.35	2.28
<u>Whites</u>			
16 years and over	5.3	7.5	3.4
16 to 19 years	15.7	23.3	9.5
20 years and over	4.5	6.6	3.0

Source: United States Department of Labor, Bureau of Labor Statistics, unpublished geographic statistics for 1980, 1982, and 1985; Current Population Survey Summary Tapes Nos. 1A, 3, and 16 from the annual demographic files; and the United States Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1980, 1982, and 1985. Bulletins No. 619, 2111, 2255.



Table 8

Teenage Unemployment Rates by Race and Hispanic Origin:  
United States, 1980, 1982, and 1985

Race/Origin	1980	1982	1985
Blacks	38.5	48.0	40.2
Hispanics	22.5	29.9	24.3
Whites	16.8	24.7	15.7
Black/White Unemployment Ratios	2.29	1.94	2.56
Hispanic/White Unemployment Ratios	1.34	1.21	1.55

Source: United States Department of Labor, Employment and Earnings, Annual Averages, January 1981, 1984, and 1987.



Table 9

Unemployment Rates by Educational Attainment, for Blacks, Hispanics, and Whites:  
The Boston SMSA, 1980 and 1985

Education	1980			1985		
	Black	Hispanic	White	Black	Hispanic	White
Less than 12 years	15.2	19.8	10.7	11.5	12.7	6.9
High school graduate	9.3	11.1	5.6	7.1	7.7	4.6
1 to 3 years college	7.2	8.3	3.8	5.4	6.3	2.4
College graduate	4.3	5.5	1.7	3.6	4.8	1.2

Sources: United States Department of Labor, Bureau of Labor, unpublished geographic statistics for 1980 and 1985; and Current Population Survey Summary Tapes Nos. 1A, 3, and 16 from the annual demographic files.



Table 10

Educational Attainment by Race, Sex, and Hispanic Origin:  
Massachusetts, 1980

Persons 25 Years and Over

Race/Origin	% less than 5 years	% high school graduate	% 4 or more years college	Median years of school completed
Blacks	3.5	61.0	8.6	12.3
Hispanics	17.7	36.3	7.3	9.6
Whites	5.0	61.6	14.3	12.3

Persons 18 to 24 Years

Race/Origin	Both sexes		Males		Females	
	% high school grad.	% 4 yrs or more college	% high school grad.	% 4 or yrs or more college	% high school grad.	% 4 yrs or more college
Blacks	69.5	5.9	65.4	5.9	73.0	5.9
Hispanics	48.8	3.7	50.3	2.7	47.7	4.5
Whites	80.8	10.4	79.7	10.3	81.9	10.5

Source: United States Bureau of Census, General Social and Economic Characteristics of Massachusetts, 1980  
Census of Population.





Table 11

Unemployment by Broad Occupational Categories, by Race:  
The Boston SMSA, 1980, 1982, and 1985

Race	White-Collar		Blue-Collar		Service		
	1980	1982	1982	1985	1980	1982	1985
Blacks	5.5	7.6	13.3	18.8	10.3	14.5	6.9
Whites	2.8	4.0	8.2	11.6	6.4	9.0	4.1
Category	1980		1982		1985		
Black							
Blue-Collar/White-Collar							
Unemployment Ratios	2.42		2.47		4.24		
Blue-Collar/Service							
Unemployment Ratio	1.29		1.30		2.09		
Whites							
Blue-Collar/White-Collar							
Unemployment Ratios	2.93		2.90		5.00		
Blue-Collar/Service							
Unemployment Ratios	1.28		1.29		2.19		

Source: United States Department of Labor, Bureau of Labor Statistics, unpublished geographic statistics for 1980, 1982, and 1985; and Current Population Survey Summary Tapes Nos. 1A, 3, and 16 from the Annual Demographic Files.



the 1980-1985 period. Thus, it would appear that white teens benefited much more from the recovery than did blacks or Hispanics.

And repeating the pattern of their older counterparts, unemployment for black teens in Boston rose by nearly 9.5 percentage points at the outset of the recession between 1980 and 1982, while the Hispanic rates rose by about seven points and the white rate by about 7.5 points. The same sort of thing happened nationally as well, i.e., black teens experienced a greater increase in their unemployment rates at the start of the recession than did the other two groups.

### **Unemployment by Educational Attainment**

Education is assumed to be a major determinant of employment and therefore of unemployment. The more education an individual has the more skilled or potentially skillful she or he is assumed to be—and thus the more employable. We expect, therefore, to see educational attainment positively associated with employment and negatively associated with unemployment; that is to say, the higher one's educational attainment (usually measured in years of school completed), the higher the probability she or he will be employed and the lower the probability he or she will be unemployed.

The data in table 9 supports this expected relationship between educational attainment and unemployment (data for 1982 was not available). For all three groups, those with less education had higher unemployment rates than those with more education.

At each level of education in both 1980 and 1985 Hispanics had higher unemployment rates than blacks and blacks had higher rates than whites. Indeed, in both years white high school graduates had unemployment rates less than or nearly equal to Hispanic college graduates. And in 1985 the unemployment rates for whites with less than 12 years of schooling was lower than those for black and Hispanic high



school graduates and only slightly higher than those of Hispanic college graduates. Similarly, in both years the white rate for one to three years of college was lower than those of black and Hispanic college graduates.

If education were the one and only determinant of employment and if all three groups benefited from the same quality of schooling in terms of classroom size, teacher/pupil ratio, per pupil expenditure, and teacher preparation among other things, then these unemployment differences at the same level of educational attainment would serve as *prima facie* evidence of labor market discrimination. This is precisely the tack that will be taken in the subsequent research when attempts will be made to “measure” the extent of labor market discrimination that contributes to racial and ethnic unemployment such as education, training, and work experience.

The data in table 10 is only for Massachusetts, but it can be seen there that the educational attainment of blacks and whites, 25 years and older, are nearly equal. In fact, the median years of school completed is the same for both groups. Yet black unemployment is considerably greater than white unemployment. This must either mean that education is not a very good predictor of employment or that there are forces at work that overpower the education effect. The task of subsequent research is to identify those forces.

### **Unemployment by Occupation**

Unemployment rates among Boston blue-collar occupations (such as craft workers, machine operators, and transportation workers) was two to five times greater than those for white-collar occupations (such as managers, executives, professionals, sales workers, administrative support, and technicians). Indeed, the blue-collar rates were from one-third as great to twice as great as those for service occupations (see table 11). Moreover the blue-collar/white-collar and blue-collar/service unemployment ratios increased dramatically between 1980 and 1985,



This seems to reflect the general decline in employment in the blue-collar occupations in the Boston economy (and nationally). This outcome is in keeping with the much discussed study by Barry Bluestone and Bennett Harrison (1986) in which they chart the growth of employment in the service sector of the economy and the decline in the manufacturing or blue-collar sector.

Black unemployment in all occupations was greater than white unemployment, and the rise in unemployment in all occupations over the 1980-1982 period of recession was greater than white unemployment in the same occupations.

## Conclusion

The preliminary results of this research indicate the following conclusions about unemployment among blacks, Hispanics, and whites in Boston during the 1980-1985 period:

- Hispanics had the highest rates of unemployment along with the highest turnover rates or probabilities of experiencing unemployment.
- Blacks were probably hit hardest by unemployment both because of the longer duration of their unemployment spells and because their unemployment rates and incidence increased at a faster rate during the recession.
- Hispanics had the highest proportion of job losers and new entrants among their unemployed, while blacks had the highest proportion of reentrants and whites the highest proportion of job leavers.
- Whites of all ages recovered from the recession at a faster rate than did blacks or Hispanics, and their employment advantage postrecession exceeded their prerecession advantage.
- Unlike the national trend, male unemployment in Boston generally exceeded female unemployment for all three groups, and nearly all of the accelerated





increase in black unemployment during the recession was caused by black males.

- Black teenagers had higher unemployment rates than either Hispanic or white teens, and like their adult counterparts black teenagers suffered a greater increase in unemployment at the outset of the recession than the other two groups.
- Education was only an imperfect determinant of unemployment by race and ethnic origin. Although unemployment was greater (lesser) among the least (most) educated as might be expected, the average educational differences between blacks and whites were much smaller than their unemployment differences.
- Unemployment among the blue-collar occupations in Boston increased over the 1980-1985 period while at the same time it decreased among the white-collar and service occupations. This appears to be in line with the decline in blue-collar occupations and jobs that is a national as well as regional phenomenon.

Each of these findings have implications for a wider set of research questions and tasks. Some of them will be undertaken in future research and others will be immediately addressed in this ongoing research made possible by the grant from the William Monroe Trotter Institute. A more detailed report of all the research findings, as well as some considerations of the methodological procedures, will be presented in the next installment of this research report.



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Table 1

Dimensions of Unemployment, by Race and Hispanic Origin:  
The Boston SMSA, 1980, 1982, and 1985

Dimension	Black		Hispanics		White				
	1980	1982	1985	1980	1982	1985			
Unemployment rate	8.6	12.1	6.5	11.2	13.6	7.2	5.3	7.5	3.4
Incidence (%)	24.4	27.5	19.6	26.7	29.3	20.5	21.0	23.9	14.8
Frequency (Spells/person)	1.9	1.96	1.91	2.40	2.41	2.29	1.64	1.68	1.63
Duration (Weeks/spell)	9.6	11.6	9.1	9.1	10.0	8.0	8.0	9.7	7.3
Turnover rate (%) (Incidence x frequency)	46.4	53.9	37.4	64.1	70.6	46.9	34.4	40.2	24.1
Black/White and Hispanic/White Unemployment Ratios	1.6	1.61	1.91	2.11	1.81	2.12	--	--	--

Sources: Calculated from data given in United States Department of Labor, Bureau of Labor Statistics, unpublished geographic statistics for 1980, 1982, and 1985; Current Population Survey Summary Tapes Nos. 1A, 3, and 16 from the Annual Demographic Files; United States Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1980, 1982, and 1985, Bulletins Nos. 619, 2171, 2255.



Table 2

Unemployment Rates, by Race, Hispanic Origin, and Sex:  
United States, 1980, 1982, and 1985

Category	1980	1982	1985
<u>Both Sexes</u>			
Blacks	13.3	18.9	15.1
Hispanics	9.4	13.8	10.5
Whites	6.3	8.6	6.2
Black/White Unemployment Ratios	2.11	2.20	2.44
Hispanic/white Unemployment Ratios	1.50	1.60	1.70
<u>Males</u>			
Black	13.2	20.1	15.3
Hispanic	8.7	13.6	10.2
White	6.1	8.8	6.1
Black/White Unemployment Ratios	2.16	2.28	2.51
Hispanic/White Unemployment Ratios	1.43	1.55	1.67
<u>Females</u>			
Black	13.5	17.6	14.9
Hispanic	10.1	14.1	11.0
White	6.5	8.3	6.4
Black/White Unemployment Ratios	2.08	2.12	2.33
Hispanic/White Unemployment Ratios	1.55	1.70	1.72

Source: United States Department of Labor, Employment and Earnings, Annual Averages, January 1981, 1984, 1987.





Table 3

Duration of Unemployment, by Race and Hispanic Origin:  
The Boston SMSA and the United States, 1980, 1982 and 1985  
(Percentages)

## Boston SMSA

	Less than 5 weeks		5 to 14 weeks		15 or more weeks		27 or more weeks					
	1980	1982	1985	1980	1982	1985	1980	1982	1985			
Blacks	39.5	30.9	42.2	30.7	31.6	27.4	29.8	37.5	30.4	14.4	19.2	15.5
Hispanics	43.0	33.2	47.2	31.8	32.9	28.8	25.1	33.9	24.0	12.8	16.8	13.0
Whites	45.7	39.1	49.2	31.0	30.5	28.6	23.3	30.4	22.1	10.4	14.3	11.1

## United States

	Less than 5 weeks		5 to 14 weeks		15 or more weeks		27 or more weeks					
	1980	1982	1985	1980	1982	1985	1980	1982	1985			
Blacks	38.6	35.2	38.3	29.7	28.9	30.1	31.1	35.9	31.6	17.5	19.9	18.4
Hispanics	46.0	39.5	44.3	31.9	33.1	31.2	22.1	27.5	24.5	9.5	13.2	12.1
Whites	42.6	36.7	43.2	31.0	31.6	30.2	26.4	31.7	26.6	13.0	15.7	14.5

Source: United States Department of Labor, *Employment and Earnings, Annual Averages, January 1981, 1984, 1987*; and United States Department of Labor, Bureau of Labor Statistics, *Geographic Profiles of Employment and Unemployment, 1980, 1982 and 1985, Bulletins Nos. 619, 2111, 2255*.



Table 4

Reasons for Unemployment, by Race and Hispanic Origin:  
The Boston SMSA and the United States, 1980, 1982, and 1985  
(Percentages)

## Boston SMSA

Race/Origin	Job Losers		Job Leavers		Reentrants		New Entrants					
	1980	1982	1985	1980	1982	1985	1980	1982	1985			
Blacks	48.5	56.3	48.1	9.3	6.1	8.7	30.5	22.7	31.2	11.7	14.9	12.0
Hispanics	55.7	59.0	53.2	12.0	6.8	8.9	21.2	15.5	21.1	11.1	18.7	16.7
Whites	50.7	58.8	49.6	14.2	10.8	14.2	24.6	18.8	25.9	10.0	11.6	10.3

## United States

Race/Origin	Job Losers		Job Leavers		Reentrants		New Entrants					
	1980	1982	1985	1980	1982	1985	1980	1982	1985			
Blacks	48.3	54.1	47.8	8.5	5.8	5.9	27.8	24.6	29.3	15.4	15.5	17.0
Hispanics	56.7	62.3	55.0	10.3	8.0	9.9	20.9	18.7	21.7	12.2	11.0	13.4
Whites	52.6	60.1	50.8	12.0	8.5	11.7	24.7	21.7	26.4	10.8	9.8	11.0

Source: United States Department of Labor, Employment and Earnings, Annual Averages, January 1981, 1984, 1987; and United States Department of Labor, Bureau of Labor Statistics, Geographic Profiles of Employment and Unemployment, 1980, 1982, and 1985, Bulletins Nos. 619, 2111, 2255.



## Relationship between Unemployment and Its Dimensions

Daniel Suits and Richard Morgenstern (1967) have long ago shown that incidence, frequency, and duration are mathematically related to the unemployment rate. During a year in which the monthly unemployment surveys report an average of one million people unemployed, the total number of people experiencing unemployment at one time or another during the year would also be one million only if each person stayed unemployed for the entire 52 weeks. On the other hand, if the average spell of unemployment lasted only one week it would take 52 million spells spread over the year to make the surveys show an average of one million unemployed. Mathematically, the incidence of unemployment,  $N$ , the average number of spells per person,  $S$ , and the average number of weeks per spell,  $D$ , are related to the unemployment rate,  $U$ , such that:

$$(1) \quad U = \frac{N \times S \times D}{52}$$

Thus, in table 1, during, say, 1980 when 24.4% of the Boston black labor force experienced at least one bout of unemployment and when the average number of spells of unemployment was 1.9 and the average duration of a spell was 9.6 weeks, the black unemployment rate was:

$$U = \frac{(24.4) \times (1.9) \times (9.6)}{52} = 8.56$$

Nancy Barrett and Richard Morgenstern (1974) have defined the product of incidence and frequency as the turnover rate, or the flow rate of individuals into unemployment. It is, therefore, the probability that an individual will experience unemployment in a given period:

$$(2) \quad \text{Turnover rate} = N \times S$$

Thus, as indicated in table 1, a black Boston worker had a 46% probability of being unemployed in 1980, a 54% probability in the recession year of 1982, and a much lower probability (37%) of being unemployed in the relatively prosperous 1985.



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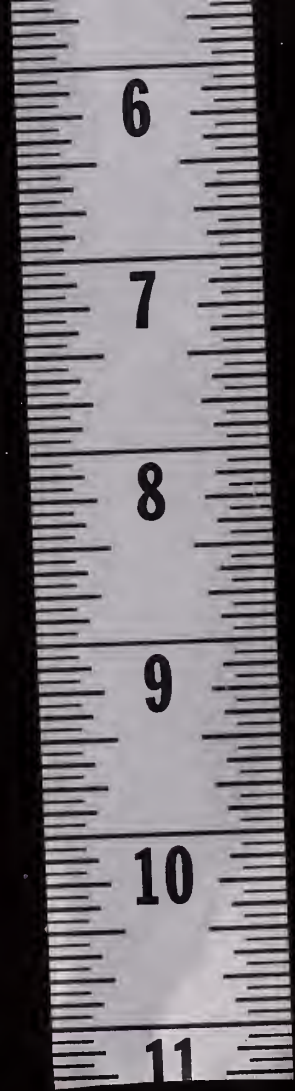


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