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Left Out of the Boom Economy: UI Recipients in the Late 1990s

Final Report

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Walter Corson
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EXECUTIVE SUMMARY

Since 1935, the unemployment insurance (UI) system has provided limited income support for workers who lose their jobs through no fault of their own. This support, which often replaces 40 to 50 percent of lost weekly earnings, continues until the unemployed worker either becomes reemployed or reaches his or her limit and "exhausts" benefits. In 1998, the year of this study, two states provided benefits for a maximum of 30 weeks, and the rest did so for 26 weeks. Nine states provided 26 weeks to all recipients, while the potential durations of benefits in the remaining states varied depending on the pre-UI earnings of the recipients. In 1998, 7.3 million people began receiving UI, and approximately 2.3 million, or 32 percent, exhausted their benefits.

This study examines the characteristics, labor market experiences, UI program experiences, and reemployment service receipt of UI recipients who began collecting UI benefits in 1998. One objective is to gauge the extent to which recent changes in the U.S. labor market may have affected the composition of UI recipients who exhaust benefits and to examine their postexhaustion labor market behavior. Another objective is to examine recipients' experiences with the delivery of reemployment services and determine whether changes in the workforce development system have affected these experiences.

The study uses individual-level survey data on a nationally representative sample of UI recipients to examine the characteristics of recipients and their labor market and program experiences and aggregate state-level data to examine trends in UI exhaustion rates over time. The findings from this 1998 survey sample are compared to those from an earlier survey of UI recipients who began collecting benefits in 1988. The economy was strong in both years, with low unemployment rates (the unemployment rate in 1998 was 4.5 percent, as compared to 5.5 percent in 1988).

STUDY DESIGN AND IMPLEMENTATION

The UI exhaustee study design for the survey called for the selection of nationally representative samples of UI exhaustees and nonexhaustees and the collection of UI program data and telephone survey data from these samples. Sample selection was a two-step process: 25 states were selected in the first step, and exhaustees and nonexhaustees were selected in the second step. The exhaustees and nonexhaustees were people who established a benefit year in 1998 and received at least one payment. Interviews were attempted with subsamples of the exhaustees and nonexhaustees. The interviews were conducted in English and Spanish during an approximately seven-month period from mid-July 2000 to mid-February 2001. Interviews were completed with 3,907 UI recipients: 1,864 exhaustees and 2,043 nonexhaustees.

Interviewing occurred in two stages. In the initial 16-week fielding period, we used mail, telephone, and database locating methods to attempt to find and complete telephone interviews with members of this sample. People interviewed in the initial stage are nationally representative of UI exhaustees and nonexhaustees who can be contacted and interviewed by telephone within 16 weeks. In a second, more intensive stage in a random subset of 10 states, we continued our

attempts to interview sample members. We continued our mail, telephone, and database locating activities and added field staff to find sample members who had not responded to our initial interview attempts. We asked people we located to call our telephone center to complete interviews. Those interviewed through this extended fielding period are nationally representative of UI exhaustees and nonexhaustees who require intensive locating efforts. Hence, the final sample of completed interviews has two components: (1) an initial fielding component obtained from 25 states, and (2) an intensive fielding component obtained from 10 states. The overall survey completion rate was 63 percent (65 percent for nonexhaustees and 61 percent for exhaustees), which is similar to the rate for the earlier study of recipients in 1988.

POTENTIAL CAUSES OF THE HIGH 1990s UI EXHAUSTION RATE

This study examines the characteristics of UI recipients and the relationship between these characteristics and UI exhaustion rates in the 1990s. Prior research has found that, during the booming economy of the late 1990s, the unemployed exhibited longer unemployment spells and worse reemployment outcomes than has historically been the case during strong economic times. UI recipients, about one-third of the unemployed, also experienced longer UI spells and higher benefit exhaustion rates than historical experience would predict. For example, a simple model of the exhaustion rate that statistically controls for the unemployment rate accurately predicts the 1988 exhaustion rate to be 28 percent. However, it predicts a 1998 exhaustion rate of 25 percent, approximately 7 percentage points lower than what was actually observed. We focused on changes over time, using both recipient-level and aggregate data, to explore potential reasons for the recent high exhaustion rates. We find that:

- ***Changes between 1988 and 1998 in recipient characteristics are a strong factor in the increase in exhaustion rates.*** Key changes leading to an increase in the aggregate exhaustion rate were the aging of the recipient population, the increase in the percentage who are Hispanic, and the decreases in the proportions who were from manufacturing and who had definite recall dates. If the recipient population, labor market backgrounds, and UI program parameters were unchanged between 1988 and 1998, we estimate that exhaustion rates would be about four to five percentage points lower in 1998 than was the case.

- ***These changes in the UI recipient population mirror broader changes in the labor market.*** Well-documented trends, such as the aging of the baby boom generation, the decline in manufacturing employment, and the increase in service sector industries are influencing the composition of the labor force, resulting naturally in changes in who becomes a UI recipient.

- ***Although most changes in UI system parameters such as wage-replacement rates or average potential durations were modest, a decline in the average UI potential duration explains part of the high exhaustion rates.*** Although the effects of several UI system parameters were usually statistically insignificant in the aggregate data analysis, analysis of recipient-level data suggests that a decline in potential duration explains some of the higher exhaustion rates between 1988 and 1998.

- ***The unemployment rate and the duration of unemployment significantly affect exhaustion rates.*** Each percentage point increase in the unemployment rate was estimated to add two to three percentage points to the exhaustion rate if other factors are held constant. Increasing unemployment durations during the 1990s, which explain about half of the atypically high exhaustion rates during the period, are likely to be symptomatic of other underlying changes affecting UI and labor market outcomes.

UI EXHAUSTEES' CHARACTERISTICS

UI exhaustees represent a particularly important group of workers for policymakers. As a group, they have strong work histories and have demonstrated attachment to the labor market in the past. However, their long UI spells suggest that they face particular difficulty finding new jobs. Documenting who they are can help policymakers who administer the UI program and reemployment services serve them better. Despite changes over time in recipient characteristics, relationships between these characteristics and whether a UI recipient exhausts his or her benefits have not changed much. In examining who UI exhaustees are, we find:

- ***Exhaustees are more likely than nonexhaustees to belong to some demographic groups.*** Females and racial/ethnic minorities are disproportionately likely to exhaust benefits compared to other groups.

- ***Prior to their UI claims, exhaustees are slightly more likely than nonexhaustees to have had lower-paying, part-time jobs that did not provide fringe benefits.*** They are also more likely to have been in nonstandard work arrangements (such as temporary work or self-employment) and less likely to have been in a union or in the manufacturing sector.

- ***Compared to nonexhaustees, exhaustees were less likely to have been laid off and were less likely to have expected to return to their former employers.*** Exhaustees were more likely to have quit, been discharged, or lost their job for some other reason. Predictably, therefore, they were less likely to have expected recall and less likely to have been recalled.

- ***Because of exhaustees' lower pre-UI earnings, they typically had lower weekly benefit amounts and potential durations than nonexhaustees.*** Not surprisingly, having a shorter potential duration increases the likelihood that a recipient will exhaust his or her benefits.

LABOR MARKET EXPERIENCES

The economic consequences of job loss for UI recipients depend both on the length of time they are unemployed and the quality of the jobs they eventually obtain. Although unemployed workers in recent years are more likely to be long-term unemployed, compared to what has been the case historically, some recipients become reemployed very quickly because they are recalled to their pre-UI jobs at the same earnings rate as before. Understanding the labor market

experiences of UI recipients, particularly of exhaustees, can therefore help to assess the long-term consequences resulting from job loss. We find, generally, that labor market outcomes for 1998 recipients were worse than those for 1988 recipients.

- ***Compared to 1988 recipients, 1998 recipients took longer to find a job and were less likely to become reemployed.*** For example, a little over one-quarter (28 percent) of UI recipients in 1998 were reemployed in 10 or fewer weeks, compared to 40 percent in 1988. At one year after job loss, reemployment rates were 65 percent for 1998 recipients, compared to 81 percent in 1988. Ultimately, twice as many 1998 recipients as 1988 recipients remained without any post-UI job during the entire follow-up period (21 percent versus 10 percent, respectively).

- ***Overall, work search rates were slightly lower in the late 1990s than in the late 1980s, although recipients who searched reported doing so intensively.*** In both 1988 and 1998, exhaustees were more likely than nonexhaustees to have looked for work, and they were more likely to look for work when they were collecting UI benefits than after they exhausted them. However, about 7 percent of recipients in 1998 appeared not to have searched for work shortly after they started collecting UI benefits because of reasons that imply they were out of the labor force. This contrasts with about four percent for 1988 recipients.

- ***In both 1998 and 1988 many recipients' post-UI jobs paid less than their pre-UI jobs.*** When 1998 exhaustees became reemployed, they averaged a 16 percent reduction in their earnings at their first post-UI job, which was comparable to the earnings losses for exhaustees 10 years earlier. Nonexhaustees in 1998 experienced an average seven percent reduction in earnings, compared to a one percent reduction in 1988. However, this difference for nonexhaustees was attributable to recipients at the tails of the distribution. Overall the distribution of earnings changes was similar in the two years. In addition, 1998 recipients were more likely to report having a job with an alternative employment arrangement (such as being a temporary worker, independent contractor, or leased employee) after their UI spells than was the case prior to the UI claim. This is especially true for exhaustees.

REEMPLOYMENT SERVICES, TRAINING, EDUCATION, AND INCOME SUPPORT

UI recipients who are not on temporary layoff may benefit from reemployment services designed to help them find a job. These services could include referrals to job openings, training in job search techniques, help with resumes, provision of information about jobs in demand, occupational aptitude and interest testing, and other similar assistance. Reemployment services may help recipients find jobs more quickly and may lead to better job matches, and recipients with poor labor market prospects might have strong incentives to use these services. Occupational training or further education may help some recipients with weak or outmoded job skills improve their skills, allowing them to find better jobs than they otherwise would. Despite the poor labor market outcomes of some recipients and recent innovations to improve reemployment service delivery, we find:

- ***Recipients in 1998 were less likely than in 1988 to use reemployment services.*** Forty-one percent in 1998, as compared to 54 percent in 1988, contacted the Job Service or a one-stop career center shortly after beginning their UI claim.

- ***Some recipients who contacted the Job Service or one-stop reported not receiving any services, and the prevalence of nonreceipt has increased over time.*** This was true for 37 percent of recipients who contacted the Job Service or a one-stop in 1998, compared to 28 percent in 1988. Recipients who did not receive specific services probably registered with the Job Service and attended an orientation session on available services but did not use them. Recipients in 1998 who received additional services received 2.1 on average, with a job referral being the most common. A substantial portion of services in 1998 were provided through self-access resource centers.

- ***Based on the survey data, about 35 percent of recipients said that they received a notice requiring them to report to the Job Service or a one-stop.*** Most of these call-in notices were probably generated by the Worker Profiling and Reemployment Service (WPRS) systems that states implemented in the mid-1990s to direct services toward likely exhaustees. Information on the characteristics of these recipients suggests that, to some degree, states are successfully targeting services to likely exhaustees.

- ***About three-quarters of the recipients who received these call-in notices said they went for services.*** This group received more services than other recipients who went to the Job Service or a one-stop.

- ***Most recipients who participated in training or education entered programs designed to improve their occupational skills.*** The rate of participation in training or education programs was somewhat higher in 1998 than in 1988 (14 versus 11 percent). By the time of the interview, most people in these programs had completed their training or education or were still participating. Most of them considered this training or education helpful in obtaining a job and useful on the jobs they held.

- ***UI recipients' families experienced large declines in weekly income during their unemployment spells relative to their pre-unemployment situations.*** UI benefits provided an important source of income during this time, as did the earnings of spouses or partners. However, this latter source of income was only available to about 40 percent of the UI recipients' families. The remaining families relied almost solely on UI benefits for income support. Relatively few UI recipients or their families received income from retirement benefits, welfare, or other transfer programs.

INTERPRETATION AND IMPLICATIONS FOR POLICY

The labor market of the late 1990s was one of the strongest of the postwar era, yet the labor market outcomes reported in this study for UI recipients, and especially for exhaustees, are surprisingly poor. UI recipients in 1998 were both less likely to have a job two years after their initial job separations and took longer to become reemployed when they did so than were UI

recipients in 1988. As in earlier periods, exhaustees' experiences in 1998 were worse than those of other UI recipients—more than one-fourth of exhaustees never had a job in the post-UI period, and of those who did find employment, 30 percent had earnings at least 25 percent lower than they had before becoming unemployed. Clearly, many recipients were left behind in the "high-pressure" labor market of the late 1990s.

Despite the fact that UI recipients in 1998 were having difficulty finding jobs, they were less likely than recipients in 1988 to seek reemployment services from the Job Service or a one-stop career center. This reduction in use of reemployment services occurred both at the start of UI collection and following benefit exhaustion.

- ***Why were UI recipients' labor market outcomes so poor?*** There are two plausible interpretations of the general finding that UI recipients fared poorly in the late 1990s: (1) the strength of the overall labor market permitted most workers to avoid collecting UI, which caused the pool of 1998 UI recipients to include a disproportionate number of workers with significant labor market problems; or (2) factors in the overall labor market changed such that UI recipients faced new difficulties that were not as prevalent in the past. Although we cannot unambiguously distinguish between these two possibilities, evidence from this study that shows that nonexhaustees as well as exhaustees experienced relatively poor labor market outcomes. Other research shows that unemployment durations are increasing and that dislocation is affecting a broader spectrum of workers. These findings lead us to conclude that important changes in labor markets have occurred that, in part, explain our results. UI policymakers will need to monitor such changes and study their programmatic implications.

- ***Why did the use of reemployment services decline?*** We investigated a number of potential explanations for this finding and conclude that a combination of factors probably contributed to this outcome. The implementation of WPRS systems, which were intended to direct services to likely exhaustees, may have concentrated services on a smaller group of recipients than in the past. A reduction in the capacity of the Job Service to provide services and recipients' reactions to a strong labor market may also have played a role, but in each case the evidence is mixed. The introduction in some states of remote UI initial claims processing might have also had an effect, since recipients no longer need to go to local offices to file claims, but the decline in service use occurred more widely than the introduction of remote claims. It is unlikely that changes in the composition of recipients affected service use, since changes that would decrease service use were offset by changes that would increase service use.

- ***How might labor market outcomes be improved?*** In the past, the UI system has used a combination of job search requirements and reemployment services to promote rapid reemployment of recipients. Strengthening job search requirements and/or increasing the resources available for reemployment services would promote this objective. Improving the targeting of the current level of resources might also be appropriate. Simulations of alternative targeting mechanisms suggest that:

- ***Services are currently targeting expected exhaustees.*** Simulations showed that services were indeed targeting UI recipients who were likely exhaustees and that these recipients were experiencing serious labor market difficulties.
- ***Services are currently targeting dislocated workers.*** Simulations suggested that dislocated workers were much more likely to obtain various reemployment services than were other UI recipients. Labor market outcomes for dislocated workers were also significantly worse than for other workers.
- ***Low-skill recipients may have unmet needs for services.*** Simulations showed that low-skill UI recipients were no more likely than other UI recipients to obtain reemployment services. However, their labor market outcomes were significantly worse than those of other recipients, suggesting that this group is underserved.

I. INTRODUCTION

Since 1935, the unemployment insurance (UI) system has provided limited income support for workers who lose their jobs through no fault of their own. This support, which replaces a fraction of lost weekly wages, continues until the unemployed worker either becomes reemployed or reaches his or her limit and "exhausts" benefits. In 1998, the year of this study, two states provided benefits for a maximum of 30 weeks, and the rest did so for 26 weeks. Nine states provided 26 weeks to all recipients, while the potential durations of benefits in the remaining states varied depending on the pre-UI earnings of the recipients. In 1998, 7.3 million people began receiving UI, and approximately 2.3 million, or 32 percent, exhausted their benefits.

This study examines the characteristics, labor market experiences, and UI and reemployment service receipt of UI recipients who began collecting UI benefits in 1998. The objective is to gauge the extent to which recent changes in the U.S. labor market have affected the composition of UI recipients who exhaust benefits and to examine their postexhaustion labor market behavior. A further objective is to examine recipients' experiences with the delivery of reemployment services and determine whether changes in the workforce development system have affected these experiences.

The study uses aggregate state-level data to examine trends in UI exhaustion rates over time and individual-level survey data on a nationally representative sample of 3,907 UI recipients (1,864 exhaustees and 2,043 nonexhaustees) to examine the characteristics of recipients and their labor market and program experiences. The findings from this 1998 survey sample are compared to those from an earlier survey of UI recipients who began collecting benefits in 1988.

The economy was strong in both years, with low unemployment rates (the total unemployment rate in 1998 was 4.5 percent, as compared to 5.5 percent in 1988).

The rest of this chapter discusses the study questions in more detail (Section A), recent labor market experience (including trends in the UI exhaustion rate) as background for the study (Section B), the design of the study (Section C), and the layout of the report (Section D).

A. STUDY QUESTIONS

The study (1) identifies the factors that explain why recipients exhaust their UI benefit entitlements; (2) examines the labor market experiences of exhaustees and nonexhaustees; (3) assesses the extent of recipients' participation in education and training and of their receipt of reemployment services; (4) determines how patterns in recipient characteristics, labor market experiences, and participation in reemployment services have changed over time, especially over the past decade; and (5) considers the implications of the findings for UI benefit and reemployment services policies.

1. What factors explain why recipients exhaust their UI benefit entitlements?

As noted earlier, the primary purpose of the UI system is to provide income support to workers who have lost their jobs through no fault of their own. This support could be made available until the unemployed worker finds suitable reemployment. However, because the availability of income support may create a disincentive to search for and accept reemployment, state UI programs limit the duration of UI benefit receipt, and, as a result, some recipients exhaust benefits before finding new jobs. Over time, between one-quarter and one-third of recipients who receive a UI first payment exhaust their benefits nationally, so it is important to examine the factors associated with benefit exhaustion, specifically in relation to recipients who

do not exhaust benefits. We address three questions that help identify the factors associated with exhaustion:

1. What demographic characteristics are associated with benefit exhaustion?
2. What labor market factors, including economic conditions and pre-UI job characteristics, are associated with benefit exhaustion?
3. What UI program characteristics are associated with benefit exhaustion?

2. What are the labor market experiences of exhaustees and nonexhaustees?

Historical concerns about reemployment disincentive effects inherent in the UI system, as well as more recent concerns about structural economic changes that may make it harder for recipients to find jobs, underlie the importance of examining the speed with which UI recipients, and specifically exhaustees, find reemployment. Therefore, understanding the duration of unemployment, particularly the time to reemployment after exhaustion, is critical to any study of exhaustees. In addition, concerns about the disappearance of "lifelong jobs" and increases in alternative employment relationships (such as contract work and leased work), as well as traditional concerns about reemployment outcomes of UI recipients, suggest a need to examine the post-UI labor market experiences of former recipients. Therefore, the study addresses five questions pertaining to the unemployment experiences and employment outcomes of recipients:

1. How long does it take UI recipients to find new jobs? How long does it take exhaustees to find jobs after they exhaust benefits?
2. What are the methods and what is the intensity of recipients' job search?
3. What are UI recipients' patterns of employment and unemployment? What proportion withdraw from the labor force?
4. What are the characteristics of post-UI jobs? How do they compare to pre-UI jobs on measures such as earnings, hours, job stability, occupation and industry, and relationship with the employer?

5. What factors explain unemployment duration?

3. What reemployment services and education and training did exhaustees and nonexhaustees receive?

UI recipients can undertake a variety of measures to develop skills useful for obtaining employment, such as improving their job search strategies and participating in education and training. The Worker Profiling and Reemployment Services (WPRS) system is designed to assist UI recipients who are expected to have difficulty becoming reemployed and hence become exhaustees. Recipients who are identified as likely exhaustees are sent notices to report to the Job Service or a one-stop service provider for reemployment services. Recipients who fail to report may be denied benefits until they comply with the call-in notice. An analysis of involvement in the WPRS system is particularly timely, because states implemented this program in the mid-1990s. Other changes in the reemployment service delivery system, such as the movement toward one-stop service centers and the use of self-accessed services, may also have affected recipients' use of services. In addition, the introduction of telephone initial claims-taking in some states may also have affected reemployment service receipt, since recipients in those states do not need to visit local offices to file a claim. As a result, these recipients may not be exposed to reemployment services unless they are called in for consultation. We address four questions that pertain to recipients' reemployment efforts and services, including involvement in the WPRS system:

1. What proportion of exhaustees and nonexhaustees receive reemployment services? What proportion are required to participate in services as a result of being referred to services through the WPRS system?

2. Which recipients receive reemployment services? Do the characteristics of recipients who were required to participate differ from those who were not required to participate?

3. What reemployment services did recipients receive? Did the services differ for those required to participate as compared to those not required to participate?

4. To what extent do exhaustees and nonexhaustees participate in education and training during and after their UI benefit periods?

In addition, we conduct a brief examination of other UI and post-UI experiences of exhaustees, such as how much they use public assistance programs and what happens to their family income levels, to assess the extent that the UI program alleviates financial hardship associated with unemployment.

4. How have patterns in recipient characteristics, labor market experiences, and participation in reemployment services changed over time?

Although previous research studies of exhaustees and nonexhaustees have provided insights into the issues discussed above, no study has been conducted during the changed labor market circumstances of the late 1990s. This fact is especially important because of several labor market and UI program trends that occurred in the 1990s. Long-term structural changes in the economy associated with technical change, shifts in employment among industries, and the impacts of international trade suggest that there may have been changes in the pool of long-term unemployed people. In addition, the recent implementation of WPRS systems and the movement toward one-stop career centers has changed the reemployment service environment. Because of these and other changes, previous findings about the exhaustee population may be out of date. This study compares exhaustees' characteristics and experiences with those found in the last nationally representative study on exhaustees, conducted by Corson and Dynarski (1990). It asks:

1. What are the important changes over time in the composition of exhaustees and nonexhaustees, their UI program and labor market experiences, and their involvement in reemployment services?

2. Do these changes mirror overall changes in the labor market?

5. What are the policy implications of the results?

We examine the policy implications of our findings, focusing on the implications for reemployment services and benefit adequacy. We consider whether reemployment services are being delivered to recipients who are likely to need services. For this analysis, we first use alternative definitions based on pre-UI characteristics of recipients to identify groups of recipients who might need services (dislocated workers, recipients likely to exhaust, low-skill/low-wage workers). We then examine whether these groups had poor reemployment outcomes (long unemployment spells, UI benefit exhaustion, low post-UI wages relative to pre-UI wages) in comparison to other recipients, which would suggest a need for services. Finally, we examine whether services were in fact delivered to these groups.

We also use our results and our data to explore benefit-adequacy questions that relate to the duration of UI benefits. We examine the targeting implications of triggering extended benefits to specific groups of recipients. We determine which sample members would have been eligible for extended benefits and examine the degree to which those sample members had greater difficulty than other sample members becoming reemployed.

B. RECENT LABOR MARKET EXPERIENCE

The recent performance of the U.S. labor market has been extraordinary. Monthly unemployment rates fell below 5 percent in mid-1997 and have remained there for the past four years. Such a sustained period of low unemployment has not been experienced in the United States since the 1960s. Perhaps even more remarkable, recent periods of low unemployment have not been accompanied by any appreciable price inflation, causing many economists to make

sharp downward revisions in their notion of what rate of unemployment might be compatible with price stability (Katz and Krueger 1999).

Other measures also suggest that the U.S. labor market was very strong throughout the late 1990s. Between 1995 and 2000, employment grew at an annual rate of approximately 2.6 percent, and unemployment averaged about 4.7 percent of the labor force. Both these figures are quite strong by historical standards.[1] Increases in real wages and declining rates of job displacement also support the notion that the late 1990s were reasonably good for workers.[2]

Unemployment durations provide some counterweight to this view. Throughout the 1990s, such durations were high by historical standards and did not decline as employment strengthened later in the decade. For example, after adjustment for the overall level of unemployment,[3] average unemployment durations were about 2.6 weeks longer during the 1990s than during other decades, and this discrepancy, if anything, was even larger later in the decade.[4] Several other authors have examined this result. For example, in their otherwise buoyant review of recent labor market trends, Katz and Krueger (1999) remark in passing that the proportion of overall unemployment represented by workers with unemployment durations of greater than 26

[1]Employment growth averaged about 2.0 percent per year from 1950 to 2000, while the unemployment rate averaged 5.7 percent.

[2]Average real weekly earnings increased by about 2 percent per year during the period. Data on worker displacement show that rates of displacement fell from 3.3 percent during the early 1990s to 2.9 percent in 1995-1996 (Hipple 1999) and to 2.5 percent in 1997-1998 (Helwig 2001).

[3]Throughout this discussion, the term "adjusting for the overall level of unemployment" is used to refer to a simple series of regressions run using the total unemployment rate to explain time series changes in various dependent variables.

[4]There is some uncertainty about the precise extent of this change, because methodological changes introduced in 1994 to the Current Population Survey make unemployment data from the late 1990s not fully comparable to earlier data.

weeks was higher in the late 1990s than during the previous labor market peak in the late 1980s. The same conclusion was reached in a more extensive analysis by Valletta (1998), who shows that most of the unexplained increase in unemployment durations can be accounted for by increased durations experienced by job losers who were permanently separated from their jobs. Changes in the distribution of the reasons unemployed workers become unemployed had little effect. Overall, Valletta estimates that expected durations of unemployment increased by about 17 percent between 1976 and 1998.

A number of other researchers (Loungani and Trehan 1997; McMurrer and Chasanov 1995; and Baumol and Wolff 1998) have also noted the recent increases in unemployment durations but as yet have offered no definitive explanations. Some experts hypothesize that the trend reflects the rapid technical change that has exaggerated problems related to skill mismatches. Others point to the possibility that the pool of long-term unemployed may have shifted toward people who have somewhat higher skills and whose search strategies are necessarily different and more time-consuming than in the past. There also remains the possibility that the trend may be largely illusory, arising from methodological difficulties in the way in which the Current Population Survey (CPS) measures the length of unemployment spells.

Related to the research on the duration of unemployment is a rapidly growing literature that focuses on possible changes in the nature of job loss in the 1990s. Much of this uses the Displaced Worker Survey (DWS), a biannual supplement to the CPS. In an influential paper based on this survey, Farber (1997) reported that rates of job loss were significantly higher in the 1990s than in the 1980s despite the strength of the labor market. The author also found that displacement rates had increased more for highly educated workers than for less-educated ones, and that rates of job loss had become a bit more equal across occupation and industry categories. An accompanying commentary to the Farber article (Abraham 1997) pointed out some

methodological problems with some of the questions on the DWS survey. Most important, the author showed that most workers who answered "other" to a question on their reason for displacement were probably not actually displaced.[5] The author hypothesized that correcting for such responses would reduce the extent to which displacements occurred in the 1990s but would not change Farber's qualitative conclusions about changes in the composition of job losers.

This conclusion is supported by two subsequent analyses of updated DWS files. Aaronson and Sullivan (1998) include data from the 1998 DWS file and experiment with several adjustments in the ways in which "other" responses are handled. They find that displacement rates continued to be high after the recession of the early 1990s had ended, even when people who responded "other" to the survey are omitted from the analysis. Increasing equality of displacement rates are illustrated both by a disappearance of what had previously been a rather large difference between men and women and by a relative increase in displacement rates for college-educated and white-collar workers. A recent update of the Farber paper (Farber 2001) reaches essentially the same conclusions using a data set that also includes the DWS for 2000. A particular focus of this paper is on trends in the earnings losses experienced by displaced workers, especially after taking into account the growth in earnings that would have occurred had there been no job loss. The author shows that this component of earnings loss can be quite large, especially for highly educated workers. However, he shows that there is no evidence that earnings losses experienced by displaced workers declined during the tight labor markets of the late 1990s.

[5]More definitive potential responses include "plant or company closed or moved," "position or shift was abolished," and "insufficient work."

The observed increase in unemployment durations in the 1990s has been accompanied by an increase in the length of time that workers spend collecting unemployment insurance. One recent report on the topic concludes that average UI durations increased by approximately 9 percent (or 1.1 weeks) in the late 1990s relative to what might have been expected based on historical data (Needels and Nicholson 1999). The authors identify three factors that are largely responsible for this increase. First, the role played by unemployment duration itself was clearly apparent. Most of the increase in the duration of UI claims during the 1990s could be explained by taking this variable into account. Second, changes in the industrial composition of employment (chiefly the relative decline in manufacturing employment) was found to have affected average UI durations, primarily by reducing the number of short UI spells usually associated with temporary layoffs in manufacturing. Finally, the authors find some evidence that changes in the demographic composition of UI recipients may have lengthened UI durations by shifting the claim load toward workers who have historically had longer durations. However, the evidence on this point is mixed.

Needels and Nicholson (1999) also identify several factors that do not appear to have increased UI durations. Most of these relate to the unemployment insurance system itself. For example, although it is generally agreed that changes in the wage replacement that UI provides or in the potential duration of benefits may affect UI and unemployment durations (Decker 1997), changes in these parameters do not appear responsible for the higher UI durations of the 1990s—primarily because there were only minor changes in these parameters. Similarly, the authors suggest that low rates of UI recipiency during the 1990s do not appear to have affected

the average UI duration of those who did collect benefits.[6] Finally, the authors use state-level data to show that changes in average durations cannot be explained by shifts in the relative sizes of UI caseloads among the states.

The UI exhaustion rate, like the duration of unemployment and the duration of UI receipt, was higher in the 1990s than historical trends would suggest. As Figure I.1 shows, the UI exhaustion rate was substantially higher on average in the 1990s than in any other decade since World War II. Even during the boom years of the late 1990s (1996-1999), the exhaustion rate averaged 32 percent—more than 3 percentage points above the overall average during the past 50 years. This comparison is even starker once the general countercyclical nature of the exhaustion rate is taken into account. As the figure shows, the unemployment rate fell in the late 1990s to levels that had not been experienced since the late 1960s and early 1970s, yet the exhaustion rate remained far above the exhaustion rates experienced at that time. When statistical controls for the unemployment rate are made (see Chapter III), exhaustion rates during the late 1990s were approximately 7.5 percentage points higher than would have been predicted given the strength of the labor market in those years.

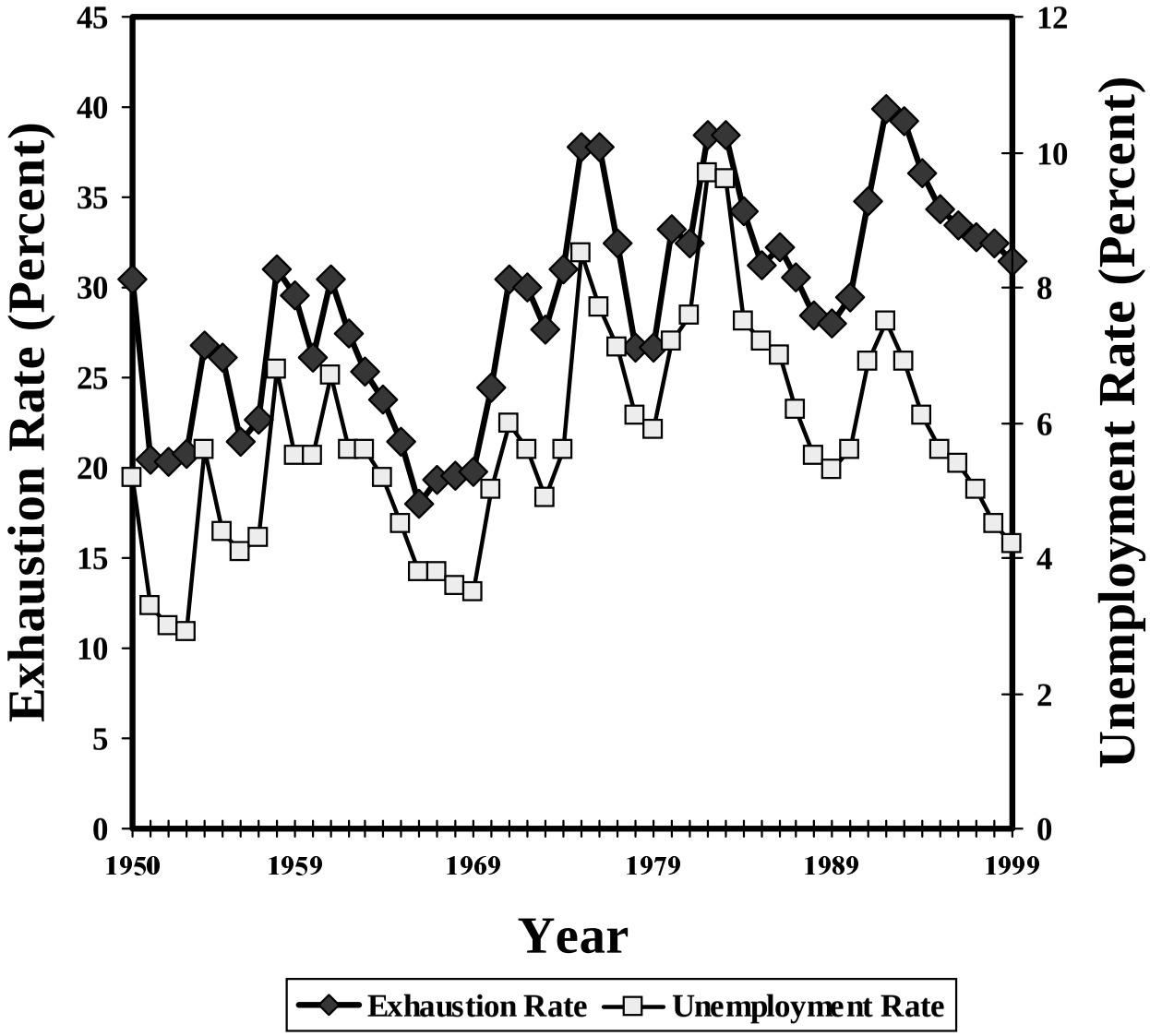
C. STUDY DESIGN

The study design called for the selection of nationally representative samples of UI exhaustees and nonexhaustees and for the collection of UI program data and survey data from

[6]Wandner and Stettner (2000) show that, although the fraction of the unemployed receiving UI benefits has declined since the 1950s, recipiency rates during the late 1990s were not noticeably lower than those during most of the 1980s. Hence, changes in recipiency rates are not a likely explanation for exhaustion rates in the 1990s being higher than in the 1980s.

FIGURE I.1

EXHAUSTION AND UNEMPLOYMENT RATES, 1950 TO 1999



Source: UI exhaustion rate data were obtained from the Unemployment Insurance System's database of state-level data. The total unemployment rate data were obtained from Data Resources, Inc.'s macroeconomic database.

these samples. In this section, we briefly describe the sample design and its implementation. Further details on the sample design and the results of the survey are presented in Appendixes A and B, respectively.

1. The Sample and Survey Designs

The sample for the study of UI exhaustees was designed to represent the national population of UI exhaustees and the national population of UI recipients who do not exhaust benefits (nonexhaustees). It was designed this way so that it could be used to describe the characteristics of UI exhaustees and their labor market outcomes and to compare these characteristics and outcomes to those of nonexhaustees. The two samples, when combined, were also designed to describe UI recipients in general. Finally, the sample was designed to provide sufficient statistical precision for the descriptive and analytic objectives of the study.

To meet these objectives, we used a two-stage, clustered sample design to select nationally representative samples of exhaustees and nonexhaustees from an initial national sample frame of everyone who established a UI benefit year during a one-year period (1998) and who received at least one payment. We randomly selected 25 states from geographic strata in the first stage and approximately 27,500 UI recipients (exhaustees and nonexhaustees) in the second stage. From these recipients, we selected random subsamples of exhaustees and nonexhaustees as an interviewing sample.

We selected the states with probabilities proportional to each state's share of the national exhaustee and nonexhaustee populations. Using this approach, we selected nine states with certainty. We also selected with certainty three additional states with probability of selection greater than .9 (after removing the nine certainty states) to ensure that they were in the sample (that is, they were given a probability of selection of one). We placed the remaining states in geographic strata and chose 13 of them. Then, for an extended interviewing effort to boost

survey response rates (see further below), we randomly selected a subset of 10 states, using the same probabilities of selection we used for the 25-state sample, adjusted for a 10-state sample.

We set overall targets of 2,000 exhaustee and 2,000 nonexhaustee survey completions, based on our analysis of the statistical power of alternative sample sizes to detect differences in characteristics and labor market experiences of exhaustees and nonexhaustees. Target survey sample sizes were assigned to each state for exhaustees and nonexhaustees so that the probability of selection of any exhaustee or nonexhaustee was constant (2,000 divided by the total exhaustee and nonexhaustee populations, respectively). States selected with certainty were assigned targets proportional to their population of exhaustees and nonexhaustees. The remaining states were assigned targets equal to the overall sampling rate times the ratio of the state exhaustee or nonexhaustee population divided by the state's probability of selection.

Our design required us to interview in two stages. In an initial fielding period, we used mail, telephone, and database locating methods to attempt to find and complete telephone interviews with members of the sample in the 25 selected states. Then, in a second, more intensive stage in a random subset of 10 states, we continued attempts to interview sample members. We continued mail, telephone, and database locating activities and added field staff to find sample members who had not responded to our initial interview attempts. We asked people we located to call our telephone center to complete interviews. For cost reasons, the second stage was restricted to 10 states.

Hence, the survey design for has two main components. The first is the initial fielding component obtained from 25 states. Recipients interviewed in this stage are nationally representative of UI exhaustees and nonexhaustees who could be contacted and interviewed by telephone within a fixed period. The second is the extended fielding component obtained from 10 states. Recipients interviewed during this period are nationally representative of UI

exhaustees and nonexhaustees who could be located and interviewed through intensive locating efforts.

2. Implementing the Sample Design and Survey

We implemented the sample design by asking the 25 states to participate in the study. We requested that they (1) select a random sample of people who had established benefit years in 1998 and who had received a UI first payment, and (2) provide selected administrative data for this sample of recipients. We requested a large sample of recipients from each state (about 27,500 in total) to ensure that we had enough exhaustees and nonexhaustees for the survey sample even if completion rates were substantially lower than expected.

In the end, 24 of the initial 25 states agreed to participate and provided samples. The state that was not able to participate, Massachusetts, was replaced with Rhode Island. This state was selected randomly with probability proportional to size from among the states in the New England region that had not been selected in the initial sample. Rhode Island was assigned a target sample size as if it had been selected initially.

When we received the sample of recipients from the states, we reviewed the samples to ensure that they met the sample frame requirements and that the requested data were provided. After these checks, we divided the recipient samples into exhaustees and nonexhaustees, where exhaustees were defined as recipients whose remaining claim balance was zero. Since we obtained data from the states in calendar year 2000, all recipients in the sample had completed their benefit years and had had a chance to collect their full entitlement.

We then selected random subsamples of exhaustees and nonexhaustees for interviewing. These subsamples were larger than the target survey completion numbers to account for likely nonresponse to the survey. Initially, we released a sample that would yield the target number of completions if the response rate was 80 percent. Subsequent releases were made as we observed

actual response rates to the survey. In the end, we released subsamples that would yield the target number of completions if the response rate was 69 percent in the 10 states with the extended fielding period and 59 percent in the 15 states without the extended fielding period. We set different release amounts in the two types of states to account for the fact that we expected to achieve a higher response rate in the extended fielding states than in the other states. Based on our experience, we also set the initial fielding period to 16 weeks in the 25 states.

We completed interviews with 3,907 UI recipients, 1,864 exhaustees, and 2,043 nonexhaustees (Table I.1). The interviews were conducted in English and Spanish during an approximately seven-month period from mid-July 2000 to mid-February 2001. These interviews collected information on labor market and other activities of respondents from the time they entered the UI system to the interview date, a period of 2.2 years on average. The overall response rate to the survey was 63 percent. It was higher for nonexhaustees (65 percent) than for exhaustees (61 percent). Most interviews were completed during the initial fielding period; only a small number were completed during the extended fielding period.

D. OUTLINE OF THE REPORT

The rest of this report includes four chapters. Chapter II describes the characteristics of UI recipients and analyzes the factors underlying exhaustion by comparing demographic, pre-UI job and job separation, UI program, and other characteristics of exhaustees and nonexhaustees. Chapter III examines potential explanations for the high exhaustion rates of the 1990s. Chapter IV analyzes the duration of unemployment and examines the job search and job outcomes obtained by exhaustees and nonexhaustees. Chapter V examines recipients' use of reemployment services and the role of the WPRS system. This chapter also examines recipients' participation in education and training. Finally, Chapter VI concludes with an interpretation and of the main findings and an analysis of the policy implications of the findings. Throughout the

TABLE I.1

UI EXHAUSTEE STUDY SAMPLE SIZE, BY STATE

	Exhaustees				Nonexaustees				Total			
	Number		Distribution (Percentage)		Number		Distribution (Percentage)		Number		Distribution (Percentage)	
	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample
California	363	298	18.2	16.0	270	235	13.5	11.5	633	533	15.9	13.6
Florida	85	88	4.3	4.7	59	62	3.0	3.0	144	150	3.6	3.8
Georgia	53	41	2.7	2.2	62	63	3.1	3.1	115	104	2.9	2.7
Hawaii	58	56	2.9	3.0	54	66	2.7	3.2	112	122	2.8	3.1
Idaho	53	49	2.7	2.6	62	70	3.1	3.4	115	119	2.9	3.1
Illinois	86	60	4.3	3.2	82	75	4.1	3.7	168	135	4.2	3.5
Iowa	38	43	1.9	2.3	77	87	3.9	4.3	115	130	2.9	3.3
Kentucky	36	40	1.8	2.2	76	78	3.8	3.8	112	118	2.8	3.0
Maine	83	82	4.2	4.4	32	42	1.6	2.1	115	124	2.9	3.2
Michigan	79	77	4.0	4.1	128	124	6.4	6.1	207	201	5.2	5.1
Minnesota	51	55	2.6	3.0	63	77	3.2	3.8	114	132	2.9	3.4
Mississippi	49	54	2.5	2.9	70	61	3.5	3.0	119	115	3.0	2.9
Montana	55	48	2.8	2.6	61	64	3.1	3.1	116	112	2.9	2.9
New Jersey	101	99	5.1	5.3	61	60	3.1	2.9	162	159	4.1	4.1
New York	205	176	10.3	9.4	97	94	4.9	4.6	302	270	7.6	6.9
North Carolina	34	43	1.7	2.3	74	71	3.7	3.5	108	114	2.7	2.9
Ohio	42	29	2.1	1.6	87	92	4.4	4.5	129	121	3.2	3.1
Oklahoma	54	58	2.7	3.1	73	82	3.7	4.0	127	140	3.2	3.6
Pennsylvania	95	100	4.8	5.4	126	144	6.3	7.1	221	244	5.5	6.3
Rhode Island	52	56	2.6	3.0	56	55	2.8	2.7	108	111	2.7	2.8
Tennessee	56	64	2.8	3.4	59	62	3.0	3.0	115	126	2.9	3.2

TABLE I.1 *(continued)*

	Exhaustees				Nonexaustees				Total			
	Number		Distribution (Percentage)		Number		Distribution (Percentage)		Number		Distribution (Percentage)	
	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample	Target Sample	Actual Sample
Texas	141	126	7.1	6.8	74	75	3.7	3.7	215	201	5.4	5.1
Virginia	43	42	2.2	2.3	68	71	3.4	3.5	111	113	2.8	2.9
Washington	54	46	2.7	2.5	48	43	2.4	2.1	102	89	2.6	2.3
Wisconsin	33	34	1.7	1.8	73	90	3.7	4.4	106	124	2.7	3.2
Total	**2,000**	**1,864**	**100.0**	**100.0**	**1,994**	**2,043**	**100.0**	**100.0**	**3,994**	**3,907**	**100.0**	**100.0**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: State values may not sum to the total because of rounding.

discussion, we compare findings from the current survey of exhaustees and nonexhaustees with the findings from the prior national survey, conducted 10 years earlier.

II. UI RECIPIENTS AND BENEFIT EXHAUSTION IN THE LATE 1990s

A growing body of research evidence (see the discussion in Chapter I) has found that, during the booming economy of the late 1990s, the unemployed exhibited longer unemployment spells and worse reemployment outcomes than has historically been the case. UI recipients also are experiencing longer UI spells than they have at past low rates of unemployment (Needels and Nicholson 1999). For example, although the national unemployment rate was lower in 1998 than in 1988 (4.5 percent compared to 5.5 percent), UI recipients in 1998 both collected benefits for more weeks on average and collected all their benefits at higher rates than in 1988.

Despite this research, there has not been a comprehensive examination of the characteristics of UI recipients and the relationship between these characteristics and UI exhaustion rates in the 1990s. Updating prior research in this area is important because of several recent changes in the nature of unemployment and the UI program. In the mid-1990s, the WPRS system was implemented in all UI jurisdictions to target reemployment services to recipients who at the start of their UI claims were identified as being most likely to exhaust their benefits. Other possible changes in the 1990s (such as in the characteristics of workers, the labor market, or state UI programs) may influence the relationships between these individual-specific characteristics and the exhaustion rate. The changes have implications for the adequacy of the UI program to meet the needs of program participants—by providing income support to job losers while they look for work without discouraging work search efforts or delaying a return to work.

UI exhaustees—UI recipients who collect all their UI benefit entitlements—represent a particularly important group of workers for policymakers. As a group, they have strong work histories and have demonstrated attachment to the labor market in the past. However, their long UI spells suggest that they face particular difficulty finding new jobs. Examining who they are

and the reasons they exhausted their UI benefits can help policymakers who administer the UI program and reemployment services serve them better.

In this chapter, we examine who UI recipients, and specifically UI exhaustees, are and how as a group they have changed over time.[1] We also examine the factors associated with benefit exhaustion. In Section A, we present information on how both the labor market and UI recipients have changed between 1988 and 1998. In Section B, we focus on comparisons between exhaustees and nonexhaustees in their demographic, labor market, and UI program characteristics. In Section C, we use multivariate techniques to analyze the determinants of benefit exhaustion by controlling for many characteristics at once. This section describes the models that are used, explains econometric issues related to the estimation of the models, and discusses the results.

From these analyses, we find that many of the changes that occurred in the 1990s in the labor force and in jobs are reflected in the UI recipient population as well. For example, males and non-Hispanic whites made up smaller fractions of the labor force, the unemployed, and UI recipients in 1998 than they did in 1988. The composition of jobs also has changed, with lower fractions of jobs in manufacturing and more in the service sector in 1988. These changes are reflected in the types of jobs lost by UI recipients in 1998. Importantly, as shown in Chapter III, these changes over time in the recipient population may explain a large portion of the unusually high exhaustion rates found in the 1990s compared to the rates that would be predicted on the basis of historical experience.

[1]Throughout the report, statistically significant differences between exhaustees and nonexhaustees, or other groups, are estimated using an average design effect of 1.7, as discussed in Appendix B.

We conclude that many of the previously documented relationships between demographic, labor market, and UI program characteristics and the probability that a UI recipient will exhaust his or her benefits are still valid. Certain demographic groups, such as females and racial/ethnic minorities, are more likely to exhaust benefits than are males and non-Hispanic whites; being married or cohabiting increases women's likelihood of exhaustion but decreases it for men. Prior to their UI claims, exhaustees are slightly more likely than nonexhaustees to have had lower-paying, part-time jobs that did not provide fringe benefits. They are more likely to have been in nonstandard work arrangements and less likely to have been in a union or in the manufacturing sector. Exhaustees were less likely to have been laid off, less likely to have expected recall, and less likely to have been recalled. Finally, because of their lower pre-UI earnings, exhaustees typically had lower weekly benefit amounts (WBAs) and potential durations than nonexhaustees. Finally and unsurprisingly, having a shorter potential duration increases the probability of benefit exhaustion. Regression analysis that controls for many of these different factors at the same time supports these descriptive patterns.

A. CHANGES IN THE UNEMPLOYED AND UI RECIPIENT POPULATIONS

Broad changes have taken place between 1988 and 1998 in the labor force and the unemployed population (Table II.1). While the labor force grew 13 percent between these two years, the number of unemployed workers declined 7 percent. (The unemployment rate declined even more so, from 5.5 to 4.5 percent.) Males and whites declined as proportions of both the labor force and the unemployed population, while the percentages of Hispanics grew considerably. We also can see the effects of the aging of the baby boom generation. If the baby boom generation is defined as people born from 1945 to 1964, this generation ranged from ages 24 to 43 in 1988 and from 34 to 53 in 1998. They are closer to their peak years of earnings in

TABLE II.1

CHANGES IN THE LABOR FORCE AND THE UNEMPLOYED
(Percentages Unless Stated Otherwise)

	Labor Force		Unemployed	
	1988	1998	1988	1998
Demographic Characteristics				
Gender				
Male	55.0	53.7	54.5	52.6
Female	45.0	46.3	45.5	47.4
Race/Ethnicity[a]				
White	86.1	83.8	73.8	72.2
Black	10.9	11.6	23.1	23.0
Hispanic	7.4	10.4	10.9	16.5
Age				
16 to 24	18.5	15.9	37.1	36.8
25 to 34	29.2	23.8	28.8	22.9
35 to 44	24.2	27.3	17.4	20.3
45 to 54	15.7	20.6	9.8	12.6
55 to 64	9.7	9.6	5.6	5.5
65 or older	2.7	2.8	1.3	2.0
Labor Market Characteristics				
In Manufacturing	18.5	15.8	17.3	13.1
In the Service Sector	32.2	35.9	18.5	25.2
Weeks Unemployed				
Less than 5 weeks	---	---	46.0	42.2
5 to 14 weeks	---	---	30.0	31.4
15 to 26 weeks	---	---	12.0	12.3
27 or more weeks	---	---	12.1	14.1
Average Unemployment Duration (Mean)	---	---	13.5	14.5
Average Unemployment Duration (Median)	---	---	5.9	6.7
Size (1,000s)	121,669	137,673	6,701	6,210
Percentage Change in the Size		13.2		-7.3

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, January 1989 and January 1999, annual averages.

[a]These race/ethnicity categories are different from those used in the survey data collected as part of the Study of UI Exhaustees. Race/ethnicity categories sum to more than 100 percent because individuals may be classified as white Hispanic or black Hispanic.

1998 than was the case in 1988. The nature of jobs has changed as well. Smaller percentages of the jobs and the unemployed are in manufacturing, while a greater percentage are in the service sector. Finally, we see that a greater proportion of the unemployed in 1998 are without jobs for more than five weeks and that average unemployment durations are longer.

Because of the possible influences of these broad labor market changes on the UI population and their UI program experiences, we compared the characteristics of UI recipients in two time periods. We used data from 3,907 interviews with a nationally representative sample of recipients who filed an initial UI claim in 1998 and who received at least one payment.[2] We compare data on these UI recipients to data from a similar study of UI recipients who filed for benefits in 1988 (Corson and Dynarski 1990).

The characteristics of UI recipients do indeed reflect these broader changes (Table II.2). UI recipients in 1998 were more likely than recipients in 1988 to be female and to have a post-high school education and less likely to be non-Hispanic whites, patterns that mirror the changes generally occurring in the labor market. UI recipients in 1998 also were more likely than 1988 recipients to be in the middle age ranges (35 to 54). For example, 53 percent of recipients in 1998 were age 35 to 54, compared to 37 percent of recipients in the 1988 sample. Workers age 34 or younger make up a smaller percentage of recent recipients: 34 percent, compared to 46 percent of recipients in the late-1980s survey. The oldest age groups, those 55 or older, make up similar proportions of 1990s and 1980s recipients. These changes in the age distribution of recipients most likely reflects the aging of the baby boom generation.

Jobs and job separations changed as well. As with labor market participants more generally, UI recipients in 1998 were less likely than recipients in 1988 to have worked in manufacturing

[2]Statistics are calculated with weights constructed by the procedures described in Appendix A.

TABLE II.2

COMPARISONS OF UI RECIPIENTS IN 1988 AND 1998
(Percentages Unless Stated Otherwise)

	1988	1998
Demographic Characteristics		
Gender		
Male	58.9	55.6
Female	41.1	44.4
Race/ethnicity		
White, Non-Hispanic	74.8***[b]	66.1
Black, Non-Hispanic	12.0	12.5
Hispanic	9.5	13.0
Other	3.7	9.3
Age		
16 to 24	12.2***[b]	9.8
25 to 34	33.4	24.6
35 to 44	25.1	30.8
45 to 54	17.4	22.3
55 to 64	10.4	10.6
65 or older	1.6	2.0
Highest Diploma or Degree Received		
Less than high school	21.4**[b]	17.5
High school/GED	54.6	54.0
Vocational/technical/business/associate's	13.5	16.1
Bachelor's	8.5	9.0
Other[a]	2.0	3.3
Labor Market Characteristics		
Hours per Week		
34 and under	6.9	8.1
35 to 39	5.2	5.0
40	50.2	53.3
41 to 45	11.1	8.4
46 or more	26.5	25.3
Job Tenure		
1 year or less	28.2***[b]	22.3
1 to 2 years	14.8	14.6
2 to 3 years	10.1	10.6
3 years or more	46.9	52.1

TABLE II.2 (*continued*)

	1988	1998
Union Member	28.8***	22.1
In Manufacturing Industry	39.5***	32.5
In Service Industry	15.2***	22.6
Reason for Job Loss		
Laid off	81.7***[b,c]	82.5
Plant or facility closed/moved	11.1	13.4
Job or shift eliminated	5.6	7.7
Lack of work	62.5	57.7
Other	2.5	3.7
Quit	7.5	5.1
Fired	10.0	8.8
Other	0.8	3.4
Recall Expectations		
Did not expect recall	51.4	53.2
Expected recall, no definite date	28.6	28.4
Expected recall, had a definite date	20.0	18.4
UI Program Characteristics		
Mean Weeks of UI Benefits Collected	12.9	13.2
Potential Duration		
Under 15 weeks	3.5	4.8
15 to 20 weeks	12.6	13.8
21 to 25 weeks	13.7	15.6
26 weeks or more	70.2	65.8

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]This category includes recipients with some college, a post-bachelor's diploma or degree, and other education levels.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for 1988 and 1998 UI recipients.

[c]Significance tests include both tests of layoffs compared to other job separation reasons and layoff subcategories compared to other job separation reasons.

*Significantly different from the 1998 sample at the .10 level, two-tailed test.
**Significantly different from the 1998 sample at the .05 level, two-tailed test.
***Significantly different from the 1998 sample at the .01 level, two-tailed test.

and more likely to have been in service industries. Job tenure also increased, raising the possibility that these recipients are at a greater risk of large earnings reductions if they fail to return to the same jobs after their UI spells (Farber 2001). Although 1998 recipients and 1988 recipients were about equally likely to have been laid off (82 percent), a layoff because of a lack of work was less common (58 percent compared to 63 percent, respectively). Among layoffs, therefore, a company's closing or moving, elimination of a job or work shift, and layoffs because of other reasons were more common reasons in the late 1990s. However, we caution against using these data to support conclusions about trends over time in reasons for job separation, because other researchers have questioned the interpretation of layoffs due to "other" reasons besides these more definitive categories (Abraham 1997; and Farber 1997). In addition, the 1998 data indicate an increase of several percentage points in recipients who reported having their job end because of an "other" reason besides getting laid off, quitting, or being fired.

Last, we note that UI recipients in 1998 were slightly less likely than recipients in 1988 to have benefit entitlements of 26 weeks or more. Shorter potential durations may contribute to the increase in exhaustion rates during the 1990s, because UI recipients who take a certain number of weeks to find another job will be, all else equal, more likely to exhaust their benefits if their potential duration is shorter.

B. CHARACTERISTICS OF EXHAUSTEES AND NONEXHAUSTEES

Research has shown that the likelihood of UI benefit exhaustion is strongly associated with individual-specific characteristics (Corson et al. 1986; Richardson et al. 1989; and Corson and Dynarski 1990). For example, UI recipients who expect to be recalled to the former employer, and especially those with a definite date upon which recall to the job will occur, are less likely to exhaust their benefits than are recipients who do not expect to be recalled. Recipients' pre-UI industry and occupation also affect exhaustion rates. Demographic characteristics, such as a

recipient's sex, race/ethnicity, and age, are associated with the likelihood of benefit exhaustion. Many possible reasons for these associations exist, such as differences between demographic groups in their opportunities to find and be offered new jobs, or other commitments on their time. However, the effects of many of these characteristics are stronger for recipients who do not expect to be recalled to their jobs than for recipients who do (Corson and Dynarski 1990).

In addition, the amount of UI benefits to which a recipient is entitled is related to the likelihood of exhausting benefits. Because of the disincentive effects of benefits on reemployment, a higher replacement rate—the ratio between the UI WBA to which a recipient is entitled and the recipient's pre-UI weekly earnings—is associated with a longer period of benefit collection and a higher probability of exhausting benefits. Not surprisingly, researchers find that recipients who can collect benefits for more weeks are less likely to collect their full entitlements, all else equal.

To examine whether these patterns hold true for UI recipients in 1998, we present comparisons of the demographic, labor market, and UI program characteristics of exhaustees and nonexhaustees. We point out important differences between exhaustees and nonexhaustees, although it is not possible through these simple comparisons to determine whether these characteristics cause, or are merely correlated with, benefit exhaustion.

1. Demographic Characteristics

Exhaustees and nonexhaustees differ in several important ways (Table II.3). Smaller percentages of exhaustees than nonexhaustees are male and white non-Hispanic. Exhaustees are somewhat more likely to be older and less likely to have exactly a high school diploma or GED. These differences in characteristics between long- and short-term UI recipients have been found in other studies of UI recipients, both when the economy was strong and when it was weak (Corson et al. 1986; Corson and Dynarski 1990; and Corson et al. 1999).

TABLE II.3

THE DEMOGRAPHIC CHARACTERISTICS
OF EXHAUSTEES AND NONEXHAUSTEES
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Gender (Percentage)			
Male	51.0**[b]	57.6	55.6
Female	49.0	42.4	44.4
Race/Ethnicity			
White, Non-Hispanic	58.7***[b]	69.5	66.1
Black, Non-Hispanic	14.0	11.8	12.5
Hispanic	17.7	10.9	13.0
Mixed	3.1	2.9	2.9
Other	6.6	4.9	5.4
Age at Start of Benefit Year			
Younger than 25	9.0**[b]	10.1	9.8
25 to 34	23.7	25.0	24.6
35 to 44	29.1	31.6	30.8
45 to 54	21.6	22.6	22.3
55 to 64	13.1	9.4	10.6
65 and older	3.5	1.3	2.0
Highest Diploma or Degree Received			
Less than high school	18.3	17.2	17.5
High school/GED	50.6	55.5	54.0
Vocational/technical/business/associate's	17.6	15.4	16.1
Bachelor's	9.5	8.8	9.0
Other[a]	4.0	3.0	3.3
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]This category includes recipients with some college, a post-bachelor's diploma or degree, and other education levels.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the.10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

2. Labor Market Characteristics

In this section, we examine recipients' pre-UI job characteristics and reasons for job separation. Several important differences between exhaustees' and nonexhaustees' pre-UI jobs are apparent (Table II.4). For example, exhaustees were, on average, slightly more likely than nonexhaustees to have lower-paying, part-time jobs prior to their benefit collection periods, and exhaustees had shorter tenures at these jobs. Exhaustees are somewhat more likely than nonexhaustees to have earned less than $300 per week at their pre-UI jobs—a cutoff that would yield $15,600 per year, an amount below the poverty rate for a four-person family (U.S. Census Bureau 2000).[3] Exhaustees also were more likely to have worked fewer than 40 hours per week, and to have been working for their former employers for less than one year.

Exhaustees were less likely than nonexhaustees to receive most types of fringe benefits on their pre-UI jobs (Table II.4). Some of these differences may arise because of exhaustees' shorter tenure at their jobs, since many companies provide these benefits only to employees who have achieved a certain tenure or seniority level. The differences also may arise because of differences in the industries or occupations in which the exhaustees worked. Because fringe benefits such as paid vacation and paid holidays, health insurance coverage, and pension plans have recently been estimated to be about 27 percent of the total compensation that workers receive, including fringe benefits as part of total compensation would increase the gap between exhaustees' and nonexhaustees' pre-UI compensation (Employee Benefit Research Institute

[3]The poverty threshold for a family of four in 1998 was $16,600.

TABLE II.4

PRE-UI JOB CHARACTERISTICS
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Weekly Earnings			
$200 or less	8.8	6.6	7.3
$201 to $300	21.7	20.7	21.0
$301 to $400	20.8	19.2	19.7
$401 to $500	14.5	14.3	14.4
$501 or more	34.1	39.1	37.6
Hours per Week			
34 and under	8.6	7.9	8.1
35 to 39	5.5	4.7	5.0
40	51.4	54.2	53.3
41 to 45	8.3	8.4	8.4
46 or more	26.2	24.8	25.3
Job Tenure			
6 months or less	10.9	9.7	10.1
7 to 12 months	14.7	11.7	12.6
1 to 2 years	15.2	14.3	14.6
2 to 3 years	9.6	11.1	10.6
3 to 5 years	13.9	13.3	13.5
5 or more years	35.7	39.9	38.6
Received as Fringe Benefits:			
Paid vacation	56.0	59.4	58.3
Paid holidays	58.6*	63.4	61.9
Paid sick leave	42.2	40.0	40.7
Health insurance	57.9***	68.4	65.2
A pension plan	42.1***	52.0	48.9
Had Previous Layoff from Pre-UI Job	18.4**	23.1	21.6
Had Layoffs on a Regular Basis	11.7**	16.3	14.9
Union Member	14.4***	25.5	22.1
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

*Significantly different from nonexhaustees at the.10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

1997; and U.S. Department of Labor 1999).[4]

Exhaustees were less likely than nonexhaustees to have had a layoff from their pre-UI job prior to the job separation that led to the 1998 UI claim and to have had layoffs on a regular basis (Table II.4). Exhaustees also had much lower rates of union membership. These patterns are consistent with higher rates of temporary layoffs among nonexhaustees, a finding that is shown below.

The industrial and occupational distributions of the two recipient groups also differed (Table II.5). Exhaustees were less likely than nonexhaustees to have worked in construction and manufacturing industries. In contrast, exhaustees are more likely to have worked in the retail trade, finance/insurance/real estate, and services industries. Exhaustees are more likely than nonexhaustees to have been in managerial/professional and administrative support occupations.

The nature and quality of workers' employment relationships with their employers were important concerns of policymakers in the 1990s (DiNatale 2001). These concerns often stemmed from two reasons. First, there is the perception that some jobs are "bad jobs," as defined by their lack of job stability, health care benefits, and earnings growth potential. It is often unclear how to define and identify employer-employee relationships that are associated with these types of characteristics. Second, there is concern that certain types of employment arrangements may reduce or eliminate the likelihood that a worker will be covered by the UI system.

[4]About 30 percent of exhaustees and nonexhaustees reported having a spouse or unmarried partner who was eligible for health insurance coverage through a job held at the UI claim date. It is likely that some UI recipients who were not eligible for coverage through their pre-UI jobs were eligible for coverage through someone else in the household or through another source.

TABLE II.5

INDUSTRY AND OCCUPATION OF PRE-UI JOB CHARACTERISTICS
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Industry			
Agriculture	6.2***[b]	5.0	5.4
Mining	0.9	1.1	1.0
Construction	10.7	15.8	14.2
Durable manufacturing	14.1	21.9	19.5
Nondurable manufacturing	12.5	13.2	13.0
Transportation/public utilities	7.1	6.0	6.4
Wholesale trade	3.1	2.4	2.6
Retail trade	11.0	9.1	9.7
Finance/insurance/real estate	4.4	2.2	2.9
Services	26.4	20.9	22.6
Public administration	3.6	2.4	2.8
Seasonal Industry[a]	15.6	16.0	15.9
Occupation			
Managerial/professional	15.4***[b]	8.5	10.6
Technical and related support	3.3	2.4	2.7
Sales	8.6	5.4	6.4
Administrative support	14.9	11.2	12.4
Service occupations	10.4	10.7	10.6
Mechanics and repairers	2.8	4.2	3.8
Construction and extractive	6.7	8.8	8.2
Precision production	3.5	7.0	5.9
Machine operators	12.4	16.4	15.2
Transportation and material moving	6.0	8.6	7.8
Handlers	9.5	12.1	11.3
Farming, forestry, and fishing	6.6	4.7	5.3
Type of Employment Relationship			
Leased or contract employee	3.6	2.7	3.0
Independent contractor or self-employed	1.5	0.9	1.1
Day laborer, casual laborer, free laborer, on-call employee, or temporary employee	11.5	8.2	9.2
Regular employee	83.3	88.3	86.7
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Seasonal industries are identified as those with changes in employment between the first and third quarters of at least 15 percent in both 1997 and 1998. Using employment data from the Bureau of Labor Statistics, we identified two-digit Standard Industrial Classification codes of 07, 16, 17, 79, 82, and 84 as seasonal. We also included agriculture codes 01, 02, 08, and 09 as seasonal industries.

TABLE II.5 (c*ontinued*)

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the.10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

Two concepts, which are often confused, recently have been used to examine the types of relationships between employers and employees: "alternative work arrangements" and "contingent arrangements." The Bureau of Labor Statistics (BLS) categorizes alternative work arrangements as independent contractors, on-call workers, temporary help agency workers, and contract company workers. The proportion of workers who are in alternative work arrangements was estimated to be 9.3 percent in 1999 (Hipple 2001); workers with traditional arrangements are all other types of workers. In contrast, the BLS defines contingent work as "any job in which an individual does not have an explicit or implicit contract for long-term employment," basically jobs that are temporary or not expected to continue because of the employer's preference (and not the worker's preference) (Hipple 2001). Approximately 4 percent of workers were in a contingent arrangement in 1999 (Hipple 2001). According to these definitions, workers in alternative work arrangements may or may not be in contingent work, and workers in contingent work may or may not be in an alternative arrangement. However, neither definition fully and accurately can be used to capture patterns that policymakers have focused on.

Some, but not all, workers in alternative work arrangements prefer these arrangements to a traditional arrangement. Independent contractors both prefer their own arrangement to a traditional one and have lower rates of contingent work than traditional workers (DiNatale 2001). In contrast, on-call and temporary help workers are likely to prefer a traditional arrangement and have higher rates of contingent work than traditional workers. The most common reason workers in contingent jobs reported having a contingent job was that it was the only type of work they could find (Hipple 2001), suggesting that a lack of labor market opportunities constrains some employees' satisfaction with their jobs.

Workers in alternative work arrangements make up a larger proportion of UI recipients than of the U.S. workforce. Overall, 13 percent of 1998 recipients were in alternative work

arrangements, defined as (1) a leased or contract employee, (2) an independent contractor or self-employed person, or (3) a day laborer, a casual laborer, a free laborer, an on-call employee, or a temporary employee (Table II.5).[5] Exhaustees are more likely than nonexhaustees to have been in alternative work arrangements, 17 percent versus 12 percent. Most of these reported being temporary employees.

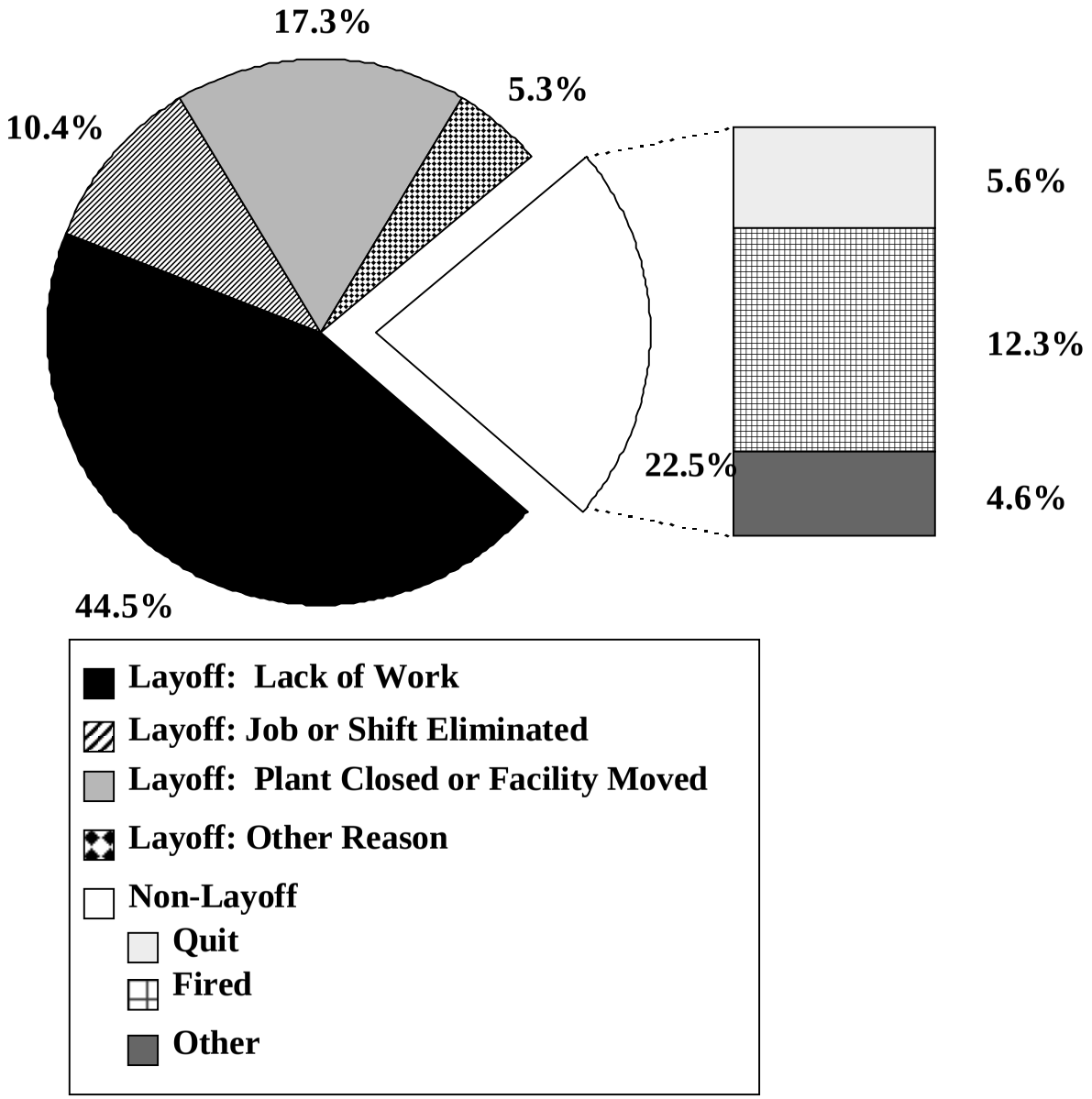
As has been found in prior studies, marked differences exist between exhaustees and nonexhaustees in the reasons for job loss prior to their UI claims and recipients' expectations about returning to their former jobs (Corson and Dynarski 1990). Seventy-eight and 85 percent of exhaustees and nonexhaustees, respectively, were laid off; exhaustees were more likely to have quit, to have been fired, or to have reported other reasons for their job loss (Figures II.1 and II.2). Even among recipients who were laid off, differences exist between the two groups. Exhaustees were less likely than nonexhaustees to have reported being laid off because of lack of work (45 percent versus 64 percent) and were more likely to have reported being laid off because the company closed or moved (17 percent versus 12 percent) or the job or shift was eliminated (10 percent versus 7 percent).

Most exhaustees expected not to return to their pre-UI jobs after their separations; most nonexhaustees expected to return (Figure II.3). Nonexhaustees were nearly twice as likely to have expected (at the time they were laid off) to be recalled to their former jobs (54 percent compared to 30 percent) and 3.5 times as likely to report having had a definite recall date (24 percent compared to 7 percent). Rates of recall expectations were higher than actual rates of

[5]The questions we used to identify alternative work arrangements differ from those of the BLS, and it is unclear to what extent this may affect the comparability of the data. The BLS asks a series of questions on alternative work arrangements as part of a supplement to the CPS, but we were able to ask only a few questions.

FIGURE II.1

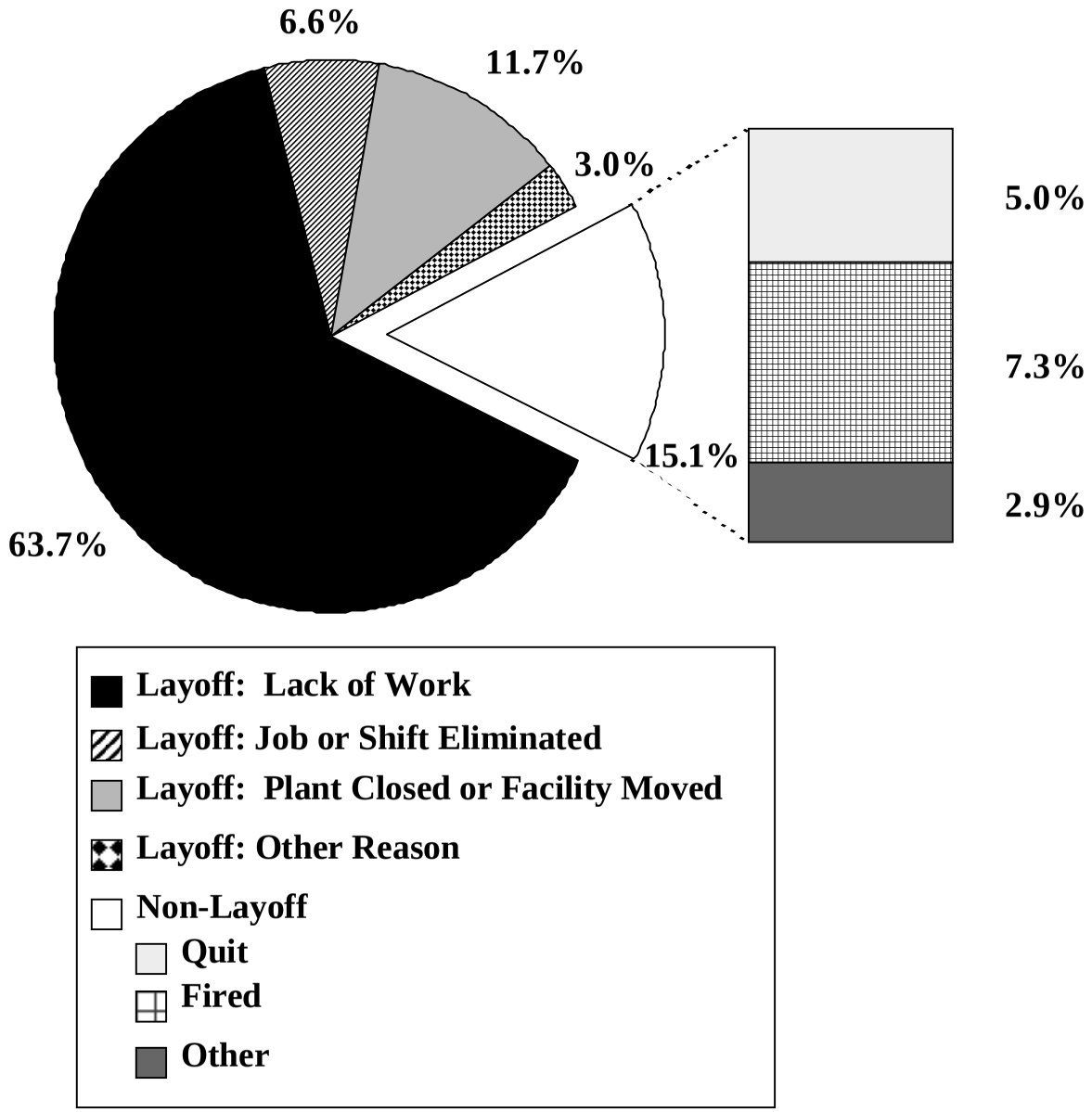
PRE-UI JOB SEPARATION CHARACTERISTICS: EXHAUSTEES



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

FIGURE II.2

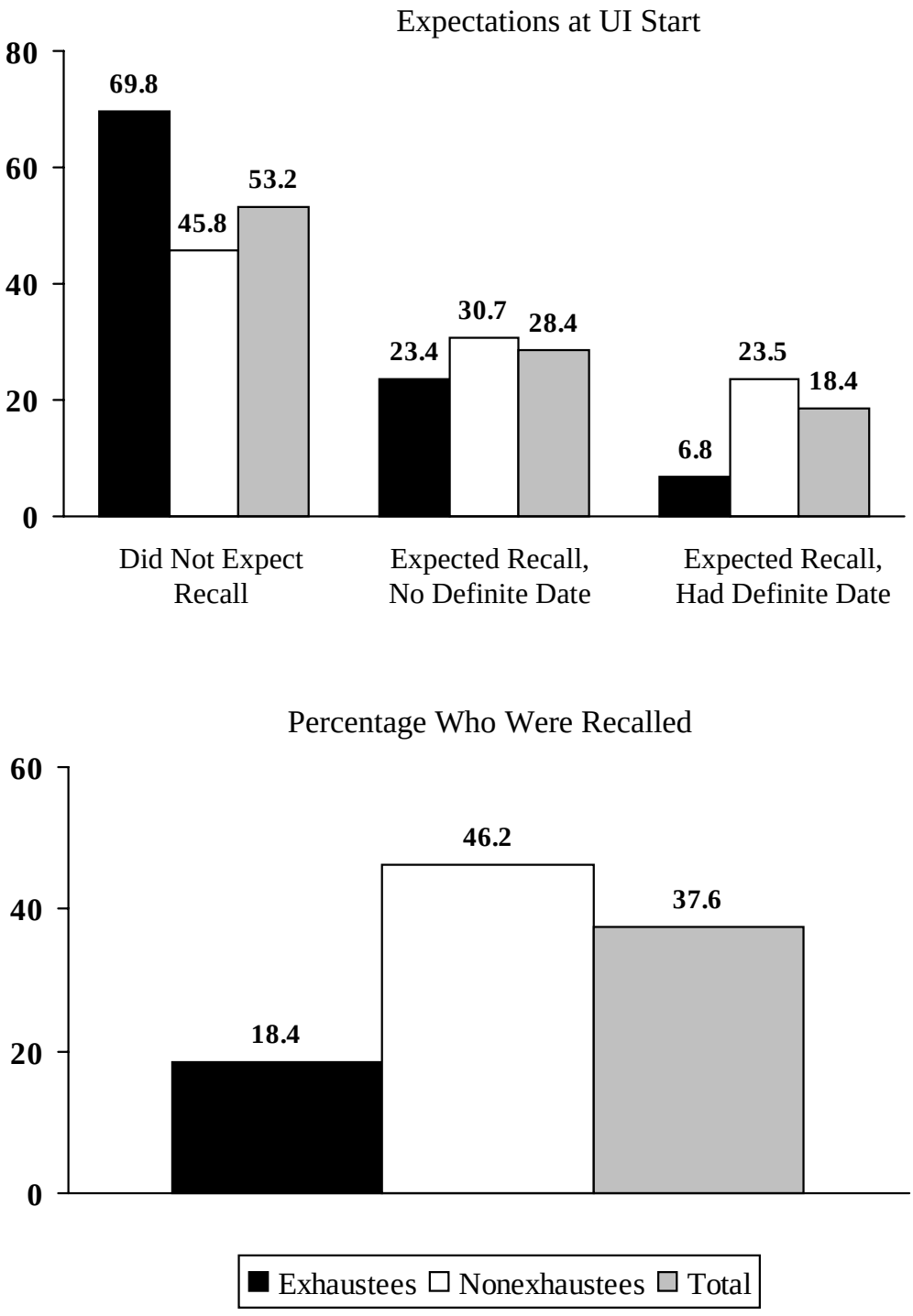
PRE-UI JOB SEPARATION CHARACTERISTICS: NONEXHAUSTEES



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

FIGURE II.3

RECALL EXPECTATIONS AND OUTCOMES



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

recall: 61 percent of exhaustees who expected to be recalled went back to their former jobs; 85 percent of nonexhaustees who expected to be recalled did so.[6]

Exhaustees were much more likely than nonexhaustees to be dislocated workers, 26 percent compared to 14 percent, respectively (Figure II.4). The BLS defines dislocated workers as those who (1) have been laid off because a plant or facility closed or moved, because a job or shift was eliminated, or for lack of work; (2) have at least three years of tenure with the former employer; and (3) have not been recalled (Flaim and Sehgal 1985; and Hipple 1999). Although dislocated workers in the late 1990s fared better economically by spending fewer weeks without work and suffering less severe earnings losses than did dislocated workers in the early 1990s, those who collect UI benefits may be more likely than other dislocated workers to face difficulties becoming reemployed (Hipple 1999). In addition, a higher percentage of recipients in 1998 (18 percent) were dislocated, compared to recipients in 1988 (12 percent).

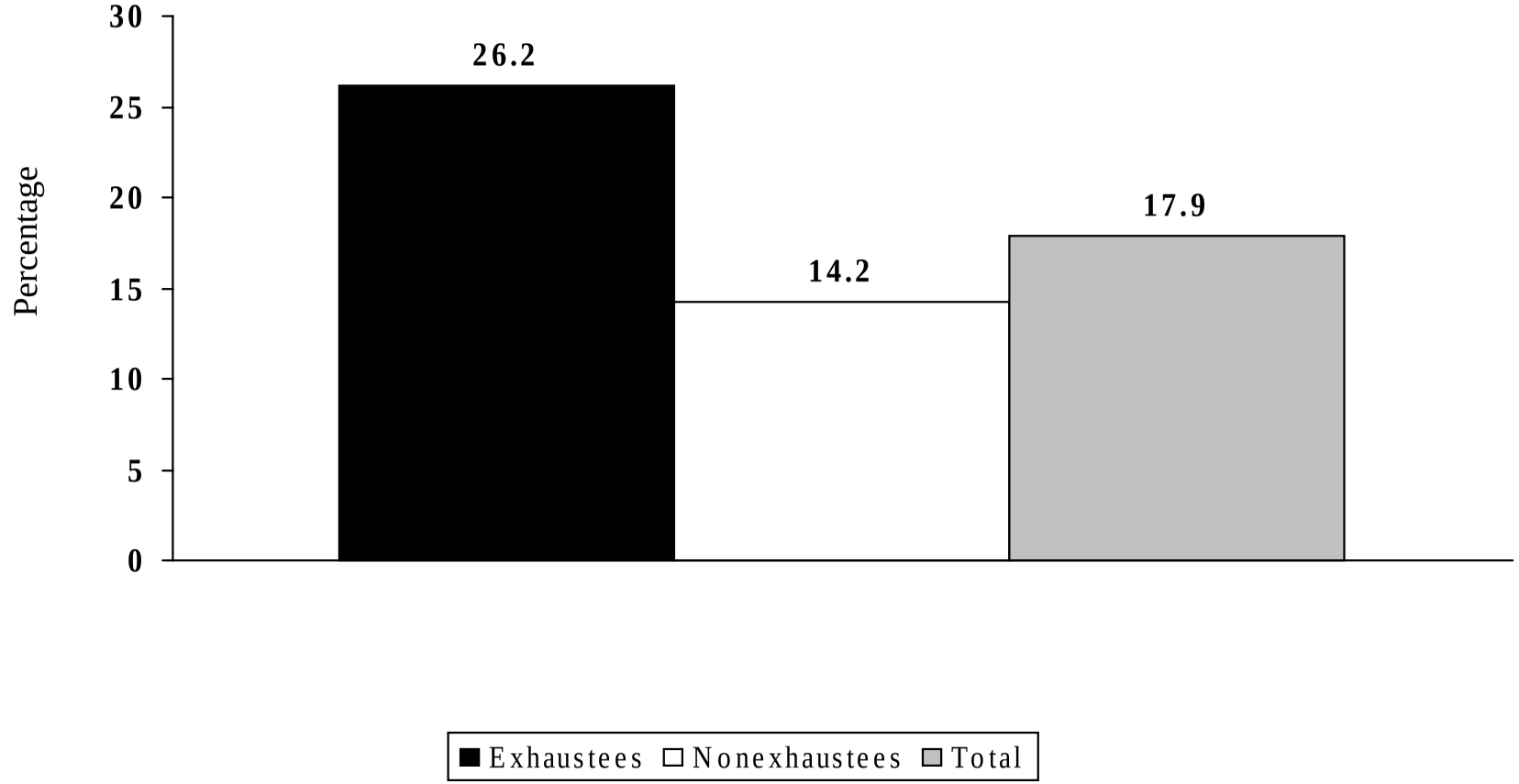
3. UI Program Characteristics

Almost by definition, exhaustees collected more UI benefits than nonexhaustees. Recipients in the sample collected an average of 13 weeks of UI benefits, but exhaustees averaged 23 weeks while nonexhaustees averaged 9 weeks (Table II.6). Exhaustees were also more likely to have shorter potential durations, which makes intuitive sense because a recipient who collects benefits for a certain number of weeks is more likely to exhaust when his or her potential duration is shorter. Compared to nonexhaustees, exhaustees therefore tended to be eligible for fewer weeks of benefits and had lower WBAs, but they collected benefits for more weeks. The WBAs were

[6]Given the retrospective nature of the survey, it is possible that recipients who were recalled were more likely to report having expected to be recalled, and recipients who were not recalled were more likely to report not having expected to be recalled. Nonetheless, we believe the general pattern is accurate.

FIGURE II.4

PERCENTAGE OF RECIPIENTS WHO WERE DISLOCATED WORKERS



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Dislocated workers were classified according to the Bureau of Labor Statistics definition (Flaim and Sehgal 1985; Hipple 1999). Recipients who were laid off because a plant or facility closed or moved, because a job or shift was eliminated, or for lack of work were counted as dislocated workers if they had at least three years of job tenure and were not recalled.

TABLE II.6

UI PROGRAM CHARACTERISTICS OF EXHAUSTEES AND NONEXHAUSTEES
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Mean Weeks of UI Collected	22.8***	9.0	13.2
Potential Duration			
Under 15 weeks	9.0***[b]	2.9	4.8
15 to 20 weeks	18.4	11.7	13.8
21 to 25 weeks	16.3	15.3	15.6
26 weeks or more	56.3	70.1	65.8
Weekly Benefit Amount (WBA)			
Less than or equal to $150	31.6***[b]	22.8	25.6
$151 to $250	38.8	39.7	39.4
$251 to $300	16.8	24.7	22.3
$301 or more	12.8	12.8	12.8
WBA/Pre-UI Weekly Earnings			
0.0 to 0.40	37.0	37.2	37.1
0.41 to 0.60	43.1	41.3	41.8
0.61 to 0.80	14.3	14.8	14.6
0.81 or more	5.7	6.9	6.5
Multiple Spells of UI Collection[a]	19.1***	34.4	29.7
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]The administrative data did not permit us directly to observe multiple spells of UI collection. Instead, recipients were assumed to have multiple spells of UI collection if the time between their benefit year beginning date and the last week of UI collection exceeded the number of weeks of benefits collected by six or more weeks.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the.10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

lower because exhaustees typically earned less in their pre-UI jobs. Given these differences, UI replacement rates for the two groups were very similar.

Exhaustees were more likely to collect their benefits week after week without interruption until they exhausted them, whereas a considerable percentage of nonexhaustees had interruptions in their collection of benefits. This pattern is probably caused in large part by the differences in the industries and occupations between the two groups, as well as differences in the likelihood of experiencing layoffs in these jobs.

C. MULTIVARIATE ANALYSIS OF THE PROBABILITY OF EXHAUSTION

The univariate analysis presented in the previous section identified clear patterns in how exhaustees and nonexhaustees differ. This analysis, however, cannot determine the interplay between these different factors in how they affect the likelihood that recipients exhaust benefits. Because unionization rates vary across industries, for example, the univariate analysis cannot determine whether being in a union or working in a particular industry is more important in affecting the likelihood of benefit exhaustion. Similarly, the univariate analysis cannot determine which demographic characteristics are more important in explaining exhaustion. In this section, we present multivariate analysis that simultaneously controls for the effects of different characteristics on the probability of exhaustion.

1. Model Specification

Several types of econometric models can be used to examine the influences of factors on binary outcomes, such as the exhaustion of UI benefits. The simplest model is a linear probability model, which is a standard ("ordinary least squares") linear regression model in which benefit exhaustion can be categorized as a (0,1) dependent variable. In equation terms, a linear probability model is often specified as follows:

(1) $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + ... + \beta_n X_n + \varepsilon,$

where Y equals 1 when a recipient exhausted the UI benefit entitlement and 0 when the recipient did not, X_1 through X_n represent factors that affect benefit exhaustion, α, β_1 through β_n represent the parameters to be estimated, and ε is a mean-zero random error term representing unobserved factors that affect benefit exhaustion.

Although linear probability models are widely used and the estimated coefficients on the explanatory variables are easy to interpret, they do not fully account for the (0,1) nature of the dependent variable. The variance of the random error term varies across individuals, so a linear probability model leads to biases on the estimates of the statistical significance of the model coefficients. Linear probability models also can generate predicted probabilities of the dependent variable that are greater than 1 or less than 0, which are meaningless.

A plausible alternative to linear probability models are logit and probit models (Maddala 1983). Generally, logit and probit models generate the same qualitative results as do the simpler linear probability models: coefficients that are significant in one type of model are usually significant in the other type, and coefficients that are not significant in one type of model are not significant in the other type. Because of the easier interpretation of the coefficients in the linear probability model, we present results from it. However, we examined the results from probit and logit models as well, and—like other researchers—found the results to be qualitatively similar.

In the models, we use explanatory variables that represent the demographic, labor market, and UI program characteristics found both here and in other studies to be related to the amount of UI benefits that a recipient collected and whether he or she exhausted the UI entitlement

(Corson and Dynarski 1990; and Corson et al. 1999).[7] Demographic characteristics include variables such as sex, age, race/ethnicity, and education level. Labor market characteristics include the industry, occupation, and unionization status of the pre-UI job; weekly earnings; job tenure; the reason for job separation; and expected recall status. We also include a measure for the strength of the economy by including the state unemployment rate at the time the recipient filed for benefits.[8] UI program participation characteristics include the wage replacement rate and potential benefit duration, although analyses using the WBA and pre-UI weekly earnings yielded similar results.

The weighted means and standard deviations of the explanatory variables are in Table II.7. (Earlier in this chapter, we discussed differences between exhaustees and nonexhaustees in many of these characteristics. We discuss differences between exhaustees and nonexhaustees in the job search and reemployment service characteristics in Chapter V.)

2. Estimation Results

Several individual-specific characteristics are statistically significant and show qualitatively large effects on the probability that a UI recipient exhausts his or her benefits (Table II.8). As was found in the Corson and Dynarski (1990) study of exhaustees, the exhaustion rates of males and females heavily depend on whether they have another possible worker in the household. Married or cohabiting men were less likely than never-married men (the "excluded group"

[7]This analysis is limited to time-invariant variables because we lack adequate data on variations in these characteristics during the unemployment spell. Asking for information about changes over time in job search activity and recall expectations, for example, would have greatly increased the length of the survey, and it is unlikely that survey respondents would have been able to provide meaningful, distinguishable answers.

[8]Exhaustees and nonexhaustees had average total unemployment rates of 4.8 and 4.6 percent, respectively.

TABLE II.7

DESCRIPTIVE STATISTICS FOR MODELS OF LIKELIHOOD
OF BENEFIT EXHAUSTION: FULL SAMPLE

	Mean	Standard Deviation
Exhaustees	0.310	0.214
Age at Claim Date (Years)	40.1	11.8
Aged-Squared (x10) (Years)	17,466.7	10,095.3
Female	0.444	0.497
African American	0.125	0.331
Hispanic	0.130	0.337
Other Racial/Ethnic Background[a]	0.083	0.276
Married/Cohabiting at Claim Date	0.565	0.496
Separated, Widowed, or Divorced at Claim Date	0.195	0.396
Female and Married/Cohabiting at Claim Date	0.233	0.423
Female and Separated, Widowed, or Divorced	0.106	0.308
Had Spouse/Cohabitant Who Worked at Claim Date	0.398	0.489
Female and Had Spouse/Cohabitant Who Worked at Claim Date	0.193	0.395
High School Dropout	0.175	0.380
Vocational/Technical/Business Associate's Degree	0.161	0.368
Bachelor's Degree	0.090	0.286
Other Education (Not High School/GED Graduate)	0.034	0.181
Months Worked on Pre-UI Job	79.099	89.972
Union Member on Pre-UI Job	0.221	0.415
Had Regular Layoffs on Pre-UI Job	0.149	0.356
Construction Worker	0.082	0.274
Machinist Worker	0.152	0.359
Sales Worker	0.064	0.249

TABLE II.7 (*continued*)

	Mean	Standard Deviation
Manufacturing Industry	0.325	0.468
Retail Trade Industry	0.097	0.296
State Unemployment Rate	4.673	0.951
Expected Recall	0.468	0.499
Expected Recall, Definite Date	0.184	0.387
Quit Pre-UI Job	0.051	0.221
Fired from Pre-UI Job	0.088	0.284
Left Pre-UI Job for Other Reason (Not a Layoff)	0.034	0.182
Wage Replacement Rate	0.454	0.165
UI Potential Duration (Weeks)	23.874	4.098
Unweighted Sample Size	**3,907**	

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: All statistics were calculated based on weights described in the text.

[a]This variable includes recipients who are coded as of "mixed" race/ethnicity or "other" race/ethnicity in Table III.1.

TABLE II.8

REGRESSION ANALYSIS OF THE PROBABILITY OF EXHAUSTION
(Standard Errors in Parenthesis)

	Marginal Effects on the Probability of Exhaustion			
Independent Variables	Full Sample	No Recall Expected	Expected Recall, No Date	Had Definite Recall Date
Intercept	0.688***	0.362**	0.671***	1.136***
	(0.112)	(0.167)	(0.191)	(0.194)
Age at Claim Date	-0.001	-0.004	0.003	0.000
	(0.005)	(0.007)	(0.008)	(0.009)
Age-Squared (× 1,000)	0.051	0.086	0.006	0.013
	(0.058)	(0.087)	(0.100)	(0.108)
Female	-0.087**	-0.068	-0.115*	-0.180***
	(0.034)	(0.048)	(0.069)	(0.064)
African American	0.062**	0.081**	0.066	0.014
	(0.025)	(0.037)	(0.049)	(0.039)
Hispanic	0.120***	0.070	0.154***	0.163***
	(0.028)	(0.043)	(0.046)	(0.048)
Other Racial/Ethnic Background	0.059*	0.008	0.172***	0.047
	(0.031)	(0.042)	(0.057)	(0.062)
Married/Cohabiting at Claim Date	-0.043	-0.056	0.018	-0.122***
	(0.028)	(0.045)	(0.046)	(0.046)
Separated, Widowed, or Divorced at Claim Date	0.017	0.039	0.029	-0.064
	(0.036)	(0.057)	(0.058)	(0.061)
Female and Married/Cohabiting	0.167***	0.174***	0.186**	0.202***
	(0.040)	(0.058)	(0.079)	(0.073)
Female and Separated, Widowed, or Divorced	0.054	0.073	-0.007	0.159*
	(0.050)	(0.073)	(0.093)	(0.090)
High School Dropout	-0.007	-0.021	-0.001	-0.008
	(0.025)	(0.040)	(0.041)	(0.039)
Vocational/Technical/Business Associates Degree	0.022	0.016	0.002	0.019
	(0.023)	(0.032)	(0.044)	(0.045)
Bachelor's Degree	-0.014	0.004	-0.051	-0.012
	(0.031)	(0.041)	(0.069)	(0.060)
Other Education	0.068	0.110*	-0.051	-0.172
	(0.050)	(0.062)	(0.122)	(0.139)
Months Tenure (× 100)	0.019*	0.054***	-0.016	-0.008
	(0.011)	(0.017)	(0.020)	(0.015)
Union	-0.048**	-0.070*	-0.035	0.005
	(0.021)	(0.038)	(0.034)	(0.031)
Had Regular Layoffs	-0.019	-0.077	-0.007	0.028
	(0.023)	(0.053)	(0.033)	(0.030)
State Unemployment Rate (Percent)	0.042***	0.056***	0.040***	-0.001
	(0.009)	(0.014)	(0.015)	(0.016)

TABLE II.8 (c*ontinued*)

	Marginal Effects on the Probability of Exhaustion			
Independent Variables	Full Sample	No Recall Expected	Expected Recall, No Date	Had Definite Recall Date
Quit Pre-UI Job	-0.093**	-0.081*		
	(0.038)	(0.042)	--	--
Fired from Pre-UI Job	0.033	0.044		
	(0.030)	(0.033)	--	--
Other Reason Left Pre-UI Job (Not a Layoff)	-0.022	-0.029		
	(0.048)	(0.053)	--	--
Expected Recall	-0.150***			
	(0.022)	--	--	--
Had a Definite Recall Date	-0.120***			
	(0.025)	--	--	--
Wage Replacement Rate	0.021	0.126	0.017	-0.261***
	(0.052)	(0.077)	(0.095)	(0.091)
Potential UI Duration	-0.023***	-0.012***	-0.033***	-0.036***
	(0.002)	(0.003)	(0.004)	(0.004)
Construction Occupation	-0.001	0.009	-0.003	0.083
	(0.031)	(0.055)	(0.044)	(0.056)
Machinist Occupation	0.041	0.073*	0.022	-0.004
	(0.026)	(0.044)	(0.045)	(0.035)
Sales Occupation	0.064*	0.037	0.236**	0.128
	(0.037)	(0.043)	(0.111)	(0.108)
Manufacturing Industry	-0.031	-0.037	-0.009	0.009
	(0.021)	(0.032)	(0.038)	(0.035)
Retail Trade Industry	-0.005	-0.046	0.114	0.018
	(0.031)	(0.040)	(0.075)	(0.064)
R-squared	0.132	0.054	0.192	0.282
Unweighted Sample Size	**2,837**	**1,593**	**789**	**455**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

from the regression) to exhaust, while the opposite is true for women. Never-married females were less likely than never-married males to have exhausted benefits, and married or cohabiting women were much more likely to exhaust their benefits than were their male counterparts.

UI recipients who had a vocational, technical, or associate's degree, or who had some "other" type of education, were slightly more likely than high school graduates (the "excluded group") to exhaust, although these differences were not statistically significant. UI recipients who dropped out of high school or who had a college degree were less likely than high school graduates to exhaust, but insignificantly so. All minority racial/ethnic groups have higher exhaustion rates than non-Hispanic whites (the "excluded group"). This is particularly the case for Hispanic recipients.

As has been found in other studies, the economy and a UI recipient's pre-UI job characteristics have a very strong influence on whether he or she exhausts benefits. Higher status unemployment rates are associated with higher benefit exhaustion rates. An increase of 1 percentage point in the unemployment rate results in an increase of 4 percent in benefit exhaustion. However, we caution that the large size of the estimated effect may result from variation in the unemployment rate that is inadequate for a robust estimate to be calculated. Recipients who worked in manufacturing or who belonged to a union were less likely to exhaust. Recipients who expected to be recalled (with or without a definite date) were much less likely than recipients who did not expect to be recalled (the "excluded group") to exhaust. Recipients who quit their pre-UI jobs were less likely than recipients who were laid off (the "excluded group") to exhaust.

All else equal, UI recipients with longer potential durations were less likely to exhaust benefits than were recipients with shorter ones. This is not surprising, because longer potential durations allow recipients to collect benefits for more weeks before they exhaust. A higher wage

replacement rate slightly (but not statistically significantly) increases the likelihood that a recipient will exhaust the benefit entitlement. This too is unsurprising, given both prior research and the theoretical prediction that higher replacement rates will increase the number of weeks of benefits collected because they provide a greater financial cushion for recipients while they are without work.

Because the likelihood of being recalled is so strongly associated with benefit exhaustion, we examined the effects of other characteristics by splitting the sample by recall status. Because recipients who expected to be recalled are all laid off, we removed variables pertaining to the job separation reason from the analysis on the two subgroups who expected to be recalled. We do find some differences, which suggests that some of the effects of the demographic, labor market, and UI program characteristics may vary, depending on recall status. Recipients with a definite recall date, for example, have larger negative coefficients for being female or married/cohabiting, and a smaller positive coefficient for being African American. These demographic influences may be related to a recipient's industry and occupation, and the effects of industry and occupation also change. The effect of the TUR is no longer statistically significant, which makes sense given that a higher unemployment rate is less likely to affect the search behavior of workers with definite recall dates.

III. POTENTIAL CAUSES OF THE HIGH UI EXHAUSTION RATES DURING THE 1990s

UI exhaustion rates during the 1990s averaged more than 34 percent, the highest of any decade since World War II.[1] As discussed in Chapter I, these rates are surprisingly high, given the low average unemployment rates during the period, and especially during the boom years of the late 1990s. Comparisons between 1988 and 1998, the two years for which nationally representative samples of UI recipients are available, are illustrative. In 1988, the unemployment rate averaged 5.5 percent, and the exhaustion rate was 28 percent. In 1998, the unemployment rate was lower, at 4.5 percent, but the exhaustion rate was higher, at 32 percent. A simple model of the exhaustion rate, when statistical controls for the unemployment rate are made, accurately predicts the 1988 exhaustion rate to be 28 percent. However, it predicts a 1998 exhaustion rate of 25 percent, approximately 7 percentage points lower than what was actually observed.

In this chapter we use both aggregate and recipient-level data to explore potential reasons for the recent high levels of UI exhaustion. The chapter is divided into three sections. Section A uses national data to present an econometric analysis of the UI exhaustion rate figures. Section B follows with an examination of UI exhaustion rates at the state level, to see whether this more disaggregated data can offer additional explanations. Because national- and state-level data cannot fully explain the unusually high exhaustion rates of the 1990s, Section C uses recipient-level data to examine how changes in the characteristics of recipients may have played a part.

[1]Exhaustion probabilities for individual UI recipients are not available. Instead, it is customary to define the exhaustion rate from aggregate data as the number of exhaustions during a period divided by the number of first payments six months previously (to allow for the typical potential UI duration of 26 weeks). This is the definition that we employ in this chapter.

A. UI EXHAUSTION RATES IN THE 1990s—A NATIONAL ANALYSIS

Exhaustion of UI benefits occurs when people collect all the benefits they are entitled to under a given claim. The research findings in Chapter I on unemployment and UI durations therefore have direct relevance to the changes in the exhaustion rate over time. Any factor that tends to increase the lengths of UI spells will tend to increase exhaustion rates, unless benefit entitlements are also increased. In particular, increases in unemployment durations may have played an important role in causing the higher UI exhaustion rates observed in the 1990s. Other factors, such as changes in the industrial composition of the labor force, also may have had some influence. In this section, we use national data to explore these effects quantitatively.

Our primary analysis of the national data used annual figures for the period 1950 to 1999. For this analysis, we experimented with several variables that might explain changes in the exhaustion rate. We recognized that this approach may sometimes yield spurious results because many of these variables tend to move together. Hence, we considered a variety of formulations in order to determine which effects seem to be robust. Table III.1 contains representative results.[2]

Several conclusions can be drawn from this table. The overall unemployment rate had a significant positive effect on exhaustion rates in all the formulations examined. Each percentage point increase in the unemployment rate was estimated to add 2 to 3 percentage points to the exhaustion rate, if other factors are held constant. Controlling only for the overall level of unemployment, the results suggested that exhaustion rates were more than 5 percentage points higher during the 1990s than during other decades.

[2]All models include an autoregressive error term with 1 lag. This error specification was found to fit the data better than other specifications.

TABLE III.1

REGRESSIONS OF THE EXHAUSTION RATE, USING NATIONAL-LEVEL DATA

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Unemployment Rate	3.019*** (0.239)	2.176*** (0.314)	2.089*** (0.316)	2.384*** (0.350)	1.511*** (0.482)	2.433*** (0.534)
Indicator for 1990s	5.336*** (1.137)	2.959** (1.333)	1.653 (1.599)	1.270 (1.580)	2.981** (1.218)	2.480* (1.360)
Average Duration of Unemployment	---	0.658*** (0.178)	0.623*** (0.179)	0.445** (0.208)	---	0.445* (0.250)
Percentage Employment in Manufacturing	---	---	-17.652 (12.569)	-22.210* (13.099)	---	---
Average UI Duration	---	---	---	---	1.539*** (0.424)	---
Average Potential Duration	---	---	---	-1.628 (1.002)	---	-1.543 (1.031)
Average Replacement Rate	---	---	---	---	---	22.220 (46.744)
IUR/TUR	---	---	---	---	---	-4.543 (3.737)
Constant	10.888*** (1.467)	7.537*** (1.899)	13.876*** (4.921)	54.734** (26.780)	-1.080 (3.526)	40.542 (26.045)
Auto-Regressive Error Term (One Lag)	0.499*** (0.133)	0.683*** (0.116)	0.676*** (0.114)	0.644*** (0.125)	0.547*** (0.126)	0.629*** (0.134)
Sample Period	1950 to 1999	1950 to 1999	1950 to 1999	1950 to 1997	1950 to 1997	1950 to 1997
R^2	0.910	0.929	0.933	0.938	0.932	0.936
Regression Standard Error	1.817	1.626	1.605	1.591	1.618	1.632
F-Statistic	154.367	147.701	121.592	102.683	148.222	83.518
Number of Observations	**50**	**50**	**48**	**48**	**48**	**48**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc..

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

IUR = insured unemployment rate.

TUR = total unemployment rate.

The extent to which exhaustion rates during the 1990s were found to be abnormally high was significantly affected by whether controls for the average duration of unemployment were included. Including that variable cut the estimated unexplained excess exhaustion rates of the 1990s roughly in half. That is, increasing unemployment durations during the 1990s appeared to explain approximately half the unusually high exhaustion rates.[3]

Many other factors may have affected exhaustion rates, but our ability to identify them precisely in this simple annual analysis was rather limited. Overall, the most important additional influence found was the impact of a declining proportion of workers in manufacturing employment.[4] Inclusion of this additional variable reduced the estimated excess exhaustion rates by a further 1 percentage point or so, and this excess itself was frequently not statistically different from zero.

Estimated effects of various parameters of the UI system, such as wage-replacement rates or average potential durations, were usually statistically insignificant and did not help to explain the high exhaustion rates of the 1990s. Similar conclusions apply to our attempts to control for levels of UI recipiency. These factors did not explain changes in exhaustion rates during the 1990s, primarily because these factors, on average, did not change very much.

Our examination of the national data on exhaustion rates therefore concluded that a significant portion of the apparent excessively high exhaustion rates during the 1990s could be

[3]Controlling for average unemployment duration also reduced the estimated excess exhaustion rates of the late 1990s (1996 to 1999) to statistical insignificance. Hence, for most of our subsequent discussion of the national data, we focus only on high exhaustion rates during the entire 1990s.

[4]Our time series data showed that the fraction of workers employed in manufacturing jobs declined at an annual rate of approximately 0.5 percent over the entire period examined. This rate of decline seemed to have accelerated somewhat during the 1990s.

explained by the increased unemployment durations that prevailed then. This finding is consistent with much of the literature about the labor market of the 1990s (discussed in Chapter I) and is, in itself, not especially surprising. To explore the policy relevance of the conclusion, however, requires a more extensive analysis of both state- and individual-level data.

B. STATE-LEVEL ANALYSIS

To identify other factors that may have affected UI exhaustion rates in the 1990s, we assembled a pooled data set using monthly data for 51 UI jurisdictions (the 50 states and the District of Columbia) over the period January 1980 to June 2000.[5] Although this data set is considerably larger than the national data set used in the previous section, the analyses that can be done with it are severely constrained by the few variables that are available for all UI jurisdictions over the entire period. Hence, although the results from this analysis can, to some extent, supplement our national-level findings, this is subject to significant limitations. In particular, the monthly data provide no information about changes in UI system parameters that may have affected exhaustion rates (although, at the national level, these factors did not change very much during the period). Hence, our approach will be to use this data set to identify states that appear to have had large unexplained increases in exhaustion rates. Then we adopt a less quantitative approach to examining whether these states appear to have anything in common that may have affected exhaustion rates.

Table III.2 contains results for our pooled analysis. All of them are based on a definition of the exhaustion rate that ameliorated some of the large variations in month-to-month totals for

[5]We also assembled a quarterly data set spanning this same period. Results from using that data set were very similar to those for the monthly analysis and will be mentioned only in passing.

TABLE III.2

REGRESSIONS OF THE EXHAUSTION RATE, USING STATE-LEVEL DATA

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	19.755*** (0.580)	---	31.246*** (0.654)	---	---
Unemployment Rate	2.180*** (0.057)	2.452*** (0.057)	2.306*** (0.056)	2.630*** (0.059)	2.478*** (0.077)
Indicator for 1990s	3.820*** (0.254)	4.291*** (0.203)	1.852*** (0.257)	2.303*** (0.262)	---
Percentage Employment in Manufacturing	---	---	-67.277*** (1.762)	-71.088*** (6.244)	-47.122*** (9.925)
Indicator Variables for Months	Yes	Yes	Yes	Yes	Yes
Indicators for States	No	Yes	No	Yes	Yes
Interaction Term Between 1990s and State Indicators	No	No	No	No	Yes
Sample Period	August 1980 to May 2000	August 1980 to May 2000	January 1982 to May 2000	January 1982 to May 2000	January 1982 to May 2000
R^2	0.345	0.621	0.424	0.632	0.645
Regression Standard Error	0.129	0.098	0.123	0.098	0.097
F-Statistic	491.141	1,649.746	588.023	1,470.046	319.932
Number of Observations	**238**	**238**	**221**	**221**	**221**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

first and final payments that occur at the state level. Specifically, we defined the exhaustion rate in any month as the ratio of a centered three-month moving average of final payments to a centered three-month moving average of first payments lagged six months. This definition is similar to that used in the national data, and the averaging helps to smooth the series a bit. Overall, between 1980 and 1999 the mean exhaustion rate in the national data was 33.6 percent, versus 33.7 percent in our pooled data set.[6] All the monthly analyses included seasonal control variables, and many also included controls for unchanging state-specific influences on the exhaustion rate.[7]

Conclusions from the analysis of the pooled data can be briefly summarized. The pooled results closely resembled those from the examination of national data in that each point increase in the unemployment rate was estimated to have increased exhaustion rates by between 2 and 2.5 percentage points. The results also suggested that exhaustion rates were approximately 4 percentage points higher during the 1990s than during the previous decade, after controlling for the unemployment rate.

Because data on unemployment durations are not available at the state level on a monthly basis, it was not possible to control for this variable directly. As a partial control for changes in unemployment durations, we added to the equations the percentage employed in manufacturing. This variable was estimated to have a significant negative effect on exhaustion rates (that is, lower percentages of the workforce in manufacturing increased exhaustion rates). Including the

[6]The standard deviation of the exhaustion rate was much smaller in the national data, however: 3.5 percentage points in the national data but nearly 15 percentage points in the pooled data (which allows for variation both over time and across states). The variation of the exhaustion rate within each state was also high (about 10 percentage points), primarily because of seasonal influences.

[7]That is, in formal terms, many of the analyses adopted a "fixed effect" framework.

variable also reduced, by about 2 percentage points, the estimate of the extent to which exhaustion rates were abnormally high during the 1990s.

As expected, the pooled results showed that average exhaustion rates vary widely across the states. Research has shown that a large portion of these long-term differences can be explained by the specific details of state UI systems (Nicholson 1981). Any attempt to measure the extent to which some states had unusually high exhaustion rates during the 1990s must take these long-term differences into account.

Our analysis identified nine states that during the 1990s had unexplained increases of more than 6 percentage points in their exhaustion rates: Arkansas, Florida, Michigan, Nevada, New York, Oregon, Tennessee, Texas, and Washington. Unfortunately, we did not have time series data on the characteristics of states' UI systems with which to conduct a detailed quantitative analysis of possible explanations for differing state exhaustion rate experiences during the 1990s. Instead, we adopted a more qualitative approach by looking in detail at UI activities in the nine states we identified as having unexpectedly high exhaustion rates during those years.[8]

This analysis suggested two conclusions. First, in none of the states' UI laws were there any major changes that might have explained the results. What changes there were in factors such as UI eligibility rules, benefit levels, or duration policy were quite modest. A quantitative examination of the characteristics of state UI laws yielded the same result—the nine states we identified had virtually no changes in their relative positions among the states on such measurable characteristics as UI wage-replacement ratios, or the average potential duration of benefits for which recipients were eligible.

[8]The primary sources for this examination were the annual surveys of changes in UI laws published each January in the *Monthly Labor Review* and published annual data on UI program financial characteristics.

Second, although several of these nine states made innovations in particular aspects of their UI laws, it is unlikely that these can explain the increase in exhaustion rates. Specifically, five of the states (Florida, New York, Oregon, Texas, and Washington) adopted special extended-benefit provisions for workers participating in training programs.[9] Four of the states (Michigan, New York, Oregon, and Washington) adopted special programs to pay UI benefits to workers who became self-employed. Although a quantitative evaluation of these provisions was beyond the scope of the present project, it seems doubtful that the initiatives could have had much of an effect on observed exhaustion rates for regular UI—primarily because current participation rates in such programs are believed to be low. In general, then, our qualitative examination of changes in UI laws in states with particularly large increases in exhaustion rates did not aid in clarifying the reasons for such large increases.

C. RECIPIENT-LEVEL ANALYSIS

Although the national- and state-level data analyses on exhaustion rates were able to identify several possibilities for the unusually high UI exhaustion rates in the 1990s, use of recipient-level data can provide an important supplement because of the much richer number and types of variables that are available. The recipient-level analysis relies on the examination presented in Chapter II on how recipients' characteristics are associated with the likelihood of benefit exhaustion. In that chapter, we use regressions to identify demographic, labor market, and UI program characteristics that affected whether or not recipients exhausted their benefits.

To investigate how changes in the characteristics of recipients over time affect exhaustion rates, we use regressions to compare the predicted probabilities of exhaustion with the average

[9]Washington also adopted a special extended-benefits program for timber workers.

characteristics of UI recipients in 1988 and 1998 (Table III.3).[10] The first row in Table III.3 uses coefficients associated with the regression model presented in Table II.8, while the second row in the table uses coefficients from a similar model based on 1988 recipient characteristics and actual 1988 exhaustion outcomes. The entries in the table represent estimated exhaustion rates using either the 1988 or 1998 coefficients, and the average UI recipient characteristics in either 1988 or 1998. The difference in the predicted exhaustion rates in each row can be interpreted as the effect that changes in the characteristics of recipients have on average exhaustion rates, when economic conditions are held constant.[11]

It was not possible to ensure that we have used consistent definitions to identify all recipient characteristics for the two time periods. In addition, these results are sensitive to sampling variation, procedures for handling missing data, and assumptions about the model specification. Nevertheless, this analysis suggests possible explanations for a large portion of the increase in the average exhaustion rate, identified earlier in this chapter.

We find that changes between 1988 and 1998 in recipient characteristics do indeed play a role in the increase in exhaustion rates (Table III.3). If the recipient population and labor market were unchanged between 1988 and 1998, we estimate that exhaustion rates would be about 4 to 5 percentage points lower in 1998 than they were.

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[10]See Appendix C for the details of the analysis.

[11]To estimate the 1988 exhaustion rate using 1998 model coefficients, we held unemployment constant at the 1998 rate. Thus, the estimated exhaustion rate is the rate that is predicted given recipients' characteristics in 1988 but under the same economic conditions that existed in 1998. Similarly, we held unemployment constant at the 1988 rate when we estimated the exhaustion rate using 1988 model coefficients and the 1998 average recipient characteristics. This is the main cause of higher simulated exhaustion rates when using the 1988 coefficients than when using the 1998 coefficients, although changes in the coefficients themselves also are a cause.

TABLE III.3

SIMULATED 1998 AND 1988 EXHAUSTION RATES
BASED ON UI RECIPIENTS' CHARACTERISTICS

	1998 Recipient Characteristics	1988 Recipient Characteristics	Difference Attributable to Changes in Recipients' Characteristics
Using 1998 Coefficients	30.0	25.9	4.1
Using 1988 Coefficients	32.3	27.2	5.1

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Appendix C contains the details of the analysis. The coefficients are estimated using an ordinary-least-squares (OLS) model with an indicator variable for whether a recipient exhausted benefits as the dependent variable. Explanatory variables include (1) an intercept term, (2) age and age-squared, (3) indicator variables for the recipient's sex and race/ethnicity, (4) indicator variables for the recipient's marital status and interaction terms of marital status with sex, (5) indicator variables for several educational attainment levels, (6) indicator variables for whether or not the recipient was in a union or experienced regular layoffs on the pre-UI job, (6) indicator variables for the reason for the job separation, (7) indicator variables for whether or not the recipient expected to be recalled or had a definite recall date, (8) indicator variables for several occupational and industry categories for the pre-UI job, (9) the state- or county-level unemployment rate, (10) pre-UI tenure, and (11) the wage replacement rate and potential duration.

To estimate the exhaustion rates using recipient characteristics from the two time periods, we multiplied the estimated coefficients with average recipient characteristics. We assumed that the unemployment rates were the same in 1988 and 1998 so that we could isolate the changes of recipient characteristics from changes in the economy.

We can attribute the effect to changes in several demographic, labor market, and UI program changes (see Appendix C). For example, about 0.6 percentage points of the increase in the exhaustion rate is attributed to the shortening of the average potential duration. (Although the change in average potential duration has been minor, from 24.0 weeks to 23.8 weeks, the effects of this on exhaustion rates are large.) In addition, the aging of the recipient population, the increase in the percentage who are Hispanic, and the decrease in the proportion who expected to be recalled also contribute to the increase in the exhaustion rate.

IV. LABOR MARKET EXPERIENCES

The economic consequences of job loss for UI recipients depend both on the length of time that they are unemployed and the quality of the jobs that they eventually obtain. The research reviewed in Chapter I suggests that recent unemployed workers are more likely to be long-term unemployed, compared to what has been the case historically (Katz and Krueger 1999). Nevertheless, some recipients become reemployed very quickly because they are recalled to their pre-UI jobs at the same earnings rate as before. Other recipients may either withdraw from the labor force or enjoy long-run earnings gains because they find new jobs that pay more than what they had been earning. Understanding the labor market experiences of UI recipients, particularly of exhaustees, can therefore help to assess the long-term consequences resulting from job loss.

In this chapter, we explore three aspects of recipients' labor market experiences. In Section A, we present information on recipients' unemployment spells, including the postexhaustion duration of unemployment (for exhaustees), and we examine the factors that influence the timing of reemployment. Section A also includes an analysis of the experiences of recipients who were not reemployed between the start of their UI claims and the interview—an average of 2.2 years. In Section B, we explore recipients' job search activities both shortly after their UI spells began and after benefit exhaustion (for exhaustees), focusing on the intensity of the job searches and on changes between these two periods. In Section C, we describe the characteristics of the first post-UI job, with particular emphasis on how they compare to those of the pre-UI job.

We find that UI recipients in 1998 were both less likely than UI recipients in 1988 to have a job and took longer to become reemployed when they did so during the 2.2 year follow-up period. Many recipients became reemployed shortly after their job loss, particularly those with definite recall dates, but many other recipients remained unemployed for long periods of time.

For example, a little over one-quarter (28 percent) of UI recipients were reemployed in 10 or fewer weeks. However, at one year after job loss, one-third of all recipients (35 percent) remained without reemployment, and one-fifth were without any post-UI job during the entire follow-up period. These reemployment rates by time period were lower in the late 1990s than in the late 1980s. Recipients' characteristics affect the length of time that recipients took to become reemployed and these effects are more likely to be statistically significant for recipients who did not expect to be recalled than for those who did.

Overall, work search rates were slightly lower in the late 1990s than in the late 1980s, although recipients who searched reported doing so intensively. Exhaustees were more likely than nonexhaustees to have looked for work, and they were more likely to look for work when they were collecting UI benefits than after they exhausted them. However, a little over 10 percent of exhaustees and nonexhaustees appeared not to have searched for work shortly after they started collecting UI benefits, because of reasons that imply they were out of the labor force.

Many recipients' post-UI jobs paid less than their pre-UI jobs, as was the case in the late 1980s. On average, exhaustees who became reemployed experienced a 16 percent reduction in their earnings at their first post-UI job, compared to a 7 percent reduction for nonexhaustees. Although the nonexhaustees' reduction in 1998 was larger than that in 1988, the distributions of earnings changes between 1988 and 1998 were similar. Recipients were even more likely to report having a job with an alternative employment arrangement after their UI spells than they were before the UI spells. This finding is particularly the case for exhaustees.

A. UNEMPLOYMENT AND EMPLOYMENT

Both historical concern about possibly detrimental effects of the UI system on recipients' job search and recent structural changes in the economy that might make it harder for recipients to find jobs suggest the importance of examining how long UI recipients take to find work. This

section presents information on how long UI recipients took to find jobs and how long after benefit exhaustion UI exhaustees took to return to work. We also examine the factors associated with the time to reemployment. In addition, we examine recipients' employment status at the time of the interview, and we document how recipients who never returned to employment differed from recipients who were reemployed during the follow-up period.

1. Duration of the Initial Spell of Unemployment

We begin the analysis of the labor market experiences of UI recipients by providing descriptive statistics on the length of time recipients were without a job. We define the "time to reemployment" as the time between when a recipient lost his or her job and when he or she reported first becoming reemployed after the UI claim date.[1] At this basic level, we do not attempt to distinguish between recipients who are actively seeking a job (or who are awaiting a return to a job) and recipients who are out of the labor force, although later in the section we explore the possibility that some recipients had withdrawn from the labor force. Because other research (Corson and Dynarski 1990) has found that recall expectations strongly affect the time to reemployment, we categorize recipients into three recall groups: (1) those who at the time they lost their job did not expect to be recalled to their former jobs, (2) those who expected to be recalled but who did not have a definite date, and (3) those who had a definite recall date.

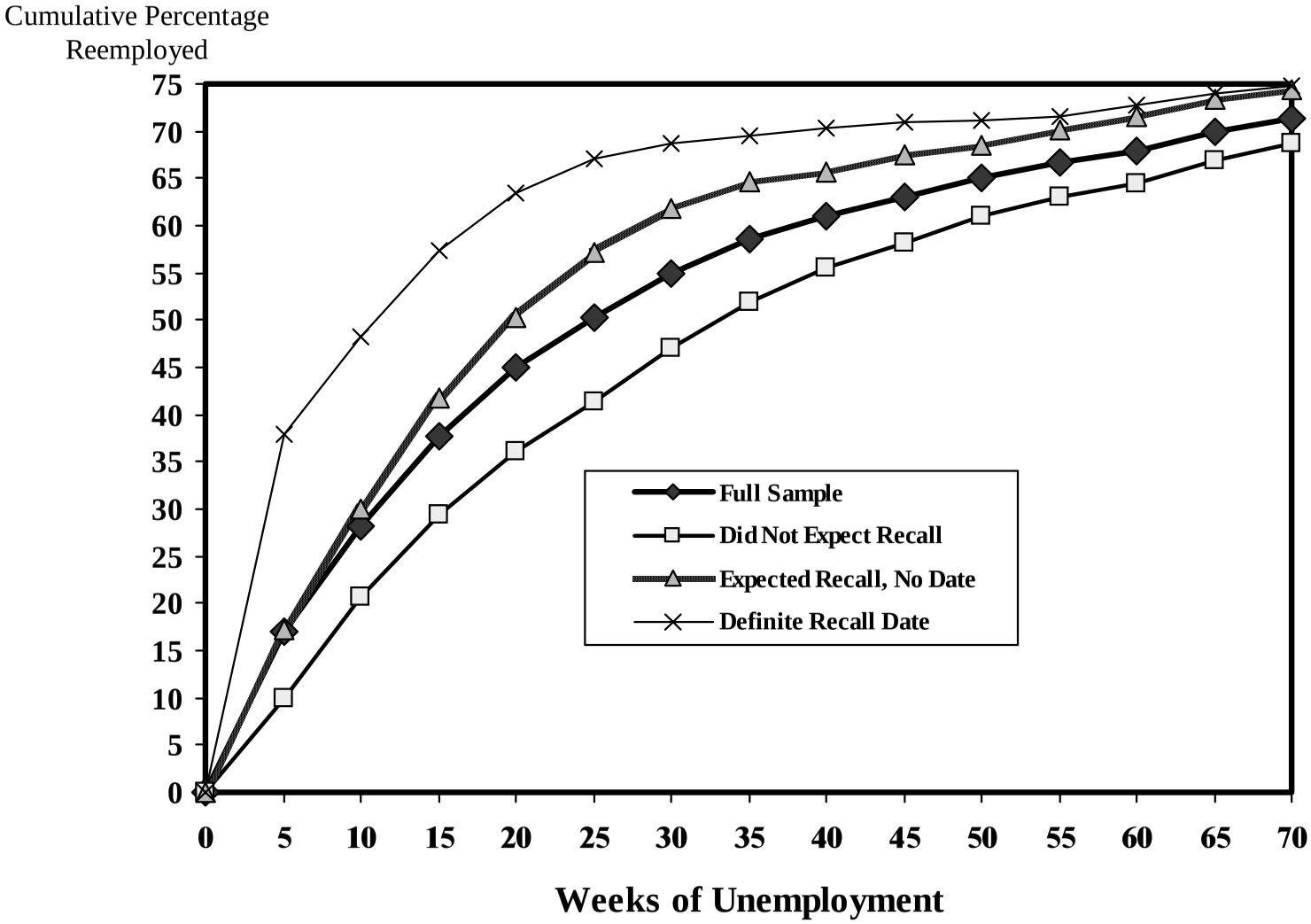
Many recipients became reemployed shortly after their job loss, but many others remained unemployed for long periods of time (Figure IV.1).[2] Weekly reemployment rates started out

[1]Eighty-two recipients reported starting at their first post-UI job prior to their UI claim date. Almost all these recipients were still at these jobs at the time of the interview. We excluded these recipients from the analysis of time to reemployment.

[2]The shortest followup between the job loss date and the interview is 18 months (about 78 weeks). A few recipients became reemployed after the 70-week period, but we limit Figure IV.1 to 70 weeks for ease of presentation.

FIGURE IV.1

PERCENTAGE OF RECIPIENTS REEMPLOYED, BY RECALL STATUS
AND BY LENGTH OF UNEMPLOYMENT SPELL



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

Note: The shortest followup between the job loss date and the interview is 18 months (about 78 weeks). A few recipients became reemployed after the 70-week period, but we limit Figure IV.1 to 70 weeks for ease of presentation.

quite high, but then declined as time passed. For example, a little over one-quarter (28 percent) of UI recipients were reemployed in 10 or fewer weeks. It took another 22 weeks for the number of recipients who were reemployed to double. In general, reemployment rates continued to decline throughout the rest of the follow-up period.

The speed with which recipients became reemployed varies dramatically on the basis of whether or not the recipient expected to be recalled. Nearly half (48 percent) of recipients with a definite recall date were reemployed within 10 weeks, in contrast to one-fifth (21 percent) of recipients who did not expect to be recalled. By 25 weeks, two-thirds of recipients with recall dates (67 percent) were reemployed, in contrast to two-fifths (41 percent) of recipients who did not expect to be recalled. The reemployment rates of recipients who expected to be recalled but who did not have a recall date fell between these other two groups.

At one year after job loss, one-third of all recipients (35 percent) remained without reemployment. The gap in reemployment rates between those with and those without recall expectations narrowed, as many recipients without recall expectations became reemployed in the second six months after the job loss. In contrast, few recipients who reported having had a definite recall date but who had not become reemployed obtained employment in the second six months.[3] Overall, 21 percent of recipients remained without a job during the average 2.2 year follow-up period. Reemployment rates for the three recall groups differed by only a few percentage points (71 percent for recipients who did not expect to be recalled were reemployed, compared to 75 percent for both of the recipient groups with recall expectations).

[3]The reemployment rate for recipients with definite recall dates rose from 67 percent to 72 percent between the 25th and 52nd weeks after job loss. The reemployment rate for recipients who did not expect to be recalled increased from 41 percent to 62 percent in the same period.

For all three recall subgroups, the reemployment rates are considerably lower than those found in the Corson and Dynarski study of UI recipients in 1988 (Table IV.1). At 25 weeks, reemployment rates in the late 1990s were 41, 57, and 67 percent for the no-recall group, the expected-recall-but-no-date group, and the definite-date group, respectively. The comparable rates for the recipients in 1988 were 49, 69, and 86 percent. The same pattern is found for reemployment rates at other time intervals after the job loss. Not only did late-1990s recipients with no recall expectations fare worse than their late-1980s counterparts, but late-1990s recipients who had recall expectations also fared worse. This pattern is consistent with the finding from Chapter II that slightly lower percentages of recipients who expected to be recalled (either with or without a recall date) were in fact recalled. Many of these recipients may have delayed their job search in anticipation of being recalled.

2. Postexhaustion Duration of Unemployment

To explore the rates at which exhaustees became reemployed, we constructed a figure similar to Figure IV.1, which started at the time that these recipients *exhausted their benefits* (Figure IV.2).[4] By the time of benefit exhaustion, the lengths of time to reemployment were very similar for recipients who expected recall and those who did not. Thus, although recipients with recall expectations are much more likely to become reemployed and less likely to exhaust their benefits, recall expectations do not seem to matter once a recipient exhausts his or her benefits. Within 10 weeks of exhausting benefits, about one-quarter (23 percent) of recipients who collected all their benefits were reemployed. Within 25 weeks, slightly more than one-third

[4]The time between the claim date and the last UI payment date varies, because recipients are eligible for a different number of weeks of benefits and may stretch out their benefit collection period if they receive less than the full weekly benefit amount each week. In addition, because recipients may have gotten a job and subsequently left it prior to benefit exhaustion, these estimates of time to reemployment after benefit exhaustion are sensitive to how recipients with jobs starting prior to the UI last payment date are handled.

TABLE IV.1

PERCENTAGES OF 1988 AND 1998 RECIPIENTS REEMPLOYED, BY RECALL STATUS AND LENGTH OF UNEMPLOYMENT SPELL

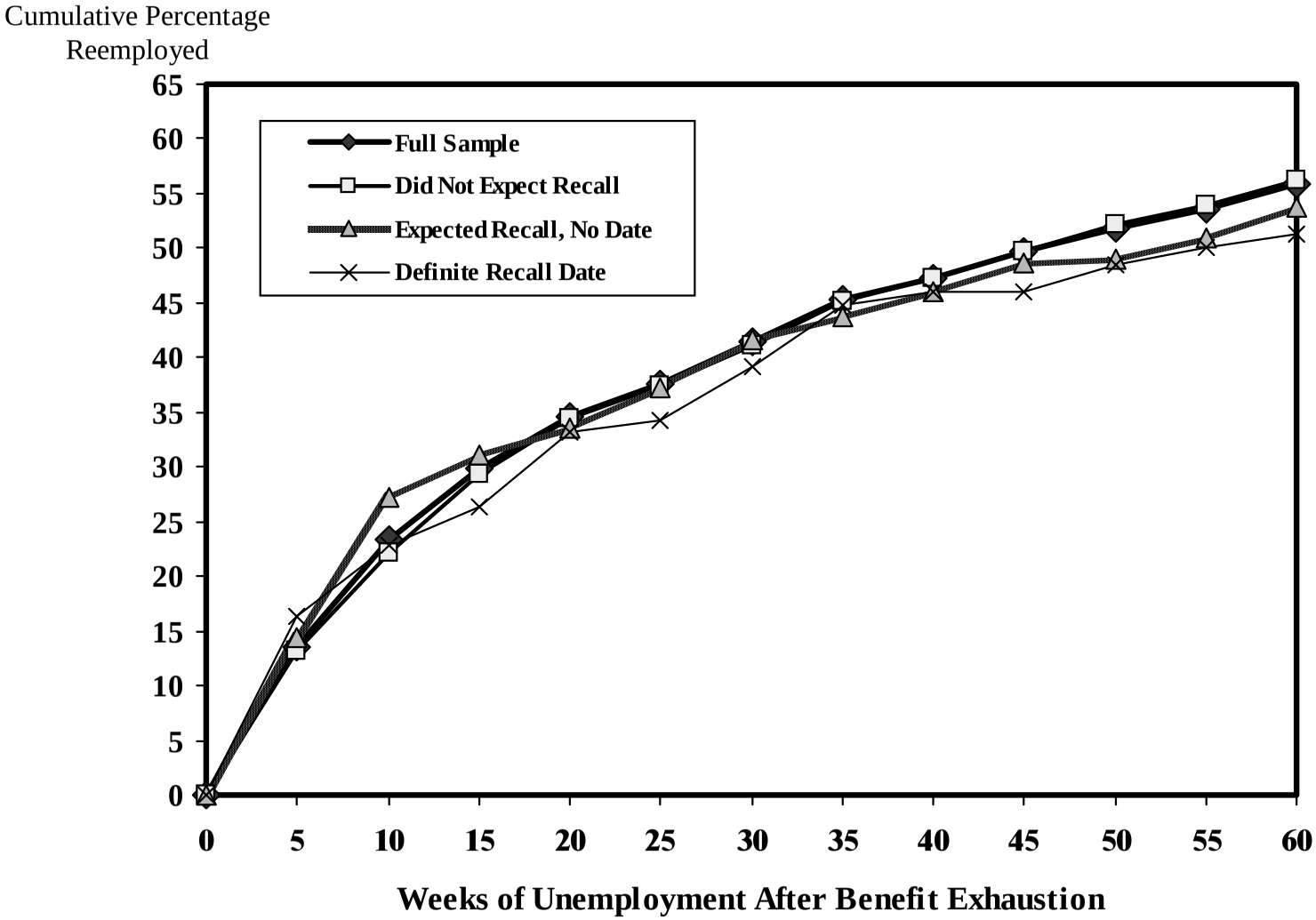
	Proportion Reemployed			
Weeks of Unemployment	Full Sample	No Recall Expectations	Expected Recall, No Definite Date	Expected Recall, Definite Date
		1988		
5	14.0	4.3	9.1	43.2
15	45.8	31.6	48.4	75.9
25	62.8	49.2	69.4	85.8
39	76.1	65.9	82.7	91.1
51	81.4	73.8	86.2	92.9
91	91.2	85.4	93.9	99.1
Unweighted Sample Size	**2,786**	**1,611**	**807**	**366**
		1998		
5	17.1	9.9	17.3	38.0
15	37.8	29.3	41.7	57.4
25	50.2	41.4	57.0	67.2
39	60.7	55.0	65.5	70.3
51	65.3	61.3	69.0	71.5
91	74.8	73.5	76.6	75.7
Unweighted Sample Size	**3,466**	**1,958**	**875**	**539**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc., for 1998 data. Corson and Dynarski (1990) for 1988 data.

NOTE: The sample sizes in the "full sample" column are greater than the sum of the sample sizes in the other three columns because some recipients did not provide information on recall status.

FIGURE IV.2

PERCENTAGE OF EXHAUSTEES REEMPLOYED, BY RECALL STATUS AND BY LENGTH OF UNEMPLOYMENT SPELL AFTER BENEFIT EXHAUSTION



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

(38 percent) were reemployed. As in Figure IV.1, Figure IV.2 implies that exhaustees became reemployed at a declining rate over time, such that exhaustees who did not find jobs for several months after their benefit exhaustion were likely to remain nonemployed for much longer. Even at one year after the recipients' last benefit checks, many exhaustees (about 48 percent) remained without a job.

The analysis of reemployment after benefit exhaustion tells a story similar to that of the analysis of time to reemployment after job loss: higher percentages of exhaustees in 1998 than in 1988 were jobless for longer periods of time (Corson and Dynarski 1990). For example, 25 percent and 40 percent of 1988 exhaustees were reemployed within 4 weeks and 10 weeks of benefit exhaustion, respectively. In contrast, the reemployment rates for 1998 exhaustees at these postexhaustion intervals were 11 percent and 23 percent, respectively. Similarly, 40 percent of l988 exhaustees remained without employment at 26 weeks after exhaustion, compared to 62 percent of 1998 exhaustees.

3. Analysis of the Time to Reemployment

In this section, we expand upon the previous descriptive analysis to examine the demographic, labor market, and UI program characteristics most strongly associated with the time to reemployment. The analysis here uses potential explanatory variables similar to those used in Chapter II to explore recipient characteristics associated with UI benefit exhaustion.

The dependent variable for the analysis is the logarithm of the number of weeks from the job loss that initiated the UI claim in 1998 to the first post-UI job. Because some UI recipients do not have any post-UI employment, we use statistical techniques that take into account that we observe these recipients for a period of time when they are without jobs, but that we do not know

whether they ever became reemployed after the follow-up interview.[5] Using the logarithm of the number of weeks until the first post-UI job also minimizes the bias caused by ending the follow-up period with the interview, rather than with the first post-UI job start date for recipients whose job start date is not observed.

As was done in Chapter II, we present results for the full sample and for the three subgroups based on the recipients' recall expectations (Table IV.2). With a few differences, many of the factors that were found in Chapter II to be associated with an increased likelihood of benefit exhaustion also are found to be associated with a longer time to first reemployment. All else equal, married or cohabiting men become reemployed more quickly than never-married men (the "excluded group"); the opposite is true for women. Racial or ethnic minorities take longer to find jobs than do non-Hispanic whites. High school dropouts take longer than to find a job than do high school graduates or GED recipients (the "excluded group"), while recipients with higher educational attainment take less time. Recipients with regular layoffs take less time to find a job. Because recall expectations generally are accurate, and because the time between a layoff and a recall (when a recall occurs) is usually short, recipients who expect recall, with or without having a recall date, have shorter periods of time in between jobs than do recipients who do not expect to be recalled (the "excluded group").

Having a job separation for some other reason beside a layoff, quit, or discharge has a large positive effect on the time to reemployment. This group of recipients includes both retirees and other people whose reported reason for job separation could not be easily classified as a layoff, quit, discharge, or retirement. Although recipients who reported leaving their pre-UI job because they retired are a small proportion of recipients in this classification, they probably have a strong

[5]That is, we take into account the right-censoring of the follow-up period.

TABLE IV.2

UNEMPLOYMENT DURATION ANALYSIS
(Standard Errors in Parentheses)

	Weeks to First Reemployment			
Independent Variables	Full Sample	No Expected Recall	Expected Recall, No Definite Date	Expected Recall, Had a Definite Date
Intercept	4.758***	4.951***	3.463***	4.955***
	(0.389)	(0.457)	(0.715)	(1.363)
Age at Claim Date	-0.034**	-0.063***	0.023	0.035
	(0.017)	(0.020)	(0.032)	(0.069)
Age-Squared (x 100)	0.067***	0.104***	-0.001	-0.020
	(0.021)	(0.024)	(0.038)	(0.081)
Female	0.011	0.047	-0.008	0.193
	(0.118)	(0.127)	(0.268)	(0.500)
African American	0.127	0.186*	0.262	-0.572*
	(0.088)	(0.096)	(0.190)	(0.312)
Hispanic	0.480***	0.273**	0.704***	0.778*
	(0.102)	(0.118)	(0.182)	(0.400)
Other Racial/Ethnic Background	0.294***	0.360***	0.350*	-0.626
	(0.104)	(0.111)	(0.209)	(0.448)
Married/Cohabiting at Claim Date	-0.286***	-0.283**	-0.133	-0.479
	(0.097)	(0.116)	(0.178)	(0.321)
Separated, Widowed, or Divorced at Claim Date	-0.061	-0.205	0.181	-0.031
	(0.126)	(0.148)	(0.225)	(0.464)
Female and Married/Cohabiting	0.393***	0.397**	0.130	0.470
	(0.141)	(0.155)	(0.309)	(0.561)
Female and Separated, Widowed, or Divorced	-0.228	-0.007	-0.720**	-0.585
	(0.172)	(0.189)	(0.363)	(0.710)
High School Dropout	0.350***	0.302***	0.291*	0.152
	(0.094)	(0.115)	(0.161)	(0.324)
Vocational/Technical/Business Associate's Degree	-0.189**	-0.179**	-0.208	0.004
	(0.076)	(0.082)	(0.158)	(0.315)
Bachelor's Degree	-0.251**	-0.299***	-0.457*	0.609
	(0.101)	(0.103)	(0.255)	(0.449)
Other Education	-0.160	-0.091	-0.732	0.731
	(0.157)	(0.148)	(0.466)	(1.074)
Months Tenure (x 100)	0.081**	0.105**	0.115	-0.050
	(0.040)	(0.047)	(0.076)	(0.127)

TABLE IV.2 (*continued*)

Independent Variables	Weeks to First Reemployment			
	Full Sample	No Expected Recall	Expected Recall, No Definite Date	Expected Recall, Had a Definite Date
Union	-0.084	-0.076	-0.340***	0.321
	(0.075)	(0.101)	(0.130)	(0.232)
Had Regular Layoffs	-0.479***	0.066	-0.658***	-1.141***
	(0.080)	(0.145)	(0.123)	(0.224)
State Unemployment Rate (Percentage)	0.040	0.026	0.081	-0.020
	(0.031)	(0.036)	(0.058)	(0.112)
Quit Pre-UI Job	-0.066	-0.041		
	(0.127)	(0.109)	--	--
Fired from Pre-UI Job	-0.121	-0.097		
	(0.096)	(0.082)	--	--
Other Reason Left Pre-UI Job (Not a Layoff)	1.008***	0.898***		
	(0.193)	(0.165)	--	--
Expected Recall	-0.252***			
	(0.076)	--	--	--
Had a Definite Recall Date	-0.099			
	(0.090)	--	--	--
Wage Replacement Rate	-0.215	-0.118	-0.316	-0.437
	(0.180)	(0.203)	(0.367)	(0.642)
Potential UI Duration	-0.019***	-0.010	-0.022*	-0.062**
	(0.007)	(0.008)	(0.013)	(0.026)
Construction Occupation	-0.013	0.046	-0.040	-0.758**
	(0.110)	(0.144)	(0.175)	(0.383)
Machinist Occupation	0.097	0.133	0.269	-0.332
	(0.092)	(0.111)	(0.178)	(0.284)
Sales Occupation	-0.184	-0.135	-0.101	-0.327
	(0.116)	(0.107)	(0.391)	(0.710)
Manufacturing Industry	-0.076	0.101	-0.363**	-0.255
	(0.074)	(0.082)	(0.144)	(0.274)
Retail Trade Industry	-0.182*	-0.075	-0.433*	-0.411
	(0.102)	(0.101)	(0.261)	(0.457)
Scale Parameter	1.255	1.062	1.252	1.728
	(0.023)	(0.026)	(0.044)	(0.078)
Log Likelihood	-4,330	-2,285	-1,148	-794
Unweighted Sample Size	**2,561**	**1,466**	**680**	**415**

TABLE IV.2 (*continued*)

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Dependent variables are expressed in natural logarithms. The models use a Weibull distribution to correct for right censoring and are estimated on unweighted data.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

influence on the estimated coefficient for this group because they are likely not to have been reemployed during the follow-up period.

The state total unemployment rate has a moderate (but not statistically significant) influence on the time until reemployment. All else equal, a 1-week increase in the unemployment rate from the sample mean of 4.7 percent increases the time to reemployment by 4 percent, or 0.2 weeks. It is possible that the effects of the total unemployment rate are not statistically significant because of relatively little variation in the total unemployment rate during the sample period (1998).

The coefficients for both the wage replacement rate and potential duration are negative (although statistically significant for potential duration only), which contradicts the theoretical predictions about the disincentive effects of UI benefit generosity on the speed of reemployment. This result was found in Corson and Dynarski (1990), as well, in the examination of recipients in 1988.

Finally, we note that the effects of demographic characteristics on the time to reemployment are less likely to be statistically significant for the two subgroups who expected to be recalled. Some of the coefficients' point estimates are large in magnitude, however. For the subgroup with definite recall dates, especially, the characteristics of the pre-UI job (rather than of the recipient) have large estimated effects on the time to reemployment.

4. Labor Market Status at the Interview Date

Given high rates of recipients without any post-UI employment, it is possible that a portion of the nonworkers withdrew from the labor force. To supplement our analysis of post-UI employment and job search around the time of the 1998 benefit collection period, we examined UI recipients' labor market status at the time of the interview to see whether recipients were working, unemployed, or out of the labor force.

Two-thirds of recipients were working when we interviewed them (Table IV.3). Slightly more than half (56 percent) of exhaustees were working, compared to 72 percent of nonexhaustees. The nonworkers at the time of the interview consist of (1) recipients who never worked during the follow-up period, and (2) recipients who had at least one post-UI job but were not working at the interview. Since about 21 percent of recipients were never reemployed, about 12 percent were in the latter category.

We asked recipients who were not working when we interviewed them whether they were looking for work and, if not, why not (Table IV.3). Unfortunately, this question was placed in the section of the interview on post-UI jobs and thus was not asked of recipients who *never* worked during the follow-up period.[6] Nevertheless, we still can gain insights into the labor market status of nonworkers at the time of the interview. A greater proportion of nonworkers reported *not* looking for work than looking for work. Since recipients with no post-UI job are probably more likely to have withdrawn from the labor force than recipients who had worked after their 1998 UI claim, it is likely that an even lower percentage of them were looking for work.

[6]We asked survey respondents several other questions about their job search, such as whether they were looking for work after the start of the UI claim and, if not, why not; whether they stopped looking if they had looked; and why they stopped if they did. We asked similar questions of exhaustees about their job search after benefit exhaustion. Almost all exhaustees who reported not looking for work at UI start because they had retired or who reported having stopped looking because they had retired gave similar answers for after their benefit exhaustion. Both exhaustees and nonexhaustees who gave these types of answers were highly likely not to have had any post-UI employment. Therefore, we assumed that any recipient who had no post-UI job and who reported not looking for work or having stopped looking because of retirement around the time of the UI claim was still retired at the time of the interview.

TABLE IV.3

LABOR MARKET STATUS AT TIME OF INTERVIEW
(Percentages, Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Labor Market Status at Time of Interview			
Working	55.6***[a]	71.9	66.9
Not Working, but Looking for Work	9.4	5.8	6.9
Not Working and Not Looking for Work	10.6	8.3	9.0
Not Working, Unknown Search Status	24.3	14.0	17.2
Unweighted Sample Size	**1,848**	**2,030**	**3,878**
If Not Working and Not Looking for Work, Reason Is:			
Waiting for New Job to Start	19.9	23.9	22.4
Expected to Get Old Job Back, or on Temporary Layoff	11.3	16.0	14.3
In School or Other Training	5.4	6.6	6.1
Did Not Want to Work/Did Not Want to Look for Work	3.0	6.0	4.9
Retired or About to Retire	36.9	21.7	27.3
Believed No Work is Available in Line of Work or Area	0.6	0.0	0.2
Personal Handicap in Finding a Job, Including Racial, Sexual, or Age Discrimination	0.5	0.6	0.5
Ill Health/Physical Disability/Pregnancy	13.3	15.8	14.9
Could Not Arrange Child Care	1.9	2.3	2.1
Other Family Responsibility	4.1	0.9	2.1
Expected Union to Provide Job	0.0	0.6	0.4
Moving/Relocating	0.5	1.1	0.9
Other	2.8	4.7	4.0
Unweighted Sample Size	**197**	**168**	**365**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The recipients' employment statuses are at the time of the interviews. Recipients who did not work between their claim date and the date of the interview were erroneously skipped past questions on their current job search efforts and, if not looking for work, the reasons for not doing so. We have assumed that 10 nonexhaustees and 22 exhaustees who reported not looking or having stopped looking for work during the first few weeks after their job ended because they were retired were also for that reason not looking for work at the time of the interview. We also included as not working but looking for work 11 recipients in the "Not Working, Unknown Search Status" category, because they refused to report whether or not they were looking for a job, in response to earlier questions in the survey.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

We concluded that those who reported both not working and not looking for work at the time of the interview are comprised of two distinct groups. One group consists of recipients who reported not looking for work because they were waiting for a new job to start or expected to be recalled to a job. Among nonworkers who were not looking for work, exhaustees were less likely than nonexhaustees to have given responses indicating they were still attached to the labor market in this way. It is unsurprising to find some recipients (particularly nonexhaustees) without work when we interviewed them, because a nontrivial portion of recipients reported being regularly laid off and/or having employment in a seasonal industry (Chapter II).

The other group of nonworkers consists of recipients who were most likely out of the labor force. Common reasons were that they did not want to work or to look for work, or that they were retired or about to retire. Others reported ill health, physical disability, or pregnancy; child care problems; or family responsibilities. Among nonworkers who were not looking for work, exhaustees were more likely than nonexhaustees to have given responses indicating they were out of the labor force. Once again, it is likely that many of the recipients who were not asked about their labor market status at the time of the interview were also out of the labor force for one of these reasons.

5. Characteristics of Recipients Who Were Never Reemployed

About one-fifth of UI recipients said they never had a job during the time between when they lost their pre-UI jobs and the time of the follow-up interview.[7] We find that this group was quite different from respondents who became reemployed (Table IV.4). On average, recipients who never became reemployed tended to be older than reemployed workers, and they were much more likely to be age 55 or older. Females, high school dropouts, and recipients who were

[7]We restrict post-UI jobs to jobs that lasted for at least two weeks after the claim date.

TABLE IV.4

CHARACTERISTICS OF RECIPIENTS, BY REEMPLOYMENT STATUS
DURING THE FOLLOW-UP PERIOD
(Percentages Unless Otherwise Stated)

	Not Reemployed	Reemployed	Total[a]
Demographic Characteristics			
Mean Age (Years)	43.8***	39.3	40.1
55 Years Old or Older	24.2***	9.9	12.5
Female	49.1	43.5	44.4
High School Dropout	26.1***	15.8	17.5
White, Non-Hispanic	56.5***	68.2	66.1
Had Working Spouse or Partner at UI Claim Date	39.4	40.0	39.8
Pre-UI Job Characteristics			
Employed in Manufacturing	35.7	31.9	32.5
Employed in Services	21.5	22.6	22.6
Earned Less than $300 Per Week	30.1**	22.3	23.8
Three or More Years Tenure	58.8**	50.7	52.1
Reason for Job Loss:			
Layoff	81.0***[b]	83.0	82.6
Quit	4.1	5.4	5.1
Fired	6.0	9.5	8.8
Other	9.0	2.2	3.4
Expected to Be Recalled	46.4	46.9	46.8
Was a Dislocated Worker[c]	21.8	17.1	17.9
Activities During Unemployment Spell			
Did Not Search for Work at Start of UI Claim	44.4***	35.0	36.6
Went to Job Service/One-Stop at Start of UI Claim	36.3	41.5	40.6
Participated in Training or Education	10.2*	14.7	13.8
Unweighted Sample Size	**798**	**3,080**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Includes 29 recipients who did not know or refused to report whether they had been employed.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for recipients who were not reemployed and recipients who were reemployed.

[c]Dislocated workers were classified according to the Bureau of Labor Statistics definition (Flaim and Sehgal 1985; Hipple 1999). Recipients who were laid off because a plant or facility closed or moved, because a job or shift was eliminated, or for lack of work were counted as dislocated workers if they had at least three years of job tenure and were not recalled.

*Significantly different from those who were reemployed, at the .10 level, two-tailed test.
**Significantly different from those who were reemployed, at the .05 level, two-tailed test.
***Significantly different from those who were reemployed, at the .01 level, two-tailed test.

members of minority racial/ethnic groups also make up a greater proportion of nonreemployed recipients. Somewhat surprisingly, recipients with working spouses or cohabitants were not significantly more likely to fall into this category—a finding that goes against an expectation that UI recipients with another worker in the household are less likely to become reemployed.

Pre-UI job characteristics and job search activities differ in other notable ways between recipients who became reemployed and those who did not. Recipients with no post-UI jobs were more likely to have been from a manufacturing job, to have had low earnings, and to have had high tenure at the pre-UI job. A larger percentage of recipients who never became reemployed are dislocated workers. They also are much more likely to have reported leaving their pre-UI job for "other" reasons besides a layoff, quit, or discharge. The "other" category includes recipients who reported having left their pre-UI job because they retired, as well as those whose pre-UI job ended for an assortment of other reasons, such as ill health, reduced hours, or labor disputes. (For many of these "other" reasons, we cannot distinguish whether or not the job separation was voluntary.) As one would expect, recipients with no post-UI jobs are less likely to have searched for work at the start of their UI claim, gone to Job Service or a one-stop center, or participated in education or training.

Although recipients with no post-UI jobs were less likely to have searched for work, visited Job Service or a one-stop, or participated in activities that would improve their skills, they did not differ from reemployed recipients in their recall expectations. Because recipients with no post-UI jobs were not recalled, this group represents a portion of those recipients who had inaccurate expectations about whether they would be recalled—those that did not subsequently find work with a new employer.

Overall, recipients who were not reemployed at any time during the follow-up period may therefore be comprised of two groups: (1) those who left the labor force shortly after losing their

pre-UI jobs, and (2) dislocated workers who had unrealistic recall expectations and subsequently left the labor force.

B. JOB SEARCH ACTIVITY

An important goal of the UI program is to provide temporary financial assistance to unemployed workers so that they may conduct an effective job search. However, some analysts of the UI program are concerned that this financial assistance may discourage aggressive efforts to find employment until the UI benefits are nearly exhausted. If recipients have low levels of job search while they are collecting benefits but increase their job search around the time that benefits are exhausted, then it may be appropriate to consider policies to encourage greater levels of job search effort while recipients receive benefits. If, in contrast, we find that search efforts are high at the start of the unemployment spells, then policies to increase job search may be inappropriate or unnecessary.

Another possibility is that unemployed workers may become discouraged about their prospects of finding employment if they search unsuccessfully for a long time. In this case, we would expect to find that work search efforts would decline over time, as workers think that there is no work available or that for other reasons they will not be hired.

We find patterns that are consistent with conclusions drawn in the earlier study that delayed job search is not a primary reason that some UI recipients exhaust their benefits (Corson and Dynarski 1990). Exhaustees are more likely than nonexhaustees to look for work shortly after they become unemployed, and recipients who do not expect to be recalled are more likely than those who do to look for work. However, as was discussed in both Chapter II and this chapter, a portion of recipients who expect to be recalled (either with or without a definite date) do not return to their former employers.

In addition, very few recipients who do not search for work appear to be discouraged about their reemployment prospects (as indicated by their reporting that no work was available, they lacked experience, or they faced discrimination). However, about 11 percent of exhaustees, the same rate as in the late 1980s, appear to have been out of the labor force.

1. Job Search Following Initial Benefit Receipt and Benefit Exhaustion

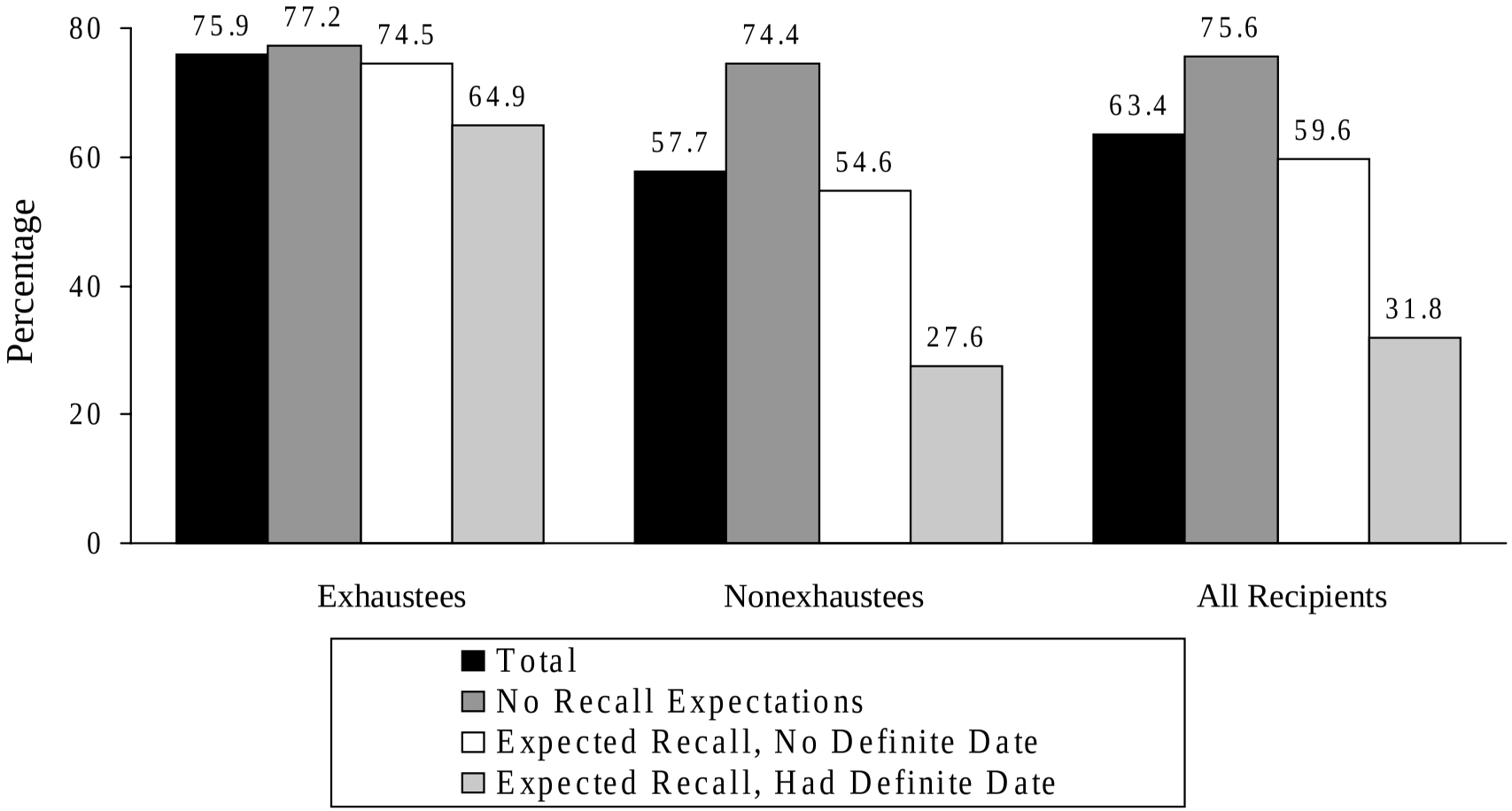
We asked UI recipients whether they looked for work at two points in time: at the start of their UI spells and, for recipients who exhausted benefits, shortly after their benefit exhaustion. Overall, 63 percent of recipients reported looking for work at the start of their UI spells (Figure IV.3). As has been found in the past, recipients who expected to be recalled and had a definite date had much lower rates of job search (32 percent) than did recipients who did not expect to be recalled (76 percent). Recipients who expected to be recalled but did not have a definite date fell in between these other groups (60 percent). These rates of job search were several percentage points lower in the late 1990s than in the late 1980s and early 1990s.[8]

Overall, exhaustees were more likely than nonexhaustees to have looked for work (76 percent compared to 58 percent). A portion of this disparity is caused by the difference in the recall expectations of exhaustees and nonexhaustees: recipients who expected recall make up a greater proportion of nonexhaustees than exhaustees. However, a high proportion of exhaustees who expected to be recalled (either with or without definite recall dates) reported having

[8]Sixty-seven percent of recipients searched at the start of the UI claim in the late 1980s. The comparable percentages for exhaustees and nonexhaustees were 82 and 62 percent, respectively. During the recessionary period of the early 1990s, almost 90 percent of long-term unemployment recipients (who collected both regular UI and Emergency Unemployment Compensation benefits) searched, and about 70 percent of short-term recipients searched (Corson et al. 1999).

FIGURE IV.3

LOOKED FOR WORK AT UI START



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

searched for work than did nonexhaustees who expected to be recalled.[9] Recipients who did not expect to be recalled were about equally likely to report searching, regardless of whether or not they ultimately exhausted their benefits (77 percent of exhaustees and 74 percent of nonexhaustees).

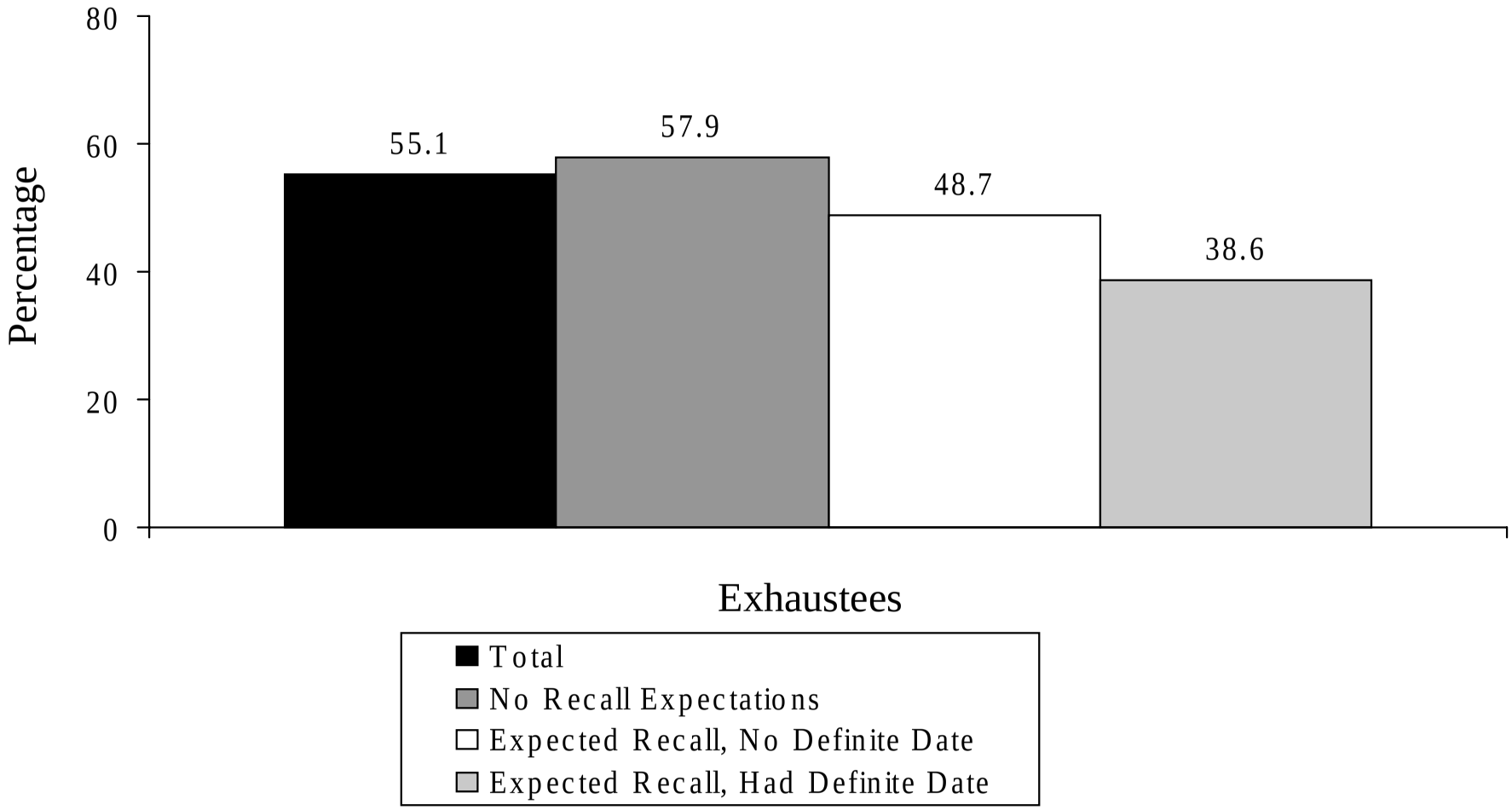
As a group, exhaustees were less likely to look for work after benefit exhaustion (55 percent) than they were at the start of their UI claims (Figure IV.4). This rate is considerably lower than the rate for exhaustees in the late 1980s (74 percent). This pattern is found regardless of whether or not the exhaustees reported expecting recall or having a definite recall date at the time they lost their jobs.

Among recipients who looked for work at the start of the UI claim, exhaustees and nonexhaustees appeared to look about equally intensively, at 15 to 16 hours per week (Table IV.5). About 85 percent of each group reported contacting at least three employers per week, on average, a number that meets or exceeds most states' UI program requirements for employer contacts. Recipients also reported using a wide variety of methods to look for work. Most recipients relied on traditional job search methods, such as asking friends or relatives about job openings and looking at want ads. However, slightly more than one-quarter of UI recipients reported using the Internet to look for and apply for work. This rate is higher than the rate of 15 percent found for unemployed job seekers through a special supplement to the December 1998 Current Population Survey (Kuln and Skuterud 2000), suggesting that UI recipients relied on

[9]The previous study of exhaustees (Corson and Dynarski 1990) found a similar, puzzling pattern. It may be that exhaustees were less certain than nonexhaustees about their likelihood of being recalled. Alternatively, it may be that the differences reflect a problem caused by the retrospective nature of the survey. Recipients who exhausted benefits may be more likely to report having looked for work at the start of their UI spells because they ultimately had to look for work once they realized they were not going to be recalled to their former employers. In contrast, recipients who expected to be recalled and who were recalled did not look for work and did not become confused about the time periods referred to in the survey.

FIGURE IV.4

LOOKED FOR WORK AFTER UI BENEFIT EXHAUSTION



Source: Study of UI Exhaustees, Mathematica Policy Research, Inc.

TABLE IV.5

JOB SEARCH ACTIVITIES OF RECIPIENTS WHO LOOKED FOR WORK
(Percentages Unless Stated Otherwise)

	Exhaustees		Nonexhaustees	Total
	At UI Start	After Exhaustion	At UI Start	At UI Start
Hours Looked per Week				
0 to 5	20.6	23.2	24.0	22.8
6 to 10	23.4	23.5	26.0	25.0
11 to 20	34.7	32.0	27.6	30.2
21 or more	21.4	21.4	22.4	22.0
Mean	15.9	15.4	15.0	15.3
Average Number of Employers Contacted Each Week				
0	1.5	0.0	2.7	2.3
1 to 2	11.3	15.6	15.7	14.1
3 to 5	47.3	43.5	46.5	46.8
6 or more	40.0	41.0	35.1	36.9
Job Search Strategies				
Contact private employment agencies	42.0*	43.2	35.8	38.1
Ask friends or relatives about job openings	88.1*	87.0	83.8	85.4
Look at want ads	91.9	88.2	88.5	89.8
Answer ads	82.0**	77.9	75.3	77.8
Personally place ads in newspapers or other publications	5.3	6.5	4.2	4.6
Apply directly to places	91.0	84.7	88.6	89.5
Check with the union	6.3**	6.0	10.8	9.1
Use the Internet to look or apply for work	31.2	31.9	26.5	28.3
Other[a]	6.9	3.7	5.5	6.0
Unweighted Sample Size	**1,413**	**1,014**	**1,168**	**2,581**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The samples are restricted to recipients who looked for work at UI start or after benefit exhaustion. The sample of exhaustees who were asked about job search following exhaustion includes only those exhaustees who indicated that they had stopped collecting UI benefits because they exhausted their benefits. Exhaustees who said that they stopped colleting for other reasons (for example, they found a job) are not included in these distributions.

[a]Commonly listed "other job" search strategies include contacting the state employment/unemployment center, contacting a prior employer, working temporary or "odd" jobs, and moving to look for a job.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

this technology more than did other job seekers. Internet-based job search strategies could include searching for job openings, finding out more about potential employers, making one's resume available for employers to see, and even making initial contacts with potential employers. Although a smaller proportion of exhaustees looked for work after benefit exhaustion than at the start of the UI claim, those that did look for work after exhaustion searched as intensively: about 15 hours per week. They appeared to contact about the same number of employers and used the same mix of job search strategies.

2. Recipients Who Did Not Look for Work

In this section, we examine why some UI recipients did not look for work and compare their characteristics with those who did look. About two-thirds of recipients who did not look for work at their start of their UI claims or after benefit exhaustion said it was because they expected to be recalled, to start a new job, or to get a job through their union (Table IV.6). As discussed in Chapter II, about 80 percent of recipients who expected to be recalled had accurate expectations (particularly those who did not exhaust their benefits). Exhaustees who did not look for work were much more likely to report expecting a new job to start after their benefit exhaustion (42 percent) than they were at the UI start (7 percent). Some of these exhaustees are recipients who reported looking for work at the start of the UI spell and who found jobs at about the time their benefits were exhausted.

Several other reasons for not looking for work were cited infrequently, but they imply that a nontrivial portion of the recipients who did not look for work were out of the labor force. The most common of these other reasons, especially among exhaustees, were that the respondent

TABLE IV.6

REASONS RECIPIENTS DID NOT LOOK FOR WORK
(Percentages Unless Stated Otherwise)

	Exhaustees		Nonexhaustees	Total
	At UI Start	After Exhaustion	At UI Start	At UI Start
Reason for Not Looking for Work				
New job to start	6.9***[a]	42.2	6.0	6.2
Expected to be recalled	28.5	22.8	73.2	64.1
In school or other training	8.0	7.3	1.6	2.9
Did not want to work or to look for work	17.1	3.8	4.3	6.9
Retired	6.7	5.9	1.6	2.6
Believed that no work was available	1.8	0.7	1.0	1.2
Lacked necessary experience, faced discrimination, or had another personal handicap	0.7	0.4	0.2	0.3
Ill health/disability/pregnancy	19.0	10.4	4.5	7.5
Family responsibility	3.8	3.1	0.7	1.3
Expected union to provide job	2.3	1.3	3.6	3.4
Other	5.2	2.2	3.2	3.6
Unweighted Sample Size	**443**	**837**	**867**	**1,310**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The samples are restricted to recipients who did not look for work at the UI start or after benefit exhaustion.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

(1) did not want to work or look for work, (2) had ill health or a disability, or (3) was pregnant.[10] Taken as a whole, 47 percent of exhaustees and 11 percent of nonexhaustees who did not look for work at the start of the UI claim reported not wanting to work or look for work, being retired, having health or medical problems, or having family responsibilities. Put another way, recipients who looked as if they were out of the labor force at the start of the UI claim were about 12 percent of exhaustees and 5 percent of nonexhaustees. Only a small percentage of recipients reported not looking for reasons that imply they were discouraged about their job prospects, such as believing no work to be available, necessary experience to be lacking, or discrimination to be an obstacle. The strong economy in the late 1990s most likely contributed to this finding.[11]

Compared to UI recipients who looked for work, recipients who did not look were more likely to be age 55 years or older, high school dropouts, and white non-Hispanics (Table IV.7). They also were more likely to have had a pre-UI manufacturing job, to have had more tenure, to have been laid off, and to have expected recall. On average, they collected fewer weeks of UI benefits and were less likely to exhaust their benefits. As a group, however, they were less likely to have any post-UI employment (78 percent compared to 84 percent for recipients who searched for work). However, when they did return to work, they did so relatively quickly. Taken as a

[10]Health- and medical-related problems typically do not disqualify a claimant from receiving UI benefits unless he or she is unable to work or unavailable for work. However, UI laws do not relax work search requirements on the basis of health- and medical-related conditions.

[11]The low rate of discouraged workers is similar to the rate found by Corson and Dynarksi (1990) when they examined UI recipients during a period with a low unemployment rate. A study of long-term unemployment compensation recipients during the recession in the early 1990s found slightly higher (but still relatively low) rates of discouraged workers, around 6 percent of those who did not look for work (Corson et al. 1999). This study also found a smaller proportion of recipients who appeared to be out of the labor force than was the case in the late 1990s.

TABLE IV.7

CHARACTERISTICS OF RECIPIENTS, BY SEARCH STATUS AT UI CLAIM DATE
(Percentages Unless Otherwise Stated)

	Did Not Search	Searched	Total[a]
Demographic Characteristics			
Mean Age (Years)	40.5	39.8	40.1
55 Years Old or Older	15.0*	11.1	12.5
Female	43.3	45.1	44.4
High School Dropout	19.6	16.4	17.5
White, Non-Hispanic	68.9	64.5	66.1
Had Working Spouse or Partner at UI Claim Date	40.8	39.3	39.8
Pre-Unemployment Job Characteristics			
Employed in Manufacturing	41.4***	27.4	32.5
Employed in Services	16.6***	26.0	22.6
Earned Less than $300 per Week	22.1	24.6	23.8
Three or More Years Tenure	61.8***	46.3	52.1
Reason for Job Loss:			
Layoff	86.6***[b]	80.2	82.6
Quit	4.8	5.3	5.1
Fired	3.8	11.8	8.8
Other	4.8	2.7	3.4
Expected to Be Recalled	64.9***	36.2	46.8
Was a Dislocated Worker	12.3***	21.1	17.9
UI Program Characteristics			
Mean Weeks of UI Collected	10.3***	14.9	13.2
Weekly Benefit Amount			
$200 or less	38.6*[b]	44.3	42.3
$201 to $300	49.0	42.8	45.0
$301 or more	12.5	12.9	12.8
Potential Duration			
20 weeks or less	17.2	19.4	18.6
21 to 25 weeks	16.1	15.3	15.6
26 weeks or more	66.7	65.2	65.8
Exhausted Benefits	20.3***	37.1	31.0

TABLE IV.7 (*continued*)

	Did Not Search	Searched	Total[a]
Employment Outcomes			
Any Post-UI Job	77.8**	83.8	81.5
Mean Weeks Between Job Loss and First Post-UI Job, If Reemployed	22.2***	29.5	27.0
Mean Weekly Earnings of First Post-UI Job, If Reemployed (Dollars)	624	662	648
Earned Less than $300 per Week, If Reemployed	21.8**	29.2	26.6
Unweighted Sample Size	**1,310**	**2,581**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Includes 16 recipients for whom information on whether they searched for work is unavailable.

[b]The significance levels pertain to statistical tests for differences in the distribution of outcomes for those who searched and those who did not search.

*Significantly different from those who searched at the .10 level, two-tailed test.
**Significantly different from those who searched at the .05 level, two-tailed test.
***Significantly different from those who searched at the .01 level, two-tailed test.

whole, these findings suggest that the recipients who did not search for work are comprised of two distinct groups: (1) a large group of recipients who had a high likelihood of returning to work, and (2) a smaller group who probably withdrew from the labor force.

C. CHARACTERISTICS OF POST-UI JOBS

An important potential advantage of the UI program is that the financial assistance it provides can facilitate effective job search, so that recipients will not have to take a job that is a poor match for them in the long run simply because of short-term financial pressure. Rather, an important goal of the UI program is to encourage appropriate matches between job seekers' skills and the jobs that the recipients take. Examining how these jobs compare to the jobs held prior to UI benefit receipt is important, because recipients are at risk of experiencing continued earnings losses if their new jobs pay less than their pre-UI jobs or if the recipients experience repeated turnover because of poor matches between their skills and these jobs.

We examine several key aspects of the UI recipients' post-UI employment experiences: the number of post-UI jobs held, the source of the first post-UI job, and earnings rates. We also examine some other important characteristics of employment, such as the relationship with the employer and whether the recipients changed the industry or occupation of jobs after their UI spells. However, we cannot attribute differences between the employment outcomes of exhaustees and nonexhaustees to longer benefit receipt for exhaustees, because other factors are probably causing both the worse employment outcomes and longer benefit receipt by exhaustees.

1. Number of Post-UI Jobs

Over 80 percent of UI recipients had at least one post-UI job during the 2.2-year period (Table IV.8). As noted earlier, reemployment rates were l2 percentage points lower for exhaustees than for nonexhaustees, at 73 percent and 85 percent, respectively. About 30 percent

TABLE IV.8

NUMBER OF POST-UI JOBS
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Number of Post-UI Jobs			
0	27.1***[a]	14.6	18.5
1	43.0	53.4	50.2
2	17.4	19.3	18.7
3	8.5	7.3	7.7
4	3.1	2.9	3.0
5 or more	0.8	2.4	1.9
Unweighted Sample Size	**1,844**	**2,025**	**3,869**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Although most of the analysis on post-UI jobs restricts the jobs to those at least two weeks long, these statistics include jobs regardless of how long they lasted, because many recipients could not report complete start and stop dates for their post UI-jobs. Excluding jobs that lasted less than two weeks and jobs for which duration cannot be calculated would decrease the numbers of post-UI jobs held but would not substantially change the results.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

of recipients held more than one job. Exhaustees who were reemployed were neither more nor less likely than nonexhaustees to hold more than one job. Conditional on being reemployed, therefore, it does not appear that exhaustees have higher turnover rates than nonexhaustees. These reemployment rates are lower than those in the late 1980s (Corson and Dynarski 1990): despite the lower unemployment rate in the late 1990s, both exhaustees and nonexhaustees in the late 1990s were less likely than their late-1980s counterparts to have any post-UI employment.[12,13]

2. Source of the First Post-UI Job

As was discussed more fully in Chapter II, many recipients were recalled to their former jobs, an occurrence more common for nonexhaustees than for exhaustees (Table IV.9). Nevertheless, about one-quarter of exhaustees were recalled. The next most important source of the first post-UI job for all recipients was friends and relatives. The importance of friends and relatives in helping job seekers to get jobs has been well documented elsewhere (Bortnick and Ports 1992). Because exhaustees had lower recall rates than did nonexhaustees, networking was an even more important job source for the exhaustees. Other common methods of getting a job were through want ads and applying directly with the employer. Although more than one-quarter of recipients reported having used the Internet to search for a job, very few recipients reported this to be the source of their first post-UI job. This job search strategy probably was used in conjunction with some of the other strategies. Getting a job through a government program with on-the-job training was rare.

[12]In the late 1980s study, 79 percent of exhaustees and 95 percent of nonexhaustees had at least one post-UI job during the shorter follow-up period (one year, eight months).

[13]The early 1990s study of recipients during the recessionary period found 17 percent of recipients without any post-benefits job during the average three and one half year followup period (Corson et al. 1999).

TABLE IV.9

SOURCE AND CURRENT STATUS OF THE FIRST POST-UI JOB FOR RECIPIENTS WITH A POST-UI JOB
(Percentages Unless Stated Otherwise)

	Exhaustees	Nonexhaustees	Total
Source of Job			
Recall	24.3***[a]	52.1	44.5
Employment Service/Job Service	3.5	1.8	2.2
Private employment agency	3.2	2.1	2.4
Friends, relatives	27.3	16.6	19.5
Want ads	14.3	9.4	10.7
Directly with employer	18.0	12.4	14.0
Union	1.4	2.6	2.3
Self-employed	5.1	1.7	2.6
School	1.0	0.1	0.3
Internet, Internet job service, TV	0.7	0.6	0.7
Other	1.4	0.6	0.8
Got Job Through Government Program with On-the-Job Training	1.3	0.4	0.6
Reason for Job End			
Job did not end as of interview	53.5	62.2	59.9
Laid off	23.4	18.0	19.5
Quit	18.8	15.4	16.3
Fired	2.7	2.3	2.4
Retired	0.3	0.9	0.7
Health problem, injury on the job, or pregnancy	0.6	0.6	0.6
Other	0.8	0.7	0.7
Unweighted Sample Size	**1,346**	**1,725**	**3,071**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

As noted when we examined the number of post-UI jobs that recipients had, some of these jobs were unstable. Although about half of exhaustees and three-fifths of nonexhaustees reported still being at their first post-UI job as of the time of the interview, getting laid off and quitting also were common. These patterns are consistent with the job retention patterns found in the prior study (Corson and Dynarski 1990).

3. Earnings, Hours, and the Employment Relationship

To examine further the quality of jobs that recipients got after their unemployment spells, we compared the weekly earnings and hours of the first post-UI job with the comparable information on the pre-UI job (Table IV.10). To make these comparisons, we restricted the analyses to recipients for whom we had valid data for both jobs.

As was the case in 1988, many UI recipients in 1998 were unable to find post-UI jobs that paid as much as their pre-UI jobs. Overall, exhaustees' average earnings dropped from about $636 per week to $532 per week ($33,000 per year and $27,700 per year, respectively), a 16 percent decline in earnings—which is identical to the average earnings decline by exhaustees 10 years earlier (Corson and Dynarski 1990). In contrast, the average earnings of nonexhaustees in the current study dropped about 7 percent, from $665 per week to $617 per week ($34,600 per year and $32,000 per year, respectively), compared to an average decline of one percent among late-1980s nonexhaustees. The distribution of earnings losses for nonexhaustees suggests, however, that this difference in the average decline was attributable to recipients at the tail ends of the distribution. Overall, the distribution of earnings losses was similar in the two years.

Overall, about 30 percent of exhaustees and 15 percent of nonexhaustees in 1998 reported earnings losses of 25 percent or more. Approximately another 15 percent of each group reported having lower post-UI earnings, but with a smaller decline. Despite the large percentages of recipients who reported earnings losses, however, some recipients (about 15 percent) reported

TABLE IV.10

COMPARISON OF EARNINGS, HOURS, AND EMPLOYMENT RELATIONSHIP OF PRE-AND POST-UI JOBS FOR RECIPIENTS WITH A POST-UI JOB
(Percentages Unless Stated Otherwise)

	Exhaustees		Nonexhaustees		Total	
	Pre-UI Job	First Post-UI Job	Pre-UI Job	First Post-UI Job	Pre-UI Job	First Post-UI Job
Weekly Earnings						
$200 or less	8.3	16.3***[a]	6.1	9.7	6.7	11.6
$201 to $300	21.5	26.5	20.2	16.1	20.5	19.0
$301 to $400	21.2	20.0	19.8	18.4	20.2	18.8
$401 to $500	16.2	12.5	13.6	13.2	14.3	13.0
$501 to $800	19.4	15.0	23.7	25.7	22.6	22.8
$801 or more	13.3	9.7	16.6	16.8	15.7	14.9
Mean (dollars)	636	532	665	617	657	594
Ratio of Post-UI to Pre-UI Weekly Earnings						
Less than 0.50		16.7***[a]		8.6		10.8
0.50 to 0.75		13.3		6.8		8.6
0.76 to 0.99		17.1		12.2		13.5
1.00		24.8		34.4		31.7
1.01 to 1.25		12.5		20.4		18.3
1.26 or more		15.7		17.7		17.1
Unweighted Sample Size		**1,002**		**1,313**		**2,315**
Weekly Hours						
34 or under	7.4	21.1**[a]	7.8	14.3	7.7	16.1
35 to 39	4.8	6.7	4.3	4.6	4.5	5.2
40	51.6	48.3	54.6	53.1	53.8	51.7
41 to 45	7.9	4.9	8.2	8.2	8.1	7.3
46 to 50	12.9	9.2	13.2	9.9	13.1	9.7
51 or more	15.4	9.9	11.9	10.0	12.9	10.0
Mean (hours)	43.9	39.3	42.9	40.7	43.1	40.3
Ratio of Post-UI to Pre-UI Weekly Hours						
Less than 0.50		6.5***[a]		3.8		4.6
0.50 to 0.75		17.1		9.6		11.7
0.76 to 0.99		19.3		15.6		16.6
1.00		40.5		53.8		50.2
1.01 to 1.25		10.7		10.4		10.5
1.26 or more		6.0		6.6		6.5
Unweighted Sample Size		**1,202**		**1,573**		**2,775**
Type of Employment Relationship						
Leased or contract employee	3.5	3.2***[a]	2.8	2.3	3.0	2.5
Independent contractor or self-employed	1.5	9.0	0.9	2.9	1.1	4.5
Day laborer, casual laborer, free laborer and on-all employee, or a temporary employee	9.6	16.6	7.5	8.2	8.1	10.5
Regular employee	85.5	71.2	88.7	86.7	87.8	82.5
Change in Employment Relationship		27.6***		13.7		17.5
Unweighted Sample Size		**1,212**		**1,607**		**2,819**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Statistics pertain to UI recipients with nonmissing information on the pre-and post-UI jobs.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

having relatively large earnings gains. On the whole, though, it is unsurprising that nonexhaustees fared better economically as a group than did exhaustees, because a much greater percentage of them returned to their former jobs.

A portion of this earnings decline can be explained by a reduction in the number of hours that recipients worked. Exhaustees more frequently reported hours reductions at their post-UI jobs compared to their pre-UI jobs than did nonexhaustees. However, many recipients in 1998 did not change the number of hours they worked. These patterns were similar to those found for recipients in 1988.

As discussed in Chapter II, UI recipients had higher rates of involvement in alternative work arrangements than was estimated for the nation. UI recipients' rate of employment in alternative arrangements in their first post-UI jobs was even higher than the pre-UI rate. Although many recipients left traditional employment for an alternative work arrangement, some recipients who had been in alternative employment prior to their UI claims found jobs that offered traditional, regular employment. Overall, rates of alternative arrangements doubled for exhaustees, from 15 percent to 29 percent. A large number of exhaustees reported becoming independent contractors or entering self-employment; even more reported being temporary employees. Much smaller rates of nonexhaustees switched employment relationships. Over one-quarter of exhaustees, and about one-seventh of nonexhaustees, reported a change in their employment relationship.

Because lifetime earnings losses by dislocated workers result from lower post-UI earnings compared to pre-UI earnings, lost earnings growth, and lost earnings during the period of unemployment (Farber 2001), we examined whether recipients were able to improve their earnings rates during the follow-up period through switching jobs. If some recipients took a relatively low-paying job immediately after the unemployment spell, but subsequently switched to higher-paying employment, the negative effects of the unemployment spell on lifetime

earnings may have been reduced. Focusing on the highest-paying job between the initial job loss and the date of the follow-up interview suggests that a proportion of recipients experienced nominal earnings growth up changing jobs (results not shown). However, much of this improvement was experienced by recipients who did not experience large earnings losses in the first post-UI job. The percentages of exhaustees and nonexhaustees who experienced nominal earnings losses of at least 25 percent between the pre-UI job and the highest-paying post-UI job declined only slightly—26 percent of exhaustees and 12 percent of nonexhaustees—compared to the results we found with the first post-UI job. This suggests that many of the recipients who suffered the greatest post-UI earnings losses did not subsequently find jobs with higher earnings. In addition, for all recipients, the highest-paying post-UI jobs were only slightly less likely to be an alternative work arrangement than were the first post-UI jobs.[14]

4. Industry and Occupation

As has been found in prior studies, a large portion of recipients, particularly exhaustees, shifted their industry or occupation upon reemployment (Table IV.11). The most notable shifts were from the manufacturing sector to the service sector. For example, 26 percent of exhaustees had a pre-UI job in manufacturing, while only 18 percent had a first post-UI job in manufacturing. Exhaustees' employment in the service sector increased from 26 percent to 34

[14]To gain a further measure of the quality of post-UI jobs, we asked recipients whether they were eligible for health insurance coverage at the job they held at the time of the follow-up interview. Among recipients employed at this time, exhaustees were much less likely to have been eligible for coverage than were nonexhaustees, at 55 percent compared to 76 percent, respectively. Recipients who were not eligible for health insurance through their post-UI jobs or who did not have a post-UI job may have been eligible for coverage through a continuation in coverage from prior employment, coverage by someone else in the household, or some other means.

TABLE IV.11

COMPARISON OF INDUSTRY AND OCCUPATION OF PRE- AND POST-UI JOBS FOR RECIPIENTS WITH A POST-UI JOB
(Percentages Unless Stated Otherwise)

	Exhaustees		Nonexhaustees		Total	
	Pre-UI Job	First Post-UI Job	Pre-UI Job	First Post-UI Job	Pre-UI Job	First Post-UI Job
Industry						
Agriculture/forestry/fishing	6.5**[a]	6.1***[a]	4.9	4.8	5.3	5.2
Mining	1.0	0.5	4.3	0.5	1.2	0.5
Construction	10.4	10.6	16.2	17.0	14.7	15.3
Durable manufacturing	14.6	10.6	21.6	19.4	19.7	17.0
Nondurable manufacturing	11.6	7.4	12.6	11.6	12.3	10.4
Transportation/public utilities	6.9	7.4	6.4	7.3	6.5	7.3
Wholesale trade	3.2	2.5	2.5	2.3	2.7	2.4
Retail trade	12.0	14.6	10.0	10.3	10.6	11.4
Finance/insurance/real estate	4.0	3.3	2.1	3.0	2.6	3.1
Services	26.4	33.7	19.9	21.6	21.7	24.9
Public administration	3.5	3.4	2.6	2.3	2.8	2.6
Change in 2-Digit Industry Code	57.8***		33.9		40.4	
Unweighted Sample Size	**1,182**		**1,563**		**2,745**	
Occupation						
Managerial/professional	15.2***[a]	12.8***[a]	8.5	8.7	10.3	9.8
Technical and related support	3.3	3.1	2.5	2.4	2.7	2.6
Sales	9.2	9.5	5.9	6.5	6.8	7.4
Administrative support	15.4	18.0	12.0	11.2	12.9	13.0
Service occupations	10.1	13.5	10.2	12.0	10.2	12.4
Mechanics and repairers	2.7	3.0	3.7	2.7	3.4	2.8
Construction and extractive	7.0	6.9	9.2	10.0	8.6	9.2
Precision production	2.3	2.2	7.0	6.5	5.7	5.3
Machine operators	12.6	7.7	15.8	14.5	14.9	12.7
Transportation and material moving	6.4	7.3	9.0	9.2	8.3	8.7
Handlers	8.8	9.2	11.8	11.5	11.0	10.9
Farming/forestry/fishing	7.2	6.8	4.6	4.7	5.3	5.3
Change in 2-Digit Occupation Code	56.4***		38.0		43.0	
Unweighted Sample Size	**1,196**		**1,579**		**2,775**	

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Statistics pertain to UI recipients with nonmissing information on the pre- and post-UI jobs.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

percent. Although these patterns are qualitatively similar to what was found in the earlier study, the pre-UI employment rate in manufacturing was lower among recipients in 1998 than among recipients in 1988, and the reverse was true for service sector employment. (This pattern of a declining share of manufacturing employment in the economy was documented in Chapter III.) Overall, 58 percent of exhaustees and 34 percent of nonexhaustees shifted 2-digit industries.

This pattern was mirrored by changes in the occupational distribution of UI recipients: higher rates of exhaustees shifted than did nonexhaustees. Exhaustees' pre-UI employment rates in the managerial/professional and machine operators occupations were much higher than their post-UI rates in them. Increases in the administrative support and service occupations were also found. These changes in occupations and industries imply that the reemployed workers may have had a more challenging transition to their new jobs (than would have been the case if they did not switch) because of their need to learn new job-specific skills at their post-UI jobs.[15]

[15]The distribution of the industries and occupations of the highest-paying post-UI jobs were very similar to those for the first post-UI jobs.

V. REEMPLOYMENT SERVICES, TRAINING, EDUCATION, AND INCOME SUPPORT FOR UI RECIPIENTS

UI recipients who are not on temporary layoff may benefit from reemployment services that are designed to help them find a job. These services could include referrals to job openings, training in job search techniques, help with resumes, provision of information about jobs in demand, occupational aptitude and interest testing, and other similar assistance. Reemployment services may help recipients find jobs more quickly and may lead to better job matches. Some recipients with weak or outmoded job skills may benefit from occupational training or further education, which may help them find better jobs than they otherwise would.

Individuals who lose their jobs lose an important source of income for themselves and their families while they remain unemployed. UI benefits offset this loss, but the amount of UI provided is limited. Unemployed individuals and their families may not need to rely solely on UI benefits for income support, however. They may have income from other sources, such as income from a working spouse or partner or payments from retirement, welfare, or other programs.

In this chapter, we examine UI recipients' use of reemployment services and participation in training and education programs. We also examine the income support available to UI recipients. We compare rates of use in 1998 with those in 1988, because economic conditions in those years were similar, with low unemployment rates prevailing.

We find that recipients in 1998 were less likely than in 1988 to use reemployment services. Forty-one percent in 1998, as compared to 54 percent in 1988, contacted the Job Service or a one-stop career center shortly after beginning their UI claim. Of those who contacted the Job Service or a one-stop, 37 percent said they did not receive any specific services, as compared to

28 percent in 1988. Recipients who did not receive specific services probably registered with the Job Service and attended an orientation session on available services but did not avail themselves of them. Those that did receive additional services in 1998 received 2.1 on average, with a job referral being the most common. A substantial portion of services in 1998 were provided through self-access resource centers.

Based on the survey data, about 35 percent of recipients said that they received a notice requiring them to report to the Job Service or a one-stop. Most of these call-in notices were probably generated by the WPRS system that states implemented in the mid-1990s. About three-quarters of the recipients who received these call-in notices said they went for services, and this group received more services than other recipients who went to the Job Service or a one-stop. Information on the characteristics of these recipients also suggests that states are successfully targeting services, to some degree, on exhaustees.

Unlike participation in reemployment services, the rate of participation in training or education programs was somewhat higher in 1998 than in 1988 (14 versus 11 percent). Most of these recipients (three-quarters) entered training programs designed to improve occupational skills. By the time of the interview, most people in these programs had completed their training or education or were still participating. Most of them considered this training or education helpful in obtaining a job and useful on the jobs they held.

When we examine family income, we find that, on average, UI recipients' families experienced large declines (about 50 percent) in weekly income relative to their pre-unemployment situations. UI benefits provided an important source of income during the period of unemployment, as did the earnings of spouses or partners. However, this latter source of income was only available to about 40 percent of the UI recipients' families. The remaining

families relied almost solely on UI for income support. Relatively few UI recipients or their families received income from retirement benefits, welfare, or other transfer programs.

The rest of this chapter provides a discussion of (1) the workforce development and service delivery system and how it has changed in the past 10 years (Section A), (2) the use of reemployment services (Section B), (3) the use of training and education (Section C), and (4) income support of UI recipients (Section D).

A. THE WORKFORCE DEVELOPMENT AND SERVICE DELIVERY SYSTEM

The Job Service, UI's partner under the Wagner-Peyser Act, provides reemployment services to UI recipients. Before the mid-1990s, UI recipients who were not on temporary layoff were typically referred to the Job Service by the UI system. These recipients were registered with the Job Service, where they could receive job referrals and other services, such as testing and job counseling. In many states, Job Service and UI offices were located together to facilitate the provision of reemployment services. When people went to the UI office to file a claim, they could register at the Job Service at the same time. UI recipients who went to the Job Service could also be referred to the local Job Training Partnership Act (JTPA) service provider for intensive reemployment services or training available to dislocated workers. UI recipients who were dislocated workers might also receive training through the Trade Adjustment Act, a program administered by the Job Service.

Since the mid-1990s, the workforce services delivery system has undergone a number of changes that affect the way in which reemployment services and training and education are directed toward UI recipients. These changes may affect both the likelihood that recipients receive services and the intensity of such services.

One main change was the introduction in the mid-1990s of WPRS systems in all states. Under these systems, UI recipients with a high likelihood of benefit exhaustion are identified

early in their claim spell (typically when they receive a first payment) and referred for reemployment services to the Job Service or sometimes the local workforce development agency. These recipients are told that failure to report for services may lead to the denial of UI benefits. Since the objective of WPRS systems is to get recipients into the reemployment service delivery system, recipients who do not report for services are generally called in a second or even a third time before the UI system is informed of their failure to report. Those who ultimately are denied benefits are generally found ineligible for the week that they failed to report.

Another change is the movement toward one-stops, in which services available from multiple agencies (like the Job Service and the local workforce development system) are available in the same location. The U.S. Department of Labor, Employment and Training Administration began making grants in the mid-1990s to support creation of one-stop centers. More recently, passage of the Workforce Investment Act (WIA) in 1998 made establishment of one-stop centers a requirement for each local workforce development area. The WIA replaced the JTPA system, and local WIA programs now provide intensive reemployment services and training to dislocated workers, including those in the UI system. The WIA was not yet implemented when the recipients in our sample began collecting UI benefits, but passage of the act may have quickened the pace at which one-stops were established, and this may have affected service delivery for the UI population.

A further change in the provision of reemployment services is the increasing reliance on self-access of services. Most Job Service and one-stop centers have resource rooms or areas where UI recipients and other people can use computers to look up job openings that are listed with the state Job Service or, through America's Job Bank, available through the Job Service in other states. They can also use the Internet to look for other job openings through state and

private Web sites that provide job listings. Depending on the software that is available locally, the computers in resource rooms can also be used to develop resumes, explore career alternatives, examine local labor market information, and investigate local training and education providers. Many resource rooms also provide access to copiers to copy resumes and fax machines and telephones to contact prospective employers. Various hard-copy resources (for example, newspapers and information on occupations) are often available. Staff often provide some support to answer questions and help users who may have difficulty using the computers and materials.

Finally, changes in state UI systems may also affect recipients' use of reemployment services. The main change is the introduction of telephone initial claims-filing in a number of states.[1] Under this method, UI claimants do not need to visit local offices to apply for benefits and, as a result, may not be exposed to reemployment services unless they are called in for consultation. Some states also began automatic registration of UI claimants in the Job Service system as part of their remote claims process, which might further affect whether claimants go to the Job Service. Changes in the characteristics of UI recipients could also affect service use, but those changes, discussed in Chapter III, seem minor compared to the changes in the service system.

B. JOB SERVICE AND ONE-STOP CENTER USE

In this section, we discuss use of the reemployment services and the degree to which it appears to be related to the WPRS system.

[1]A few states are beginning to provide Internet initial claims-taking, but in 1998 this method of applying for UI would have affected few, if any, claimants.

1. Contact with the Job Service or One-Stop Career Center

Forty-one percent of UI recipients in 1998 reported that they went to a local Job Service office or one-stop service center shortly after beginning their UI claim (Table V.1). This percentage is substantially below the 54 percent reported in the 1988 survey, which indicates that the likelihood that UI recipients use the reemployment service system has declined in the past 10 years.[2] This decline occurred for both exhaustees and nonexhaustees. It occurred for exhaustees both at the start of UI receipt and following exhaustion of benefits. In 1988, 29 percent of exhaustees reported going to the Job Service after exhaustion, compared to 11 percent in 1998.

As was found in the 1988 study, recipients' recall expectations were a primary determinant of whether they went to the Job Service or a one-stop. In the current study, 24 percent of recipients who expected recall and had a definite recall date went to the Job Service or a one-stop, compared to 37 percent who expected recall but did not have a definite recall date, and 48 percent of those with no recall expectations. The pattern was similar in the 1988 study, although the likelihood of going to the Job Service or a one-stop was higher in all the categories.

Multivariate models also highlight the importance of recall expectations as a factor in determining which recipients went to the Job Service or a one-stop (not shown in the tables). Other variables that were statistically significant show that members of unions and workers in the construction industry were less likely than other recipients to go to the Job Service or a one-stop. These findings are expected, since union members often find work through their unions, and workers in the construction industry are often on seasonal layoffs. Age and age-squared were also statistically significant but with opposite signs, which indicates that the likelihood that

[2]The question in the 1998 survey asked about use of the reemployment service system in the first few weeks after the job loss, while the question in the 1988 survey asked about use after the job loss but mentioned the first few weeks as an interviewer probe. This difference in wording might have affected the answers in the two surveys, but probably very little.

TABLE V.1

UI RECIPIENTS' PARTICIPATION IN REEMPLOYMENT SERVICES
(Percentage Going to the Job Service or a One-Stop Service Center)

	Exhaustees		Nonexhaustees	Total
	At UI Start	After Exhaustion	At UI Start	At UI Start
1998				
No Recall Expectations	51.9*	12.0	45.8	48.2
Expected Recall, No Definite Date	41.7	7.3	35.0	36.7
Expected Recall, Definite Date	35.0	10.0	22.6	24.0
Total	48.4***	10.6	37.1	40.6
Sample Size	**1,864**	**1,864**	**2,043**	**3,907**
1988				
No Recall Expectations	65.8	30.0	64.2	64.6
Expected Recall, No Definite Date	62.5*	26.0	51.2	54.3
Expected Recall, Definite Date	54.7***	27.4	25.2	33.3
Total	64.1***	29.2	50.0	53.9
Sample Size	**1,920**	**1,506**	**1,009**	**2,929**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc. for 1998 data. Corson and Dynarski (1990) for 1988 data.

NOTE: Some recipients could not report or chose not to report their recall status or reason for job separation (used in some instances to construct recall status). These recipients are reported in the "Total" rows when information on their involvement with one-stops is available, but they are not included in any of the recall status rows.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

recipients' use of the Job Service or one-stops increases initially with age but then declines for older recipients. Finally, high school dropouts were less likely to use the Job Service or a one-stop than were recipients with high school or greater levels of education.

2. Participation in Reemployment Services

When asked a series of questions about the specific services recipients obtained, a large percentage (37 percent) of those who went to the Job Service or a one-stop reported not receiving any services (Table V.2), compared to 28 percent in 1988. We believe that these people probably registered for the Job Service and attended a briefing on available assistance but did not avail themselves of any specific additional services. On the other hand, those who did receive services tended to receive several. The average in 1998, including those who reported not receiving any services, was 2.1 services per recipient.

The main service received by those who went to the Job Service or a one-stop was a job referral (38 percent). Seven percent of these recipients said that they received a job offer (19 percent of the referrals), and 4 percent accepted a job (50 percent of the offers). These rates were similar to those found in the 1988 study, in which 34 percent of those going to the Job Service received a job referral, 9 percent received an offer, and 5 percent accepted a job for which they received a referral.

Other main services received were information about jobs in demand (34 percent), training in job search methods (20 percent), help with a resume (19 percent), and information on education or training options (23 percent). Recipients who said that they received training in job search methods or help with a resume said that they spent, on average, 6.3 and 4.7 hours on these activities, respectively (data not shown in table).

Exhaustees who went to the Job Service or one-stop were more likely than nonexhaustees to receive services (66 percent versus 61 percent), and they received a greater number of services

TABLE V.2

SERVICES RECEIVED AT JOB SERVICE/ONE-STOP
(Percentages Unless Stated Otherwise)

	Exhaustees		Nonexhaustees	All
	At UI Start	After Exhaustion	At UI Start	At UI Start
Percentage of Recipients Who Received:				
0 services	33.9	47.8	38.9	37.0
1 service	17.5	24.6	21.2	19.8
2 to 3 services	21.6	16.0	21.1	21.3
4 to 5 services	10.1	6.7	9.4	9.7
6 to 10 services	14.1	3.5	8.2	10.3
More than 10 services	2.9	1.5	1.3	1.9
Mean Number of Services Received	2.6***	1.4	1.9	2.1
Services Received from Job Service/One-Stop Career Center:				
Basic skills testing	20.1*	12.5	14.2	16.4
Occupational interests and aptitude testing	18.8**	7.6	11.8	14.4
Exploration of career alternatives	16.9*	9.9	11.2	13.3
Information about jobs in demand	37.2	16.7	31.4	33.5
Training in job search methods	26.0***	8.6	16.2	19.8
Help preparing a resume	24.0**	10.8	15.3	18.5
Help developing training or work plans	14.8	7.0	9.6	11.5
Counseling in stress management	8.1	3.4	4.8	6.0
Counseling in money management	5.1	1.9	3.0	3.8
Referral to job openings	40.3	33.8	36.0	37.6
Information on education or training options	26.4	12.0	21.5	23.3
A job club	3.4*	1.7	1.1	2.0
Referral to other programs	10.3	9.2	6.5	7.9
Other services	3.7	3.2	2.8	3.1
Went to a Self-Access Center[a]	41.7	35.5	38.0	39.4
Mean Number of Job Referrals Received	2.3	2.1	2.2	2.3
Mean Number of Employers Contacted	2.0	1.8	1.7	1.8
Received at Least One Job Offer	8.9	5.9	6.4	7.3
Mean Number of Job Offers Received	0.2	0.1	0.2	0.2
Started Working for One of These Employers	4.8	3.7	3.1	3.7
Unweighted Sample Size	**905**	**199**	**756**	**1,661**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The samples are restricted to recipients who went to a Job Service office, one-stop center, EDWAA Office, or JTPA office at UI start or after benefits exhaustion.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

[a]Self-access centers usually contain computers, telephones, and other services that job seekers can use in looking for work.

(2.6 versus 1.9 at UI start). On the other hand, exhaustees who went to the Job Service or one-stop after benefit exhaustion were less likely to receive services than at the start of their UI claim (only 52 percent said that they received any services). The kinds of services received were similar among all the groups.

A substantial amount of the services that were received through the Job Service or one-stop were through self-access centers.[3] Thirty-nine percent (Table V.2) of recipients who went to the Job Service or one-stop indicated that they went to a self-access center for some of their services. Since virtually all these recipients reported receiving one or more self-access services (Table V.3), they account for about 62 percent of the recipients who said that they received some services. Moreover, these recipients said they received 3.3 services on average from the self-access center. This average, when multiplied by the percentage who went to a self-access center and divided by the average number of services received by all recipients who went to the Job Service or one-stop ($.39 \times 3.3 \div 2.1$), suggests that about 60 percent of the specific services provided to UI recipients by the Job Service or one-stop were provided through self-access centers. Of course, this calculation counts all services equally, whether they can be gained through self-access and are inexpensive to provide (like information on education or training options) or require staff assistance and are expensive to provide (like basic skills testing). Nevertheless, it seems reasonable to conclude that many services were provided through self-access centers.

[3]We asked survey respondents who said that they received some services through a self-access center what services they received. Although the method is different, similar services (for example, a job referral) can be received through staff assistance or through a self-access center. For this reason, we used similar lists of services to ask about all the services received (reported in Table V.2) and those received through a self-access center (reported in Table V.3). We only deleted services from the self-access center list that require staff assistance such as testing or counseling.

TABLE V.3

SELF-ACCESS SERVICES RECEIVED AT JOB SERVICE/ONE-STOP
(Percentages Unless Otherwise Stated)

	Exhaustees		Nonexhaustees	All
	At UI Start	After Exhaustion	At UI Start	At UI Start
Services Received at Self-Access Center Within Job Service/One-Stop Career Center				
Occupational interests and aptitude testing	23.5	10.2	16.1	19.0
Exploration of career alternatives	24.9	15.2	18.5	21.0
Information about jobs in demand	53.1	35.4	50.6	51.5
Training in job search methods	37.5*	17.7	26.1	30.6
Help preparing a resume	39.7**	21.5	25.6	31.1
Help developing training or work plans	21.9*	10.8	12.7	16.3
Referral to job openings	61.3	57.6	56.2	58.2
Information on education or training options	38.4	17.2	32.9	35.1
A job club	6.1	2.5	1.8	3.5
Referral to other programs	17.1	12.1	9.5	12.4
Other services	4.8	5.6	5.6	5.3
Percentage of Recipients Who Received:				
0 self-access services	1.3	1.3	1.5	1.4
1 self-access services	22.9	46.8	32.3	28.6
2 to 3 self-access services	30.5	32.3	32.4	31.7
4 to 5 self-access services	17.7	8.0	17.6	17.7
6 to 10 self-access services	26.8	11.7	16.2	20.4
More than 10 self-access services	0.8	0.0	0.0	0.3
Mean Number of Self-Access Services Received	3.8**	2.5	3.0	3.3
Unweighted Sample Size	**367**	**68**	**281**	**648**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The samples are restricted to recipients who received self-access services at a Job Service office, one-stop center, EDWAA, or JTPA office at UI start or after benefits exhaustion. Self-access centers usually contain computers, telephones, and other services that job seekers can use in looking for work.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

3. WPRS Participation

As discussed earlier, one of the changes in the reemployment service system in the 1990s was the introduction of WPRS systems, whereby selected recipients are instructed to report to the Job Service or another service provider. In an attempt to examine the implications of the introduction of WPRS systems, we asked recipients if they were sent a letter requiring them to go to the Job Service as a condition of eligibility for unemployment benefits. Further questions asked respondents who said they were told to go and who did not go whether they were asked why they did not go and whether they lost benefits as a result.

Based on these questions, we found that approximately 35 percent of recipients indicated that they had received a letter saying that they were required to go to the Job Service or a one-stop (Table V.4). It seems likely that many, but probably not all, of these call-in notices were a result of WPRS activity. For example, in recent visits to 11 states, we found two that are calling in or planning to call in claimants for a Job Service orientation as soon as an initial claim is filed.[4] In addition, claimants who are called in for eligibility reviews might indicate that they had been told to go to the Job Service without having been called in as part of the WPRS system.

About three-quarters (72 percent) of the recipients who reported being required to go to the Job Service reported having gone. This percentage seems reasonable, since some recipients who are called in find jobs before they are to report. Those who do not show up for the first call-in are generally called in a second and possibly a third time, and some of them will have found jobs in the meantime.

[4]These visits were conducted for a project that assessed changes in WPRS systems made by 11 states that received grants from the U.S. Department of Labor, Employment and Training Administration for this purpose.

TABLE V.4

PARTICIPATION IN WPRS SERVICES
(Percentage)

	Exhaustees	Nonexhaustees	All
Required to Go to Job Service or a One-Stop			
Yes	40.9***	32.3	35.0
Don't know or refused to answer	10.2	10.3	10.3
Went to Job Service or One-Stop If Required to Go	77.4**	69.4	72.3
Asked Why Did Not Go to Job Service or One-Stop If Did Not Go as Required	14.1	13.2	13.4
Lost Benefits Because Did Not Go to a One-Stop If Did Not Go as Required	5.7	3.4	4.1
Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Small percentages of recipients did not know or refused to answer whether they (1) were asked why they did not go to the Job Service or one-stop, or (2) lost benefits because they did not go to the Job Service or one-stop. The percentages of recipients who answered, "Yes" to these questions are based on the samples who answered either "Yes" or "No." In contrast, we report the percentages of recipients who said they did not know or refused to answer whether they were required to go to a one-stop, because these percentages are substantially larger. The percentages who answered, "Yes" to this question are based on the full sample.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

About 13 percent of those who said they were required to go to the Job Service but did not report also said that the UI agency asked them why they did not go. Four percent of those that did not go when required reported having lost some benefits as a result. Some recipients who do not report for services have found jobs and stopped collecting UI; these people are generally not contacted and asked why they did not report. However, this probably is not the full explanation of why only 13 percent are called and asked why they did not report. Indeed when we examine the distribution of payments to this group, we find that 47 percent collected more than 12 weeks of benefits, a period which seems long enough to allow multiple call-ins. These numbers suggest, therefore, that (1) either the link in WPRS systems that provides feedback to the UI adjudication system from the service providers is weak, or (2) UI adjudicators are not following up when recipients do not report for services. The recent national WPRS evaluation suggests that the first reason is important; that evaluation indicates that states have had difficulty developing automated tracking systems that link service providers and UI systems (U.S. Department of Labor 1999).

Information about the targeting of WPRS suggests that states are targeting services, to some degree, on likely exhaustees (Table V.5). Exhaustion rates are higher among those called in than among those not called in (36 versus 28 percent). Other measures of outcomes—weeks collected, mean time to first post-UI job, and percentage with no post-UI job—all show that those called in had worse labor market outcomes than those not called in. We view these findings as evidence of targeting and not of ineffectiveness of the program (if there were no call-ins, the exhaustion rate and other outcomes might be worse although we cannot determine whether this is the case).

Measures of pre-UI characteristics also show evidence that recipients who are required to go to the Job Service or a one-stop are more likely than those who are not to be permanently

TABLE V.5

RECIPIENT CHARACTERISTICS, SERVICES RECEIVED, AND LABOR MARKET OUTCOMES, BY WHETHER REQUIRED TO GO TO JOB SERVICE/ONE-STOP
(Percentages Unless Stated Otherwise)

	Required to Go	Not Required to Go	Don't Know Whether Required to Go	Total
Pre-UI Job Characteristics				
Reason for Job Loss				
Laid off	81.3	83.9	80.5	82.6
Quit	4.9	5.4	4.7	5.1
Fired	10.8	7.1	11.3	8.8
Other	3.1	3.6	3.6	3.4
Recall Status				
Did not expect recall	60.2	48.1	57.5	53.4
Expected recall, no definite date	26.5	29.2	29.0	28.2
Expected recall, had a definite date	13.3	22.6	13.4	18.4
Dislocated Worker[a]	22.5	14.3	21.1	17.9
UI Program Characteristics				
Mean Weekly Benefit Amount (Dollars)	216	216	214	215
Mean Potential Duration (Weeks)	24.0	23.8	23.9	23.9
Mean Number of UI Weeks Collected	14.6	12.3	13.7	13.2
Percentage Who Exhausted Benefits	36.1	27.8	30.2	31.0
Participation in Job Service/One-Stop Activities				
Went to Job Service/One-Stop	71.6	20.1	42.9	40.6
If Went to Job Service/One-Stop, Services Received:				
Basic skills testing	18.4	11.5	17.6	16.4
Occupational interests and aptitude testing	15.7	10.7	16.0	14.4
Exploration of career alternatives	16.4	7.3	11.3	13.3
Information about jobs in demand	38.8	22.5	31.5	33.5
Training in job search methods	22.5	13.7	19.9	19.8
Help preparing a resume	21.2	13.2	16.2	18.5
Help developing training or work plans	13.3	8.8	7.9	11.5
Counseling in stress management	7.3	3.8	4.3	6.0
Counseling in money management	4.5	2.7	2.4	3.8
Referral to job openings	40.7	29.5	40.5	37.6
Information on education or training options	27.3	16.0	19.1	23.3
A job club	2.4	1.4	0.7	2.0
Referral to other programs	9.9	4.0	6.5	7.9
Other services	3.2	2.6	4.3	3.1
If Went to Job Service/One-Stop, Number of Services Received				
0	31.2	49.5	38.8	37.0
1	19.7	20.0	20.0	19.8

TABLE V.5 (*continued*)

	Required to Go	Not Required to Go	Don't Know Whether Required to Go	Total
2 or 3	23.3	17.8	18.3	21.3
4 or 5	11.3	4.7	13.2	9.7
6 to 10	12.4	6.4	8.6	10.3
More than 10	2.1	1.7	1.1	1.9
If Went to Job Service/One-Stop, Mean Number of Services Received	2.4	1.5	2.0	2.1
Lost Benefits Because Did Not Go to Job Service/One-Stop	1.2	n.a.	NA	0.5
Labor Market Outcomes				
Percentage with No Post-UI Job	19.8	17.8	17.2	18.5
If Reemployed, Mean Time to First Post-UI Job (Weeks)	29.8	25.1	28.0	27.0
Unweighted Sample Size	**1,451**	**2,044**	**412**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Recipients were asked whether they had been required to go to a Job Service office, One-Stop Career Center, EDWAA office, or JTPA office at the start of their UI benefit collection.

n.a.= not applicable.

NA = not available.

[a]Dislocated workers were classified according to the Bureau of Labor Statistics definition (Flaim and Sehgal 1985; Hipple 1999). Recipients who were laid off because a plant or facility closed or moved, because a job or shift was eliminated, or for lack of work were counted as dislocated workers if they had at least three years of job tenure and were not recalled.

separated from their pre-UI job. Recipients with no recall expectations were a substantially larger proportion of the group of recipients who were called in (60 percent), as compared to those not called in (48 percent). The reverse was the case for recipients with a definite date of recall. Similarly, dislocated workers were disproportionately represented among those called in for services. Multivariate models show that recall expectations are an important factor in explaining the likelihood that a recipient is called in. These models also show that workers in seasonal industries like construction are less likely to be called in than workers in other industries, and that union members are less likely to be called in than other recipients. States typically exempt from WPRS requirements workers who find jobs through their unions.

Finally, recipients who were required to go to the Job Service or a one-stop and did go were more likely to receive some services that those who were not required to go but went anyway. As a result, the rates of receipt of any individual service were higher for those required to go than for those not required to go.

C. PARTICIPATION IN TRAINING AND EDUCATION PROGRAMS

Some UI recipients enter training and education programs while they are unemployed. They may be seeking to develop specific occupational skills or to enhance their general level of education to improve their chances of finding a good job. Some may find retraining or further education to be necessary in a changing labor market.

To examine participation in training and education, we asked survey respondents whether they had participated in training or education programs between their initial claim for UI and the interview date. About 14 percent of recipients said that they had (Table V.6). Most of these recipients entered a single program, although a few entered two or more. Three-quarters of the programs were training programs designed to improve occupational skills, as opposed to general education programs. This participation rate was significantly higher among exhaustees than

TABLE V.6

USE AND TYPE OF TRAINING OR EDUCATION RECEIVED
(Percentage)

	Exhaustees	Nonexhaustees	Total
Number of Training or Education Programs Participated in Between First Claim Date and Interview Date			
1	16.7***[a]	9.0	11.4
2	2.0	1.6	1.7
3 or more	1.0	0.6	0.7
Total	19.7***	11.2	13.8
Start of Training			
Before beginning benefit receipt	8.9***[a]	15.9	12.9
During benefit receipt	53.0	23.3	36.2
After benefit receipt, before job start	17.6	17.0	17.2
After job start	20.6	43.8	33.7
If Participated in Training or Education, First Program Was:			
Skilled/occupational training program	77.9	73.4	75.4
General education program	22.1	26.6	24.6
If Participated in Second Program, It Was:			
Skilled/occupational training program	63.1	61.9	62.3
General education program	36.9	38.1	37.7
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

nonexhaustees. One would expect that recipients who do not find jobs quickly are more likely than those who do to seek training or education.

Not all the training and education UI recipients received occurred during the period of unemployment. About one-third of the recipients who participated in a training or education program entered the program after becoming reemployed (Table V.6). Such training or education may be related to the recipient's new job. A greater proportion of nonexhaustees who participated did so after the job start, which is not surprising given the higher reemployment rates and faster return to work of nonexhaustees relative to exhaustees. Another 13 percent of recipients participated in a program that they had begun prior to receipt of UI. More of these cases were education than training programs.

Unlike participation in reemployment services, the rate of participation in training or education programs was somewhat higher in 1998 than in 1988 (14 versus 11 percent). Otherwise, the findings for the two years are similar. Most recipients in 1988 participated in occupational training as opposed to general education programs, and similar percentages began participating before entering UI or after the start of a new job.

Recipients who participated in occupational training programs received training in a wide range of occupations, with training in computer-related occupations and health careers (like nursing) being the most popular (Table V.7). Overall, one-third of the training was in those two occupational areas, which were also the two most popular in 1988. About 60 percent of this training was provided by vocational training centers, community colleges, and other colleges or universities. Eleven percent was provided by the recipient's employer. While about one-half the training lasted less than six months, one-quarter lasted more than two years.

About one-half the recipients who took general education courses were in two- or four-year programs at colleges or universities (Table V.8). Although a fairly large number (29 percent)

TABLE V.7

CHARACTERISTICS OF OCCUPATIONAL TRAINING
(Percentage)

	Exhaustees	Nonexhaustees	Total
Start of Training			
Before beginning benefit receipt	6.8***[a]	13.3	10.3
During benefit receipt	55.0	21.6	36.8
After benefit receipt, before job start	18.1	20.5	19.4
After job start	20.1	44.6	33.5
Type of Training			
Computer-related occupation	24.8	15.4	19.7
Health careers	14.8	12.8	13.7
Business management or administration	4.3	6.7	5.6
Accounting/tax preparation	1.8	0.6	1.2
Trades (such as carpentry, plumbing, welding, or printing)	8.4	9.5	9.0
Secretarial/office skills/clerical	8.4	1.3	4.6
Paralegal	0.7	1.7	1.3
Teaching	5.1	4.5	4.7
Child care	2.5	0.6	1.5
Real estate sales	2.4	5.2	3.9
Retail sales	1.1	0.0	0.5
Insurance	2.6	1.2	1.9
Trucking/delivery/transportation	4.3	7.4	6.0
Corrections/security/protective services	2.6	0.7	1.6
Other[b]	16.2	32.5	25.0
Location of Training			
Vocational training center	27.0	18.9	22.5
Community college	21.9	18.4	20.0
Business school	9.9	5.1	7.3
Company	9.0	13.2	11.3
Adult education/community school/adult high school/night school	3.2	7.6	5.6
Other college or university	16.8	18.2	17.5
Home study/on-line study	1.3	2.4	1.9
State/local government	2.7	1.6	2.1
Union	0.0	6.0	3.3
Technical/computer school	3.4	3.9	3.7
Other	4.9	4.7	4.8
Program Was Paid for by:			
Recipient or recipient's family	37.8	41.5	40.1
Employer	10.0**	24.6	18.0
Government agency (JTPA/EDWAA/PIC/VA)	46.5***	20.3	32.2
Government loan or scholarship	7.3	9.1	8.3
Trade Adjustment Assistance (TAA)	1.2	1.6	1.4
Other	3.0*	11.6	7.7

TABLE V.7 (*continued*)

	Exhaustees	Nonexhaustees	Total
Duration of Program[c]			
Less than one month	18.6	24.1	21.5
1 to 5 months	28.4	33.9	31.5
6 to 11 months	18.4	6.6	12.2
12 to 23 months	11.1	9.9	10.5
24 or more months	23.5	25.6	24.6
Completion Status			
Completed program	72.0	60.3	65.6
Dropped out of program	8.3	9.3	8.9
No specified completion	0.7	2.1	1.5
Still in program	19.0	28.2	24.1
Course Was Taken Mainly to:			
Prepare for new occupation	75.7**[a]	55.1	64.5
Improve in current occupation	22.8	44.4	34.6
Neither	1.4	0.5	0.9
Was Program Useful in Obtaining a Job?			
Very useful	66.7	64.1	65.3
Somewhat useful	15.8	18.9	17.5
Not useful	17.4	16.9	17.2
How Useful Is Program on Current Job?			
Very useful	45.8	54.0	50.3
Somewhat useful	13.7	19.5	16.9
Not useful	24.3	15.1	19.3
No current job	16.3	11.4	13.6
Unweighted Sample Size	**287**	**170**	**457**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Analysis is restricted to survey respondents whose first education or training program was occupational training.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

[b]Frequent responses grouped in the "other" category include: technical/repair work, social work, work with specialized machinery, and factory work.

[c]We asked survey respondents who could not recall the duration of the program whether it was less than six months or six months or more. Of those who could respond, about 44 percent thought it was less than six months.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

EDWAA = Economic Dislocation and Worker Adjustment Assistance
JTPA = Job Training Partnership Act
PIC = Private Industry Council
VA = Veterans Administration

TABLE V.8

CHARACTERISTICS OF GENERAL EDUCATION COURSES
(Percentage)

	Exhaustees	Nonexhaustees	Total
Start of Training			
Before beginning benefit receipt	16.8	23.1	20.7
During benefit receipt	45.2	27.9	34.4
After benefit receipt, before job start	15.4	7.5	10.5
After job start	22.7	41.5	34.4
Type of General Education			
High school	3.8	6.0	5.1
GED	15.4	11.9	13.3
Noncredit adult education	5.2	1.6	3.0
Two-year college	26.8	14.6	19.4
Four-year college or university	16.9	28.5	23.9
Graduate or professional program	5.0	7.1	6.3
Other[a]	27.0	30.4	29.1
Program Was Paid for by:			
Recipient or recipient's family	55.8	54.5	57.7
Employer	1.0**	22.4	13.9
Government agency (JTPA/EDWAA/PIC/VA)	31.2	21.1	25.1
Government loan or scholarship	10.5	6.8	8.2
Private organization or scholarship fund	4.7	1.3	2.7
Trade Adjustment Assistance (TAA)	4.5	0.0	1.8
Other	4.4	3.4	3.9
Duration of Program[b]			
Less than one month	4.1	17.8	12.4
1 to 5 months	28.3	20.3	23.5
6 to 11 months	7.2	6.0	6.5
12 to 23 months	12.2	6.0	8.4
24 to 47 months	27.5	30.0	29.0
48 or more months	20.6	19.9	20.2
Completion Status			
Completed program	48.8	43.6	45.7
Did not complete program	22.1	16.0	18.4
No specified completion	0.0	1.6	1.0
Still in program	29.1	38.8	35.0
Course Was Taken Mainly to:			
Prepare for new occupation	59.6	42.1	49.0
Improve in current occupation	32.4	51.5	43.9
Neither	8.0	6.4	7.0
Was Program Useful in Obtaining a Job?			
Very useful	63.0	49.1	54.9
Somewhat useful	20.4	35.4	29.1
Not useful	16.7	15.5	16.0

TABLE V.8 (*continued*)

	Exhaustees	Nonexhaustees	Total
How Useful Is Program on Current Job?			
Very useful	33.3	45.5	40.7
Somewhat useful	29.6	28.4	28.9
Not useful	16.3	18.1	17.4
No current job	20.8	7.9	13.0
Unweighted Sample Size	**84**	**57**	**141**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Analysis is restricted to survey respondents whose first education or training program was a general education course.

[a]Frequent responses grouped in the "other" category include: computer/technical courses, child care courses, English classes, courses in office skills, and courses in job search skills. Some of these courses may have been to prepare the claimants for specific occupations, but we could not distinguish these courses from other, more general education courses.

[b]We asked survey respondents who could not recall the duration of the program whether it was less than six months or six months or more. Of those who could respond, about 36 percent thought it was less than six months.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

EDWAA = Economic Dislocation and Worker Adjustment Assistance
JTPA = Job Training Partnership Act
PIC = Private Industry Council
VA = Veterans Administration

were not taking courses for a degree, many of these courses appeared to be the kind that would enhance job qualifications, like computer/technical courses and courses in office skills. As expected, the education programs were longer than the training programs, with about one-half lasting more than two years.

Recipients paid for their training and education in a variety of ways.[5] Forty percent said that some or all of their training was paid for by themselves or their family, 18 percent by their employer, and one-third by a government agency. Loans from the government were also used in 8 percent of the cases. The rate of government participation in funding training for UI recipients was higher in 1998 than in 1988 (only 16 percent of UI recipients in 1988 said that the government paid, in part, for their training). Recipients taking education courses were more likely than those in training to be paying themselves, but employers and government agencies were also important sources of funding for education as well as training.

Most of the recipients appear to be on the way to completing their training or education. Two-thirds had completed training by the time of the interview, and one-quarter were still in training. Only 10 percent had dropped out. These figures were comparable to those obtained for 1988 recipients. Somewhat greater proportions of recipients in education were still in their programs (35 percent) or had dropped out (18 percent), which reflects the longer duration of these programs as compared to training. Nevertheless the great majority either had completed or were still in their program.

Virtually all the training was taken either to prepare for a new occupation (65 percent) or to improve skills in a current occupation (35 percent). Exhaustees were more likely than nonexhaustees to take training in a new occupation. While recipients were less likely to say they

[5]The questions about how training or education programs were paid for asked the respondent to list all sources of funds. Hence, multiple sources were listed in some cases.

were taking education programs than training programs to prepare for a new occupation, over 90 percent said they were taking courses either to prepare for a new occupation or to improve in a current one.

About two-thirds of the recipients thought the training they took was very helpful in obtaining a job, and half thought it was very useful on their current job. These rates were lower for those taking general education courses, but most recipients thought of their courses as very or somewhat useful in obtaining a job and in performing a job.

D. INCOME SUPPORT FOR UI RECIPIENTS

Individuals who lose their jobs lose an important source of income for them and their families while they remain unemployed. UI benefits offset this loss, but the amount of UI provided is limited. The UI weekly benefit amount typically equals one-half of average weekly wages up to a statewide maximum amount. In addition, UI is available only for a limited number of weeks. Unemployed individuals and their families, however, may not need to rely solely on UI benefits for income support; they may have income from other sources. For example, the unemployed individual's spouse or partner may be working and have income, or they or other members of their families may receive retirement, welfare, or other benefits. Receipt of income from these other sources may have occurred prior to the job loss, or it may not have begun until after the job loss. In this section, we examine the size of the income loss and the degree to which UI and other sources of income offset the loss.

On average, UI recipients' families experience large declines in income relative to their pre-unemployment situations, with UI benefits providing an important source of income during the period of unemployment. Prior to becoming unemployed, UI recipients in 1998 had average weekly family incomes of $885 (Table V.9), which is approximately $46,000 on an annual

TABLE V.9

FAMILY INCOME RELATIVE TO THE POVERTY-LEVEL THRESHOLD

	Exhaustees	Nonexhaustees	Total
Pre-Unemployment Family Income			
Mean Weekly Amount (Dollars)	881	886	885
As a Percentage of the Poverty Threshold			
0.0 to 0.5	2.1	1.4	1.6
0.5 to 1.0	9.5	9.5	9.5
1.0 to 1.5	15.6	14.9	15.1
1.5 to 2.0	15.9	14.1	14.7
2.0 to 3.0	21.4	20.8	21.0
Over 3.0	35.5	39.3	38.1
Family Income During the UI Collection Period			
Mean Annual Amount (Dollars)	470	457	461
As a Percentage of the Poverty Threshold			
0.0 to 0.5	12.0	11.3	11.5
0.5 to 1.0	27.9	24.9	25.8
1.0 to 1.5	18.9	19.9	19.6
1.5 to 2.0	12.4	14.7	13.9
2.0 to 3.0	15.6	17.3	16.7
Over 3.0	13.4	12.1	12.5
Family Income During the UI Collection Period, Excluding UI Benefits			
Mean Annual Amount (Dollars)	268	238	248
As a Percentage of the Poverty Threshold			
0.0 to 0.5	57.9	58.7	58.5
0.5 to 1.0	8.9	9.0	9.0
1.0 to 1.5	11.7	12.0	11.9
1.5 to 2.0	7.2	8.2	7.9
2.0 to 3.0	8.7	7.5	7.9
Over 3.0	5.7	4.5	4.9

TABLE V.9 (*continued*)

	Exhaustees	Nonexhaustees	Total
Family Income After the UI Collection Period			
Mean Annual Amount (Dollars)	580	726	681
As a Percentage of the Poverty Threshold			
0.0 to 0.5	27.9***[a]	19.1	21.8
0.5 to 1.0	12.5	9.0	10.1
1.0 to 1.5	13.9	12.7	13.1
1.5 to 2.0	11.1	12.1	11.8
2.0 to 3.0	17.0	17.2	17.1
Over 3.0	17.7	29.9	26.1
Unweighted Sample Size	**1,440**	**1,560**	**3,000**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: Family income is the sum of the respondent's earnings, spouse's earnings (or partner's earnings if living with someone unmarried), retirement benefits, and transfer payments. We imputed the earnings of spouses/partners, based on the sex and age of the claimant, for claimants who reported having a working spouse/partner but for whom we did not have an earnings rate.

[a]The significance levels pertain to statistical tests for differences in the distribution of outcomes for exhaustees and nonexhaustees.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

basis.[6] During the period in which UI was received, weekly family income was about half that amount ($461 on average). The decline in income may have been partially offset by changes in a spouse's earnings or in receipt of other benefits, but the availability of UI benefits was clearly important. Assuming that there would be no behavorial response if UI benefits were not available, family income would have averaged $248 a week, which is 28 percent of the pre-unemployment amount.

Weekly family income rose after the period of UI collection when many recipients became reemployed, but family income at that point was still about 23 percent lower, on average, than the pre-unemployment amount. Since exhaustees were less likely than nonexhaustees to become reemployed, the post-UI to pre-UI decline in average family income was more severe for that group (34 versus 18 percent).

Estimates of family income relative to the poverty level threshold also highlight the importance of UI benefits in providing income support to the families of recipients. Prior to unemployment, about 11 percent of the families had weekly incomes below the poverty threshold; after receipt, that number had risen to 37 percent. If UI benefits were unavailable, the percentage below poverty could be as high as 68 percent if family members did not respond to the absence of UI by seeking and accepting employment or applying for welfare or other benefits, which seems unlikely.[7]

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[6]Family income is the sum of the respondent's earnings, spouse or partner's earnings, retirement benefits, and welfare and other transfer payments. It does not include the earnings of other individuals in the family or income from rent, interest, or dividends, since data on income from these sources were not collected. Income from these sources is likely to be small on average, but these exclusions mean that the figures presented here underestimate true family income to some degree.

[7]These estimates of the percent of families with incomes below the poverty level pertain to weekly income at a point in time. On an annual basis, fewer families would have incomes below

The presence or absence of a spouse or partner's income from employment is a very important source of income to UI recipients' families and a primary determinant of whether income is below the poverty line. As Table V.10 shows, 57 percent of the UI recipients had a spouse or partner at the UI claim date, and 70 percent of the spouses or partners were working. Earnings from working spouses or partners averaged $222 a week computed over all recipients (those with and without a spouse or partner). This amount was a little less than half (48 percent) of the average family income while the respondent was collecting UI. UI benefits accounted for most of the rest (46 percent). These averages mask the fact that only 40 percent of recipients had a working spouse or partner. For those individuals, the spouse or partner's income averaged $558 ($222/.398). For the rest of the recipients, it was zero. These numbers were similar for exhaustees and nonexhaustees. They were also similar at the interview date, although a slightly higher percentage of respondents were married at that point than at the claim date.

Retirement benefits, welfare, and other transfer payments were received by relatively few recipients and were, on average, an unimportant component of family income either before, during, or after UI receipt (Table V.11). For example, in the year prior to receiving UI, about four percent of recipients reported that they or someone in their household received social security, and three percent reported that they or someone in their household received a pension. These rates were similar during UI receipt and afterward. The rates of receipt of retirement income were slightly higher for exhaustees than for nonexhaustees, but the rate of receipt was still low for both groups. Receipt of worker's compensation or disability insurance or cash welfare benefits was also very low (three percent or under for exhaustees and nonexhaustees).

(continued)
the poverty threshold, since families will have some periods in which the respondent is working, some periods on UI, and, in some cases, some periods with no UI.

TABLE V.10

SPOUSE/UNMARRIED PARTNER EMPLOYMENT STATUS AND EARNINGS AT CLAIM DATE AND AT INTERVIEW
(Percent)

	Exhaustees	Nonexhaustees	Total
Percent with Spouse/Unmarried Partner:			
At UI Claim Date	55.7	56.9	56.5
At Interview	57.8	60.2	59.4
Percent with Working Spouse/Unmarried Partner:[a]			
At UI Claim Date	40.0	39.6	39.8
At Interview	40.8	41.9	41.6
Mean Weekly Earnings from Spouse/Unmarried Partner (Dollars):[a,b]			
At UI Claim Date	232	217	222
At Interview	240	245	243
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Statistics for percentages with a working spouse/unmarried partner and mean earnings of spouse/unmarried partner are for the entire sample. Recipients with no spouse/unmarried partner, or with a spouse/unmarried partner who was not working, are included in the calculations to assess changes in earnings in response to both changed likelihood of having a spouse/unmarried partner who is working and changed work effort by working spouses/unmarried partners.

[b]We imputed earnings of spouses/ partners, based on the sex and age of the claimant, for claimants who reported having a working spouse/ partner but for whom we did not have an earnings rate.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

TABLE V.10

SPOUSE/UNMARRIED PARTNER EMPLOYMENT STATUS AND EARNINGS AT CLAIM DATE AND AT INTERVIEW
(Percent)

	Exhaustees	Nonexhaustees	Total
Percent with Spouse/Unmarried Partner:			
At UI Claim Date	55.7	56.9	56.5
At Interview	57.8	60.2	59.4
Percent with Working Spouse/Unmarried Partner:[a]			
At UI Claim Date	40.0	39.6	39.8
At Interview	40.8	41.9	41.6
Mean Weekly Earnings from Spouse/Unmarried Partner (Dollars):[a,b]			
At UI Claim Date	232	217	222
At Interview	240	245	243
Unweighted Sample Size	**1,864**	**2,043**	**3,907**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Statistics for percentages with a working spouse/unmarried partner and mean earnings of spouse/unmarried partner are for the entire sample. Recipients with no spouse/unmarried partner, or with a spouse/unmarried partner who was not working, are included in the calculations to assess changes in earnings in response to both changed likelihood of having a spouse/unmarried partner who is working and changed work effort by working spouses/unmarried partners.

[b]We imputed earnings of spouses/ partners, based on the sex and age of the claimant, for claimants who reported having a working spouse/ partner but for whom we did not have an earnings rate.

*Significantly different from nonexhaustees at the .10 level, two-tailed test.
**Significantly different from nonexhaustees at the .05 level, two-tailed test.
***Significantly different from nonexhaustees at the .01 level, two-tailed test.

The rate of food stamp receipt was slightly higher, and the exhaustee-nonexhaustee differences were a bit more pronounced (eight percent of exhaustees received food stamps during the post exhaustion period, compared to three percent of nonexhaustees), but this source of income was still not very important to most recipients.

The rate of receipt of benefits from these sources was similarly low in 1988, although the rates of receipt were somewhat higher at that point. The most striking difference is that about twice as many exhaustees in 1988 than in 1998 received cash welfare both while receiving UI and afterward. Nationally, the proportion of the population receiving cash welfare benefits also declined over this period, but the decline appears smaller (it was 29 percent for Aid to Families with Dependent Children[AFDC]/Temporary Assistance for Needy Families [TANF]).[8] Food stamp receipt also declined for UI recipients, but the decline was not as large as the decline in cash welfare receipt. It was roughly 6 percent for UI recipients while they were collecting benefits and 21 percent for exhaustees. Nationally, the proportion of the population receiving food stamps also declined over this period, but the decline was small (four percent).[9]

[8]Data reported by the U.S. Department of Health and Human Services (http://www.acf.dhhs.gov/news/stats/6097rf.htm) indicate that 4.5 percent of the U.S. population received AFDC in 1988, and 3.2 percent received TANF in 1998.

[9]Data reported by the Food and Nutrition Service (http://www.fns.usda.gov/pd/fssummer.htm) indicate that approximately 7.6 percent of the population received food stamps in 1988, compared to 7.3 percent in 1998.

VI. INTERPRETATION AND IMPLICATIONS FOR POLICY

In many respects, the labor market of the late 1990s was one of the strongest of the postwar era. The unemployment rate hovered around four percent, rates of job displacement were low, and real wages rose at a healthy rate. Given this environment, the labor market outcomes reported in this study for UI recipients, and especially for exhaustees, are surprisingly poor. UI recipients in the late 1990s had longer unemployment durations and were less likely to have a job two years after their initial job separations than were UI recipients in the late 1980s. As in earlier periods, exhaustees' experiences in the late 1990s were worse than those of other UI recipients—more than one-fourth of exhaustees never had a job in the post-UI period, and of those who did find employment, more than 47 percent had earnings lower than they had before becoming unemployed. Clearly, many workers in our sample were left behind in the "high-pressure" labor market of the late 1990s.

Despite the fact that UI recipients in the late 1990s were having difficulty finding jobs, they were less likely than recipients in the late 1980s to seek reemployment services from the Job Service or a one-stop career center. This reduction in use of reemployment services occurred both at the start of UI collection and following benefit exhaustion.

In this chapter, we interpret the policy implications of these findings. Our discussion is divided into four sections. In Section A, we ask why labor market outcomes in our sample seem to be so poor. We especially address whether underlying changes in the labor market contribute to the poor outcomes. In Section B, we examine the decline in the use of reemployment services by the workers in our sample and identify potential reasons for this trend. In Section C, we explore some ways UI policy might be used to improve the labor market outcomes of UI recipients. Finally, in Section D, we briefly examine the specific question of UI policy toward

the potential duration of benefits and how that policy may affect observed rates of benefit exhaustion.

A. WHY WERE UI RECIPIENTS' LABOR MARKET OUTCOMES SO POOR?

There are two plausible interpretations of the general finding that UI recipients seem to have fared poorly in the late 1990s: (1) the strength of the overall labor market permitted most workers to avoid collecting UI, which caused the pool of 1998 UI recipients to include a disproportionate number of workers with significant labor market problems; or (2) factors in the overall labor market changed such that UI recipients faced new difficulties that were not as prevalent in the past. If the first interpretation was the sole explanation, the poor outcomes would have limited implication for policy. Unfortunately, our research does not provide an unambiguous way to distinguish between these two possibilities, since we cannot measure all the factors that might lead some recipients to have worse labor market outcomes than others. However, we believe that the evidence both from this study and from other research suggests that important changes in labor markets have occurred that, in part, explain our results. UI policymakers will need to monitor such changes and study their programmatic implications.

We conclude that changes in labor markets may explain some of the poor performance of the workers in our sample and that the poor labor market outcomes we find are not due solely to characteristics of the recipients. We base our conclusions on three reasons. First, as summarized in Chapter I, much of the recent literature on unemployment in the late 1990s concludes that some long-established labor market patterns have changed. For example, the incidence of long-duration unemployment seems to have increased in recent years. Similarly, although overall rates of worker displacement remain rather low, a broader spectrum of workers has been displaced, and the consequences have been more negative. Because these trends are occurring generally across the entire labor market, it seems plausible that they would be reflected in our

data on UI recipients regardless of the strength of the labor market. Of course, the very low recent unemployment rates may have had additional impact by increasing the relative representation among UI recipients of workers who would have had labor market problems even if circumstances had not changed.

A second reason for believing that underlying factors in the labor market may have changed comes from our study of the determinants of UI benefits exhaustion (see Chapter III). We showed that the changing characteristics of the UI population can explain a significant portion of the higher exhaustion rates experienced during the late 1990s. By itself, this finding would be more consistent with the notion that the population of UI recipients is more subject to adverse selectivity than in the past. However, our findings—that both the exhaustees and the nonexhaustees in our sample experienced labor market outcomes that were worse than those for similar recipients in 1988—suggest that broad labor market trends or unmeasured factors are coming into play. Similarly, when we examine the effect of changes in the characteristics of UI recipients on the increased unemployment duration we observe, we find that changes in the characteristics of recipients explain only one-quarter to one-third of the increased unemployment duration (see Appendix C). This finding is also consistent with the hypothesis that underlying factors in the labor market have changed.

Finally, some of the changes in the measurable characteristics of UI recipients probably mirror the changing labor market. For example, the significant increase in dislocated workers between 1988 and 1998 may reflect the "increasing democratization" of displacement that other researchers have found. Similarly, the increase in the incidence of workers with low potential UI durations (see below) may also reflect the changing nature of some UI recipients' jobs, which may be of considerably shorter tenure than in the past.

B. WHY DID THE USE OF REEMPLOYMENT SERVICES DECLINE?

Why did the of use of reemployment services by UI recipients decline from 54 percent in 1998 to 41 percent in 1998? This is an important question, and there are a number of possible answers.

First, the characteristics of recipients changed between the two years, and these changes could have reduced the use of reemployment services because some types of recipients are less likely than others to use services. For example, the fact that the UI population in 1998 was older and more likely to be Hispanic than in 1988 could explain some of the decline, since older recipients and Hispanic recipients are less likely than other groups to seek services. However, some changes in the characteristics of recipients, such as the decline in the percentage of recipients who were unionized or from manufacturing, should have increased the use of services, since these two groups are less likely than others to use services. To investigate the net result of these changes in characteristics, we estimated a model explaining use of services in 1998 as a function of recipient characteristics (see Appendix C). We then predicted use of services using average characteristics in 1998 and 1988. We found that the changes in average recipient characteristics between the two years made little difference. Changes that would increase use of services offset the changes that would reduce use.

Second, UI recipients in 1998 might have thought they could get a job without much help given the very strong labor market; as a result, they might not have used reemployment services. While we cannot test this hypothesis directly, it is hard to give much weight to this explanation when the decline in reemployment service use and job search occurred both at the start of UI and after exhaustion of benefits. Recipients who initially thought they could easily find a job would probably change their view by the time they exhausted benefits.

Third, the capacity of the reemployment services system to serve UI recipients might have declined between the two years. Two factors suggest that this could have happened. One, the number of UI recipients rose in the 10 years between 1988 and 1998 from approximately 6.5 to 7.2 million, an 11 percent increase. Two, while funding for the state Job Service and one-stop career centers rose over the same period by 23 percent in nominal terms, from $738 million in fiscal year 1988 to $911 million in fiscal year 1998, the increase in average wages for state employees over this period (roughly 30 percent) more than offset this increase.[1] The net result of these two factors is a 14 percent decline in real dollars per recipient. Counteracting these effects, however, are two other factors suggesting that the capacity of the system to serve UI recipients could have increased. One, funding for dislocated workers available through the JTPA and the Trade Adjustment Assistance programs increased more than fourfold during this period (from $329 million in fiscal year 1988 to $1,470 million in fiscal year 1998). While much of this money is used to pay for retraining, some of the JTPA funding is used for reemployment services and to support one-stop career centers. Since some UI recipients are dislocated workers, one might expect that this large increase in funding would have paid for more reemployment services for them. Two, despite the decline in Job Service funding per UI recipient noted above, the capacity of the system to serve recipients may not have declined much or at all due to the increased emphasis on self-accessed services. The net effect of these four factors on the capacity of the system to serve UI recipients is hard to gauge.

[1]Data on funding levels were obtained from DOL/ETA's Web site [www.doleta.gov/budget/bahist.asp]. Data on average wages for state employees were obtained from U.S. Bureau of the Census, Public Employment, series GE, no. 1, 1988, and [www.census.gov/pub/govs/www/apes.html].

Fourth, the movement to remote initial claims and the closing of UI local offices might have had an effect on reemployment service use if recipients no longer go to local offices unless they are called in. We investigated this possibility by examining service use in the 15 states that were in both the 1998 and 1988 samples. We found a decline in service use in 14 of those states, so there is no evidence that the decline was concentrated only in states switching to remote claims. Remote claims may still be a factor in explaining the decline in service use, but it is not the only one.

Finally, the implementation of WPRS systems may have been a factor. WPRS systems were intended to concentrate services on recipients who were most likely to exhaust benefits, and our data show that did happen. About 35 percent of the recipients said they were called in for services, and this group accounted for about 60 percent of all the recipients who used the Job Service or a one-stop. This group was also more likely to receive services other than an orientation if they went to the Job Service or a one-stop. This suggests that the WPRS system may have concentrated services on a smaller group of recipients than in the past.

C. HOW MIGHT LABOR MARKET OUTCOMES BE IMPROVED?

UI policy could be changed in three general ways to promote improved labor market outcomes for UI recipients:

1. Job search requirements for claimants could be strengthened.
2. Increased resources could be devoted to reemployment services.
3. Reemployment services could be targeted better.

In this final section, we look at these possibilities.

1. Strengthening Job Search Requirements

In Chapter IV, we showed that the proportion of UI claimants who were actively searching for work appears to have been lower in 1998 than was true a decade earlier. A similar decline in search activity was recorded for workers who had exhausted their UI entitlements. We do not have a convincing explanation for these declines, although they may be explained in part by workers' incorrect assumptions that they did not have to actively seek work because jobs were readily available. Whatever the cause, increased attention to enforcing job search requirements might yield improvements in labor market outcomes. For example, a recent experimental study of job search requirements in the state of Maryland (Klepinger et al. 1998) concludes that requiring workers to make additional employer contacts or verifying those contacts that are reported can have a significant effect on increasing exit rates from UI and on reducing the dollar value of UI benefits received. The authors suggest that, because more stringent job search requirements increase the "costs" of being on UI, these requirements may encourage a more realistic appraisal of reemployment prospects. Such a revision of expectations might indeed have an important impact on the labor market outcomes of UI recipients, but the evidence from the Maryland study is not strong enough to be certain on this point.

2. Increasing Resources Devoted to Reemployment Services

In the previous section, we pointed out that there has been a decline in real spending per recipient for Job Service and one-stop career centers over the past decade, although much of this decline may have been offset by increases in related JTPA/WIA funding. The increasing importance of self-accessed services such as the Internet may also have improved the productivity of whatever dollars are spent. Still, increased resources devoted to providing services to workers who are not served might have labor market payoffs as has been shown in several demonstrations (see, for example, Corson and Haimson, 1996 and Decker et al. 2000).

The additional funding for reemployment services ($35 million) provided to the Job Service in program year 2001 is a step in this direction.

3. Improving Targeting of Service Delivery

The introduction of the WPRS system in all of the states in the mid-1990s provided the most recent example of policymakers' desires to focus reemployment services on UI recipients who would benefit the most from them. To examine the effects of this type of targeting of services and whether it is performing well in the new labor market environment, we used our own model of UI exhaustions to predict exhaustion probabilities for the recipients in our sample. We then simulated a situation under which the 30 percent of recipients with the highest predicted probabilities of exhaustion would be offered reemployment services. The first two columns of Table VI.1 present the results for that simulation. These show that our model did indeed identify recipients who were significantly more likely to exhaust and who (judging by the lengths of their unemployment spells) experienced significantly worse labor market outcomes. UI recipients who were likely exhaustees by our model were also significantly more likely to go to the Job Service or a one-stop career center (48 percent, compared to 39 percent). There was no significant difference, however, in the probability of participating in education or training between those with high predicted probabilities of exhaustion and those with low predicted probabilities.

The simulations in Table VI.1 also examine two other approaches to the service-targeting question. The first looks at the consequences of targeting dislocated workers. To make the BLS definition of "displacement" suitable for *a priori* administrative use, we replaced the stipulation that workers had not returned to their prior jobs with the requirement that they *did not expect* to

TABLE VI.1

ALTERNATIVE APPROACHES TO TARGETING SERVICES

	Likely Exhaustees[a]		Dislocated Workers[b]		Low-Skill Workers[c]	
	Yes	No	Yes	No	Yes	No
Labor Market Outcomes						
Exhaustion rate	49.4***	21.7	46.4***	28.3	41.1***	28.8
Ever found employment (percentage)	77.6**	83.9	78.2	82.1	75.3**	82.9
Length of unemployment spell (weeks)	34.7***	22.6	34.0***	25.7	34.9***	25.2
Pre-UI weekly wage	$564	$767	$666	$712	$288**	$792
Post-UI weekly wage	$456	$638	$570	$649	$322	$641
Service Receipt						
Job Service, one-stop center (percentage)	47.6**	39.0	55.2***	38.4	43.6	40.4
Any education or training (percentage)	15.6	13.3	19.3**	12.9	15.9	13.5
Unweighted Sample Size	**1,018**	**1,975**	**619**	**3,127**	**614**	**2,763**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Highest 30 percent of predicted probabilities of exhaustion.

[b]Three or more years on pre-UI job, laid off, and did not expect recall.

[c]Earned $300 or less per week on pre-UI job or had less than high school education, and did not expect recall.

*Significantly different from the other group at the .10 level, two-tailed test.
**Significantly different from the other group at the .05 level, two-tailed test.
***Significantly different from the other group at the .01 level, two-tailed test.

return to such jobs.[2] The results of this simulation show that targeting dislocated workers would indeed focus services on workers who experience high exhaustion rates and long spells of unemployment. The data also suggest, however, that such workers are already more likely than other workers to receive services, so the gains to adopting additional displacement screens in the worker profiling system (in response, say, to the greater numbers of displaced workers in the UI recipient group) might be marginal.

A second simulation in Table VI.1 examined the possibility of targeting low-skill workers. Specifically, we defined UI recipients as having low skills if they earned $300 or less per week on their pre-UI jobs or if they had less than a high school education. We also required that such low-skill workers not expect to return to their pre-UI jobs. Again, these hypothetical targeting criteria focused on a set of workers with severe reemployment difficulties. Especially notable are the long unemployment durations experienced by this low-skill group—a finding that tends to contradict the notion that these are mainly younger workers exploring different job options. An important finding is that, in this simulation, low-skill workers seemed no more likely than other workers to have received services. Therefore, the results suggest that expanding the measures of low skill, such as education level, that are already used in targeting of services might add to the effectiveness of the profiling system in the current labor market environment.

D. HOW MIGHT INCREASED UI POTENTIAL DURATIONS BE TARGETED?

Most UI policy initiatives that extend recipients' potential durations have been adopted in response to recessionary circumstances. The Federal-State Extended Benefits program provides such extra benefits whenever state unemployment rates reach certain trigger levels. Additional emergency extensions were passed in response to major recessions in each of the past three

[2]This stipulation was in addition to the requirements that such workers have been laid off and that they have three or more years of experience on their pre-UI jobs.

decades. Unlike some prior studies of benefit exhaustion, the very low unemployment rates of the late 1990s imply that our sample is not a very good one with which to examine issues related to these types of extensions. The observed unemployment rates are simply too low to permit any sort of meaningful simulations. Hence, our examination of benefit duration policy focused on possible rationales for providing longer durations of benefits for certain categories of workers in strong labor market environments.

The first simulation reported in Table VI.2 examines the possibility that extended benefits might be targeted toward workers with significant tenure (three or more years) on their prior jobs. The rationale for such a policy is based on research findings that show that these workers suffer significant losses of job-specific human capital when they are laid off (Kletzer 1998). Hence, some extension of benefit eligibility may be desirable by providing these workers with additional time to find better job matches. The results reported in the table do not strongly support this hypothesis, however. Two of the three labor market outcomes we use are better for long-tenure workers than short-tenure ones. In fact, the average duration of UI benefits currently provided to high-tenure workers appears to cover a greater length of these workers' typical unemployment spells than is true for other workers.[3] The case for benefit extensions to this group based on an income maintenance rationale is also not especially strong. Family incomes of high-tenure workers during their periods of UI collection, on average, tend to be somewhat higher than those of other workers.

The second set of simulations reported in Table VI.2 appear to be more promising from the perspective of potential innovations in UI duration policy. These simulations focused on UI

[3]Comparing the ratios of the average potential duration to the length of the unemployment spell for long-tenure and short-tenure workers, shown in Table VI.2, is a simplification of the appropriate analysis, but it does indicate that long-tenure workers have UI benefits available for a greater proportion of their UI spells.

TABLE VI.2

ALTERNATIVE APPROACHES TO TARGETING BENEFIT EXTENSIONS

	Long-Tenure Workers[a]		Low Potential Duration[b]	
	Yes	No	Yes	No
Labor Market and UI Outcomes				
Exhaustion rate	29.3	32.3	49.5***	27.6
Average potential duration (weeks)	24.5***	23.2	15.6***	25.3
Length of unemployment spell (weeks)	25.1	28.1	31.6*	26.2
Family Income				
Average annual income during UI benefit collection (dollars)	27,674*	20,304	18,553	24,947
Percentage in poverty during UI benefit collection	31.5***	43.6	48.8***	35.3
Average annual income during UI benefit collection, excluding benefits (dollars)	15,799	9,952	9,807	13,422
Percentage in poverty during UI benefit collection, excluding benefits	64.0**	70.8	71.8	67.7
Unweighted Sample Size	**1,909**	**1,756**	**669**	**3,162**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

[a]Workers with more than three years on pre-UI job.

[b]Workers with UI potential durations of 20 weeks or less.

*Significantly different from the other group at the .10 level, two-tailed test.
**Significantly different from the other group at the .05 level, two-tailed test.
***Significantly different from the other group at the .01 level, two-tailed test.

recipients who were eligible for short UI durations (20 or fewer weeks). Not surprisingly, this group of workers (who made up about one-sixth of our sample) had much higher exhaustion rates than did workers eligible for longer benefits. Indeed, the actual average unemployment duration for this group of workers was significantly *longer* than the average duration for workers who could collect more in benefits. Family incomes (during the period of UI collection) for workers with short UI potential durations were quite low, and the exhaustion of those benefits raised the incidence of poverty for this group from 50 to 72 percent. Although there are clear trade-offs in the allocation of benefits among potential recipient populations, these simulations suggest that a strong policy interest in the well-being of exhaustees might warrant exploring the appropriateness, feasibility, and consequences of lengthening potential durations for recipients who currently are only eligible for short ones.

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APPENDIX A

SAMPLE DESIGN AND WEIGHTS

The sample for the study of UI exhaustees was designed to represent the national population of UI exhaustees and the national population of UI recipients who do not exhaust benefits (nonexhaustees). This was done so that it could be used to describe the characteristics of UI exhaustees and their labor market outcomes and to compare these characteristics and outcomes to those of nonexhaustees. The two samples, when combined, were also designed to describe UI recipients in general. Finally, the sample was designed to provide sufficient statistical precision for the descriptive and analytic objectives of the study.

To meet these objectives, we used a two-stage, clustered sample design to select nationally representative samples of exhaustees and nonexhaustees from an initial national sample frame of everyone who established a UI benefit year during a one-year period (1998) and received at least one payment. We randomly selected 25 states from geographic strata in the first stage and approximately 27,500 UI recipients (exhaustees and nonexhaustees) in the second stage. From these recipients, we selected random subsamples of exhaustees and nonexhaustees as an interviewing sample.

Interviewing occurred in two stages. In the initial 16-week fielding period, we used mail, telephone, and database locating methods to attempt to find and complete telephone interviews with members of this sample. People who were interviewed in the initial stage are nationally representative of UI exhaustees and nonexhaustees who can be contacted and interviewed by telephone within 16 weeks. Then, in a second, more intensive stage in a random subset of 10 states, we continued our attempts to interview sample members. We continued our mail, telephone, and database locating activities and added field staff to find sample members who had not responded to our initial interview attempts. We asked people we located to call our

telephone center to complete interviews.[1] Those interviewed through this extended fielding period are nationally representative of UI exhaustees and nonexhaustees who require intensive locating efforts. Hence, the final sample of completed interviews has two components: (1) an initial fielding component obtained from 25 states, and (2) an intensive fielding component obtained from 10 states.

We set a goal of completing interviews with 2,000 exhaustees and 2,000 nonexhaustees, since we judged these sample sizes to be large enough to describe exhaustees and compare them to nonexhaustees with a sufficient degree of precision. In the end, we completed interviews with 1,864 exhaustees and 2,043 nonexhaustees.

We now turn to a discussion of five sample design issues: (1) the sample frame, (2) sampling states and UI recipients, (3) implementing the sample design, (4) weights, and (5) design effects.

A. SAMPLE FRAME

Given our objective of representing the national populations of UI exhaustees and nonexhaustees, we defined the initial sample frame as all exhaustees and nonexhaustees who began collecting UI in the 50 states or the District of Columbia during a one-year period. This sample frame has several attributes worth noting.

First, we included 51 of the 53 UI programs in the sample frame. We excluded Puerto Rico and the Virgin Islands, because their economies and UI programs differ in important ways from those of the remaining UI programs.

[1]To minimize training costs and to maintain a uniform data collection mode, we did not have field staff conduct interviews. Instead, field staff either asked the people they located to use their own phone to call the MPR telephone center or offered them a cell phone to use.

Second, we restricted the sample frame to people who received at least one payment (that is, a first payment). Alternatively, we could have defined the frame as all claimants and included people who filed a new initial claim but did not receive a first payment. We did not do so, because we believed that the policy issues addressed in this study (for example, what services should be directed toward long-term recipients) pertain more directly to recipients than to claimants.

Third, we chose a one-year period to define the sample frame to account for any seasonal differences in the UI population. Given the project schedule, we selected 1998 so that we would have an adequate follow-up period to observe labor market activities of exhaustees and nonexhaustees while still providing timely information for policy decision making.

Fourth, we included people collecting benefits under the regular state UI programs, the Unemployment Compensation for Federal Employees program, and the Unemployment Compensation for Ex-Servicemembers program. This approach included everyone collecting unemployment compensation benefits.

B. SELECTING STATES, EXHAUSTEES, AND NONEXHAUSTEES

In principle, we could have selected samples of exhaustees and nonexhaustees from all states. However, this was not feasible for cost reasons, so we selected a sample of states as the first stage in a two-stage sample design and then selected recipients.

1. Selecting States

One possible method of selecting states was used in the 1988 study of UI exhaustees (Corson and Dynarski 1990). In that study, states were selected with probabilities proportional to the number of UI exhaustees, with samples of exhaustees selected from the states to form a

self-weighting sample of exhaustees representative of the nation. Supplementary samples of nonexhaustees were chosen from the same states.

For this study, we changed this design slightly to give some weight in the selection of states to nonexhaustees, as samples of both exhaustees and nonexhaustees are used in the analysis. Specifically, we weighted exhaustees and nonexhaustees equally in the selection of states and selected states with probabilities proportional to this weighted population. Relative to selecting states with probability proportional to the number of exhaustees, this procedure reduced somewhat the probability of selecting states that had very high exhaustion rates. However, states with high exhaustion rates were still given greater weight in the selection process than if we had made selection proportional to the UI recipient population.

We show this approach in Table A.1, using data for the period July 1997 through June 1998.[2] Columns 2 through 4 show, by state, the number of people receiving first payments, the number exhausting benefits, and an estimate of the number of nonexhaustees (the number of first payments minus the number of exhaustees). Column 5 is the weight assigned to each state when the numbers of exhaustees and nonexhaustees were given equal weight.[3] We scaled these weights to sum to 25, the number of states we included in the study.

Under this approach, nine states (California, New York, Pennsylvania, Texas, Michigan,

[2]Although we wanted to represent the UI population in 1998, we used data for July 1997 though June 1998 for state selection, since 1998 data were not yet available when the states were chosen.

[3]The weight was calculated for a particular state by averaging the state's share of the national exhaustee population and the state's share of the national nonexhaustee population.

TABLE A.1

STATE SELECTION PROBABILITIES

State	First Payments 7/97-6/98	Exhaustees 7/97-6/98	Non-exhaustees 7/97-6/98	Weighted Sum	Probability	Expected Number		Exhaustion Rate	UI Duration
						Exhaustees	Non-exhaustees		
California	1,083,445	417,928	665,517	3.992009	1.000000	417,928	665,517	0.386	16.9
New York	472,056	238,635	233,421	1.894603	1.000000	238,635	233,421	0.505	19.2
Pennsylvania	422,750	107,312	315,438	1.404510	1.000000	107,312	315,438	0.253	16.8
Texas	327,751	167,319	160,432	1.319919	1.000000	167,319	160,432	0.510	15.8
Michigan	350,676	92,422	258,254	1.174410	1.000000	92,422	258,254	0.263	11.3
Illinois	306,892	105,451	201,441	1.095251	1.000000	105,451	201,441	0.343	17.1
New Jersey	274,074	117,804	156,270	1.043022	1.000000	117,804	156,270	0.429	17.4
Florida	245,298	97,546	147,752	0.911845	1.000000	97,546	147,752	0.397	14.3
Ohio	237,351	51,220	186,131	0.763757	1.000000	51,220	186,131	0.215	13.6
North Carolina	216,261	37,124	179,137	0.669679	1.000000	37,124	179,137	0.171	9.6
Wisconsin	213,455	38,503	174,952	0.666100	1.000000	38,503	174,952	0.180	11.9
Washington	183,317	61,134	122,183	0.649134	1.000000	61,134	122,183	0.333	18.7
Massachusetts	175,984	57,938	118,046	0.621107	0.857541	49,684	101,229	0.329	16.3
Connecticut	110,306	29,742	80,564	0.371254	0.512579	15,245	41,295	0.269	15.9
Rhode Island	48,635	15,358	33,277	0.169853	0.234511	3,602	7,804	0.315	15.7
Maine	40,137	23,323	16,814	0.169419	0.233912	5,456	3,933	0.581	14.2
Vermont	19,881	3,306	16,575	0.061270	0.084594	280	1,402	0.166	14.4
New Hampshire	14,924	905	14,019	0.041663	0.057524	52	806	0.060	9.8
Maryland	104,812	34,920	69,892	0.371052	0.512299	17,889	35,806	0.333	15.7
Virginia	105,908	23,950	81,958	0.343802	0.474676	11,369	38,904	0.226	10.4
West Virginia	56,144	11,350	44,794	0.178559	0.246530	2,798	11,043	0.202	14.8
District of Columbia	20,599	11,691	8,908	0.086183	0.118990	1,391	1,060	0.567	19.2
Delaware	22,015	5,523	16,492	0.072961	0.100735	556	1,661	0.250	16.9
Georgia	172,113	52,643	119,470	0.596403	0.823433	43,348	98,376	0.305	9.6
Tennessee	165,675	49,940	115,735	0.572079	0.789849	39,445	91,413	0.301	12.1
Alabama	140,843	28,166	112,677	0.447092	0.617284	17,386	69,554	0.199	10.5
Kentucky	113,649	19,430	94,219	0.351710	0.485595	9,435	45,752	0.170	12.2
South Carolina	93,994	19,826	74,168	0.301200	0.415857	8,245	30,843	0.210	11.1
Mississippi	57,813	14,938	42,875	0.192794	0.266185	3,976	11,413	0.258	13.8
Indiana	116,378	34,638	81,740	0.400641	0.553151	19,160	45,215	0.297	11.2
Minnesota	104,237	30,517	73,720	0.357451	0.493520	15,061	36,382	0.292	14.3
Arkansas	87,177	37,478	49,699	0.331782	0.458080	17,168	22,766	0.429	12.1
Louisiana	64,210	18,571	45,639	0.219565	0.303146	5,630	13,835	0.289	14.9
Oklahoma	41,225	12,461	28,764	0.142445	0.196669	2,451	5,657	0.302	12.7
New Mexico	32,107	9,864	22,243	0.111376	0.153774	1,517	3,420	0.307	16.4
Missouri	138,717	37,447	101,270	0.466999	0.644770	24,145	65,296	0.269	13.4
Iowa	70,172	14,496	55,676	0.224025	0.309304	4,484	17,221	0.206	12.5
Kansas	50,872	13,849	37,023	0.171582	0.236898	3,281	8,771	0.272	13.7
Nebraska	25,040	7,841	17,199	0.087268	0.120489	945	2,072	0.313	11.8
Colorado	60,783	23,434	37,349	0.223923	0.309164	7,245	11,547	0.385	12.4
Utah	36,658	10,165	26,493	0.124150	0.171410	1,742	4,541	0.277	10.9
Montana	26,998	8,196	18,802	0.093383	0.128932	1,057	2,424	0.303	14.0
North Dakota	11,601	4,580	7,021	0.043032	0.059414	272	417	0.394	12.3

TABLE A.1 *(continued)*

State	First Payments 7/97-6/98	Exhaustees 7/97-6/98	Non-exhaustees 7/97-6/98	Weighted Sum	Probability	Expected Number: Exhaustees	Expected Number: Non-exhaustees	Exhaustion Rate	UI Duration
Wyoming	10,990	3,075	7,915	0.037295	0.051493	158	408	0.279	14.1
South Dakota	9,102	879	8,223	0.026308	0.036323	32	299	0.096	10.9
Arizona	67,852	20,650	47,202	0.234835	0.324229	6,695	15,304	0.304	14.5
Nevada	63,882	20,291	43,591	0.223427	0.308479	6,259	13,447	0.317	13.9
Hawaii	38,730	13,164	25,566	0.137826	0.190292	2,505	4,865	0.339	17.7
Oregon	143,824	39,101	104,723	0.484948	0.669552	26,180	70,117	0.271	15.3
Alaska	44,831	18,065	26,766	0.167302	0.230988	4,173	6,183	0.402	15.2
Idaho	46,515	12,985	33,530	0.157771	0.217830	2,829	7,304	0.279	12
Grand Total	**7,088,659**	**2,327,094**	**4,761,565**	**25.000000**	**25.000000**	**1,915,543**	**3,750,713**	**0.328**	**14.9**

SOURCE: Data were obtained from the Unemployment Insurance Service UI reporting system ETA 5159 reports.

Illinois, New Jersey, Florida, and Ohio) were chosen with certainty.[4] In addition, we chose three additional states (North Carolina, Wisconsin, and Washington) with certainty. The probability of selecting these states was greater than .9, and by selecting them with certainty, we ensured that they were in the sample. We chose the remaining 13 states with probability proportional to their weight, as shown in column 6 of the table. Based on these probabilities, a 25-state sample contained, in an expected-value sense, large proportions of the exhaustee population (82 percent) and nonexhaustee population (79 percent).

We selected the noncertainty states by stratifying them by the nine DOL regions and by using a systematic sampling approach. This approach ensured that the sample states were dispersed geographically. We believed that geographic stratification was a useful way of ensuring that we represented the full range of UI programs, since similarities in UI programs tend to be concentrated geographically.

After we selected the 25-state sample, we also selected a 10-state subset from it. As noted earlier, in these states we extended the interviewing period and did in-person locating. These interviews represent recipients who cannot be found solely through mail, telephone, and database searching and interviewed during a limited fielding period, but who can be found through additional locating effort and interviewed during an additional fielding period. We selected these states so that their probability of selection equaled the probability we would have assigned had we chosen a 10-state sample in the same way we selected the 25 states. Since selection of these states occurred in two stages, we set the conditional probability of selection in the second stage such that the probability of selection for the 25-state sample times the probability of selection for

[4]The seven states with weights greater than one were chosen with certainty, because these states have more than 1/25 of the total weight. After removing these seven states, we also chose two additional states with certainty, because they had more than 1/18 [1/(25 − 7)] of the remaining total weight.

the 10-state subset equaled the probability of selection for a 10-state sample. Under this procedure, we selected one state, California, with certainty. The other nine, including those that were selected with certainty for the 25-state sample, were noncertainty states.

This process yielded the states shown in Table A.2.

2. Selecting Exhaustees and Nonexhaustees

After we selected the 25 states, we set target exhaustee and nonexhaustee survey samples for each state that would yield, if everyone responded, nationally representative self-weighting samples of the two populations. Certainty states were assigned exhaustee and nonexhaustee samples proportional to the population of exhaustees and nonexhaustees in those states. The exhaustee sample sizes in noncertainty states were proportional to the following formula (nonexhaustee samples were set analogously):

$$(1)\quad S_i = f\,(e_i/p_i),$$

where S_i is the exhaustee sample in state i, f is the national sampling fraction for exhaustees (exhaustee sample/total exhaustees), e_i is the number of exhaustees in state i, and p_i is the probability that state i was selected. This formula set the sample in each state (S_i) so that the probability of selection was f for all exhaustees. The total probability that a UI exhaustee was selected is the probability that the state was chosen (p_i) times the probability that a person was chosen in the state (S_i/e_i).

C. IMPLEMENTING THE SAMPLE DESIGN

We implemented the sample design by asking the 25 states to participate in the study. We requested that they (1) select a random sample of people who established benefit years in 1998

TABLE A.2

UI EXHAUSTEE STUDY: SELECTED STATES

25-State Sample	10-State Sample
Region 1	
Maine	
Massachusetts	
Region 2	
New Jersey[a]	
New York[a]	New York
Region 3	
Pennsylvania[a]	
Virginia	Pennsylvania
Region 4	
Florida[a]	
Georgia	
Kentucky	
Mississippi	
North Carolina[a]	Florida
Tennessee	Tennessee
Region 5	
Illinois[a]	
Michigan[a]	
Minnesota	
Ohio[a]	Michigan
Wisconsin[a]	Ohio
Region 6	
Oklahoma	
Texas[a]	Texas
Region 7	
Iowa	
Region 8	
Montana	Montana
Region 9	
California[a]	
Hawaii	California
Region 10	
Washington[a]	
Idaho	Idaho

[a]Denotes certainty state.

NOTE: All but one state were able to participate in the study. That state, Massachusetts, was replaced by Rhode Island.

and received a UI first payment, and (2) provide selected administrative data for this sample of recipients.[5] We asked for a large sample of recipients from each state (about 27,500 in total) to ensure that we had enough exhaustees and nonexhaustees for the survey sample even if completion rates were substantially lower than expected.

In the end, 24 of the initial 25 states agreed to participate and provided samples. The state that was not able to participate, Massachusetts, was replaced with Rhode Island. This state was selected randomly with probability proportional to size from among the states in the New England region that had not been selected in the initial sample. Rhode Island was assigned a target sample size as if it had been selected initially.

When we received the sample of recipients from the states, we reviewed the samples to ensure that they met the sample frame requirements and contained the requested data. After these checks, we divided the recipient samples into exhaustees and nonexhaustees, where exhaustees were defined as recipients whose remaining claim balance was zero. Since we obtained data from the states in calendar year 2000, all recipients in the sample had completed their benefit years and had a chance to collect their full entitlement.[6]

We then selected random subsamples of exhaustees and nonexhaustees for interviewing. To account for likely nonresponse to the survey, we made these subsamples larger than the target survey sample numbers described above. Initially, we released a sample that would yield the

[5]We asked them to provide contact information, basic UI information on the claim (benefit year begin date, weekly benefit amount, entitlement, balance remaining, first and last claim week ending date), demographic and job characteristic information (gender, race/ethnicity, birth date, base period earnings, and Standard Industrial Code of main or most recent base period employer), and information on participation in the WPRS system.

[6]New Jersey provided data selected in mid-December 1999. Although a sample member in this state who began collecting benefits in late 1998 might have collected some benefits after the sample was drawn, that possibility would affect, at most, only a very few sample members.

target number of completions if the response rate was 80 percent. Subsequent releases were made as we observed actual response rates to the survey. In the end, we released subsamples that would yield the target number of completions if the response rate was 69 percent in the 10 states with the extended fielding period and 59 percent in the 15 states without the extended fielding period. We set different release amounts in the two types of states to account for the fact that we expected to achieve a higher response rate in the extended fielding states than in the other states.

As discussed in Appendix B, we completed interviews with 3,907 UI recipients (1,864 exhaustees and 2,043 nonexhaustees).

D. WEIGHTS

To construct weights for the analysis sample (Table A.3), we needed to take into account differential response rates across states and the two components of the sample (the 16-week initial fielding component conducted in 25 states and the post-16-week extended fielding component conducted in 10 states). Because the extended fielding component was conducted in only 10 states, the post-16-week component of the population is undersampled relative to the within-16-week component. Finally, we needed to decide how to weight the within-16-week and post-16-week components to represent nonrespondents. Our analysis of nonresponse (Appendix B) showed a few statistically significant differences between the two components of the sample and between the initial fielding component and nonrespondents. However, we did not think these differences warranted using the post-16-week sample solely to represent nonrespondents, particularly since that sample is very small. Instead, we decided to assume that nonrespondents in the population are split proportionally between the populations of within-16-week and post-16-week interview completers.

TABLE A.3

UI EXHAUSTEE STUDY SURVEY SAMPLE SIZES AND WEIGHTS

Extended Fielding States	Exhaustees				Nonexhaustees			
	Initial Fielding		Extended Fielding		Initial Fielding		Extended Fielding	
	Number	Weight	Number	Weight	Number	Weight	Number	Weight
California	278	1,369	0	1,369	219	2,895	16	2,895
Florida	76	1,085	12	2,621	56	2,403	6	5,592
Idaho	43	1,221	6	3,726	61	2,258	9	6,546
Michigan	73	1,152	4	2,161	107	2,602	17	4,701
Montana	46	1,285	2	3,923	59	2,425	5	7,031
New York	154	1,313	22	1,527	85	2,609	9	2,923
Ohio	26	1,634	3	4,713	84	2,380	8	6,612
Pennsylvania	93	1,068	7	1,675	141	2,204	3	3,331
Tennessee	58	983	6	3,002	53	2,431	9	7,049
Texas	109	1,263	17	2,108	72	2,498	3	4,016
Subtotal	**956**		**99**		**937**		**85**	
Other States								
Georgia	41	1,276			63	2,293		
Hawaii	56	1,055			66	1,928		
Illinois	60	1,426			75	2,483		
Iowa	43	902			87	2,070		
Kentucky	40	922			78	2,255		
Maine	82	1,041			42	1,806		
Minnesota	55	961			77	1,937		
Mississippi	54	926			61	2,613		
New Jersey	99	1,042			60	2,339		
North Carolina	43	833			71	2,382		
Oklahoma	58	953			82	2,078		
Rhode Island	56	956			55	2,374		
Virginia	42	1,051			71	2,224		
Washington	46	1,190			43	2,537		
Wisconsin	34	999			90	1,892		
Subtotal	**809**				**1,021**			
Total	**1,765**		**99**		**1,958**		**85**	

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

To describe the weighting procedure, we use the following notation:

n_1 = the number of states selected for the 16-week initial fielding period = 25

n_2 = the number of states selected for the extended fielding period = 10

z_s = the sampling probability for state *s* (if one state were selected)

E_s = the number of exhaustees in state *s*

e_s = the number of exhaustee releases in state *s*

rw_s = the within-16-week telephone response rate in state *s*

rp_s = the post-16-week response rate in state *s* (for the extended fielding states only)

r_s = the total response rate in state *s* = $rw_s + rp_s$ (for the extended fielding states only)

EW_s = the number of exhaustees in the state s population who are within-16-weeks completers = $E_s * (rw_s / r_s)$

ew_s = the number of those in state s with whom we completed interviews within-16-weeks = $e_s * rw_s$

EP_s = the number of exhaustees in the state s population who are post-16-week completers = $E_s * (rp_s / r_s)$

ep_s = the number of those in state s with whom we completed interviews after 16 weeks = $e_s * rp_s$

1. Weights for Those in the Within-16-Week Sample

The probability that exhaustee *i* in state *s* completed an interview within 16 weeks after being released is:

(2) $p_{is1} = n_1 * z_s * (ew_s / EW_s) = n_1 * z_s * (e_s / E_s) * r_s.$

The total response rate r_s was known only for the 10 extended interviewing states, so it was imputed for the other 15 states as a weighted average of the 10 extended interviewing states.

The weights for those in the within-16-week sample were then calculated as follows:

(3) $w_{is1} = 1 / p_{is1.}$

In expectation, these weights should sum to the within-16-week population in the country (that is, to $EW = \sum EW_s$). However, in any particular random sample of states they may not, so the weights were scaled to sum to this population. Certainty states represent themselves, so the sum of the weights in these states was summed to the within-16-week population in those states. The weights for the noncertainty states were summed to the total national within-16-week population *excluding* the population in the certainty states.

2. Weights for Those in the Post-16-Week Sample

The weights for those in the post-16-week sample in the 10 states were constructed in a similar way to the weights for those in the within-16-week sample. The probability that exhaustee *i* in state *s* completed an interview during the post-16-week period is:

(4) $p_{is2} = n_2 * z_s * (ep_s / EP_s) = n_2 * z_s * (e_s / E_s) * r_{s.}$

The weight for those in the post-16-week sample can then be expressed as follows:

(5) $w_{is2} = 1 / p_{is2.}$

As above, the weights were scaled to sum to the post-16-week population (that is, to $EP = \sum EP_s$).

E. VARIANCE OF THE ESTIMATES AND DESIGN EFFECTS

The standard errors produced by most statistical software programs are computed under the assumption that the samples used to compute estimates are simple random samples of the population. However, these standard errors underestimate the true standard errors for estimates made with the UI exhaustee survey sample, since the design of this sample is not a simple random sample. Instead, the two-stage sample design used in the study clusters the initial fielding component (the within-16-week sample) in 25 states and the extended fielding component (the post-16-week sample) in 10 states.

To assess the effect of this clustering, we computed the variance of the estimates (1) under the assumption that the sample was a simple random sample of the population, and (2) taking into account the complex sample design. We computed these variances using the SUDAAN computer program that was developed by the Research Triangle Institute to compute variances for complex sample designs.

The design effect, which is the ratio of the variance that takes account of the design and the variance of a simple random sample, is a measure of the extent to which the variance of an estimate obtained from a complex sample design differs from that of a simple random sample. This effect varies by variable being larger for variables that measure population characteristics that are likely to be distributed unevenly among most populations (like race/ethnicity) and smaller for characteristics that are distributed more evenly among most populations (like gender). For that reason, we computed design effects for several demographic and UI program characteristics.

Across the variables we examined, design effects for the exhaustee and nonexhaustee samples vary from a low of 1.1 for the mean age of exhaustees to a high of 4.4 for the percentage of nonexhaustees who are white, nonhispanic (Table A.4). The other variables shown in the

TABLE A.4

DESIGN EFFECTS FOR THE UI EXHAUSTEE SURVEY

	Exhaustees		Nonexhaustees	
Variable	Mean	Design Effect	Mean	Design Effect
Percentage Female	47.8	1.31	42.0	1.42
Percentage White, NonHispanic	62.5	3.45	72.9	4.41
Age (Years)	41.2	1.10	35.6	1.26
Potential Duration (Weeks)	22.8	3.96	24.4	4.28
Weekly Benefit Amount (Dollars)	206	2.88	220	3.86
Weeks of Benefits Collected	22.8	3.95	9.0	1.53

SOURCE: Survey of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The design effect is the ratio of the variance of the estimate that takes account of the complex sample design and the variance of the estimate of a simple random sample.

table, such as potential duration of UI benefits and the weekly benefit amount, which vary among states, have design effects in the middle of this range. Overall, the average design effect of the variables shown in the table is about 2.8.

We use the average design effect when determining whether the differences we observe in the characteristics of exhaustees and nonexhaustees are statistically significant. Specifically, we inflate the standard errors we obtain under the simple random sample assumption by 70 percent, since the square root of 2.8 is 1.7.

APPENDIX B

SURVEY RESULTS AND NONRESPONSE ANALYSIS

The UI exhaustee study design called for the selection of nationally representative samples of UI exhaustees and nonexhaustees and the collection of UI program data and telephone survey data from these samples. Sample selection was a two-step process in which 25 states were selected in the first step and exhaustees and nonexhaustees were selected in the second step. The exhaustees and nonexhaustees were people who established a benefit year in 1998 and received at least one payment. Interviews were attempted with subsamples of the exhaustees and nonexhaustees, with a target of 4,000 interviews split evenly between the two groups. The interviews were conducted in English and Spanish during an approximately seven-month period from mid-July 2000 to mid-February 2001. Interviews were completed with 3,907 UI recipients, 1,864 exhaustees and 2,043 nonexhaustees.

Interviewing occurred in two phases. During an initial 16-week fielding period, we used mail, telephone, and database methods to attempt to locate and interview sample members. In 15 randomly selected states, we stopped our efforts to conduct interviews after this initial period. In the remaining 10 states, we extended the fielding period to boost response rates. For cost reasons, we did this in a subset of states instead of all states. In the extended fielding states, we continued searching for potential respondents using mail, telephone, and database locating methods, and we added the use of field locators. When these field locators found a potential respondent, they asked the person to call the MPR telephone center to complete an interview. The field locators carried cell phones to facilitate this process. The vast majority of interviews were completed during the initial fielding period, and only a small number were completed during the extended fielding period.

The rest of this appendix provides a description of the survey results and an analysis of nonresponse.

A. SURVEY RESULTS

Overall, 3,907 interviews were completed out of 6,203 sample members who were released for interviewing, for a 63 percent response rate. As Table B.1 shows, about 9 percent of potential respondents refused the interview, 16 percent were never located, and 7 percent were retired after multiple attempts to contact them. This last group was retired when the interviewing period ended. A few potential respondents were confirmed as deceased, and a few claimed when we contacted them that they had never collected benefits. In these cases, the administrative data indicated that they had collected benefits, but the potential respondents said they had not. Finally, the other category (about 3 percent) includes cases that we located but could not interview, because there was either no phone or a nonlisted phone, there was a language barrier, or the respondent had moved out of the country.

The response rate was higher for nonexhaustees (65 percent) than for exhaustees (61 percent). As shown in the table, the difference in response rates occurred primarily because exhaustees were harder to locate than nonexhaustees. The overall response rate and the difference between exhaustees and nonexhaustees were similar to the response rates in the survey of exhaustees and nonexhaustees conducted in the winter of 1989-1990. In that survey, the response rates were 60 percent for exhaustees and 64 percent for nonexhaustees (Corson and Dynarski 1990). That survey was conducted solely by telephone; no field staff were used.

Response rates by state (Table B.2) varied considerably, from under 50 percent in a few cases to over 75 percent in others. The differences in response rates by state occurred, in part, as a result of the natural variation found in small samples, but they also occurred because of differences among states in the mobility of the population and in the prevalence of telephone numbers in the UI database. For example, one state could not provide telephone numbers for any sample members, and locating efforts were necessary for all sample members from that state.

TABLE B.1

SURVEY RESULTS: REASONS FOR NONRESPONSE

Interview Status	Exhaustees (Percentage)	Nonexhaustees (Percentage)	Total	
			Number	Percentage
Complete	60.6	65.3	3,907	63.0
Refusal	9.8	8.1	554	8.9
Ineligible for Interview				
Deceased	0.6	0.7	42	0.7
Claimed did not collect UI benefits	0.8	1.9	84	1.4
Unable to Locate	17.9	14.3	999	16.1
Retired After Multiple Attempts	7.0	7.0	436	7.0
Other	3.2	2.6	172	2.8
Total	**100.0**	**100.0**	**6,203**	**100.0**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

TABLE B.2

SURVEY RESPONSE RATES, BY STATE
(Percentage)

State	Exhaustees			Nonexhaustees		
	Initial Fielding	Extended Fielding	Total	Initial Fielding	Extended Fielding	Total
Extended Fielding States						
California	53.0	3.8	56.8	55.9	4.1	59.9
Florida	61.8	9.8	71.5	65.1	7.0	72.1
Idaho	55.8	7.8	63.6	67.8	10.0	77.8
Michigan	64.0	3.5	67.5	57.5	9.1	66.7
Montana	57.5	2.5	60.0	67.0	5.7	72.7
New York	51.7	7.4	59.1	60.3	6.4	66.7
Ohio	42.6	4.9	47.5	66.7	6.3	73.0
Pennsylvania	67.4	5.1	72.5	77.0	1.6	78.7
Tennessee	71.6	7.4	79.0	61.6	10.5	72.1
Texas	53.2	8.3	61.5	66.7	2.8	69.4
Subtotal	56.2	5.8	62.0	63.1	5.7	68.8
Other States						
Georgia	46.1	n.a.	46.1	59.4	n.a.	59.4
Hawaii	57.1	n.a.	57.1	71.7	n.a.	71.7
Illinois	43.8	n.a.	43.8	54.0	n.a.	54.0
Iowa	67.2	n.a.	67.2	66.9	n.a.	66.9
Kentucky	65.6	n.a.	65.6	60.9	n.a.	60.9
Maine	65.1	n.a.	65.1	77.8	n.a.	77.8
Minnesota	63.2	n.a.	63.2	72.0	n.a.	72.0
Mississippi	65.9	n.a.	65.9	51.7	n.a.	51.7
New Jersey	57.9	n.a.	57.9	57.7	n.a.	57.7
North Carolina	74.1	n.a.	74.1	56.8	n.a.	56.8
Oklahoma	63.7	n.a.	63.7	66.7	n.a.	66.7
Rhode Island	63.6	n.a.	63.6	57.9	n.a.	57.9
Virginia	56.8	n.a.	56.8	61.7	n.a.	61.7
Washington	50.0	n.a.	50.0	53.1	n.a.	53.1
Wisconsin	60.7	n.a.	60.7	72.6	n.a.	72.6
Subtotal	58.9	n.a.	58.9	62.2	n.a.	62.2
Total	**57.4**	**3.2**	**60.6**	**62.6**	**2.7**	**65.3**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

n.a. = not applicable.

The effect of the extended fielding period on response rates was modest. It added about 6 percentage points to the response rates for exhaustees and nonexhaustees in the 10 states with an extended fielding period. In about one-quarter of the interviews completed during the extended fielding period, a field locator found the respondent and had the respondent call into the telephone interviewing center. The remaining 75 percent were interviews conducted by the telephone center through locating information obtained both by field locators and by the continuing efforts of the telephone center locators. We cannot determine whether we needed the field locators to complete these interviews or whether they would have been completed merely by extending the fielding period and continuing telephone center locating efforts.

B. NONRESPONSE ANALYSIS

Potential nonresponse bias could result from using the survey data, since 37 percent of the potential respondents did not complete an interview. If these nonrespondents differ from respondents in a systematic way, conclusions drawn from analysis of the data might be misleading.

To analyze the likelihood of nonresponse bias, we used administrative data that are available for both respondents and nonrespondents. We used data on demographic characteristics, UI program characteristics, and UI receipt. Since we wanted to use information from this analysis to determine how to weight the initial fielding and extended fielding respondents, we examined the 10 extended fielding states and the remaining 15 states separately. In addition, since survey response rates differ by state, the distribution of respondents and nonrespondents also differs by state. Thus, unweighted comparisons of respondents and nonrespondents are likely to be misleading, since some characteristics (for example, percentage white, non-Hispanic) differ substantially by state. To avoid this problem, we weighted the state-level estimates the same way for each respondent category. For the extended fielding state estimates, the states were

assigned weights equal to the state share in a 10-state national sample. The states were weighted equally for the "other states" estimates.

The results of this analysis (Table B.3) indicate that there are some statistically significant differences between respondents and nonrespondents. These differences imply that respondents are more likely than nonrespondents to be female and older. The differences are significant for all categories, except that the gender difference is not significant for nonexhaustees in the extended fielding states. In a few cases, respondents also have significantly higher weekly benefit amounts and longer potential durations than do nonrespondents. These differences probably arise from the age difference. Finally, among exhaustees, "weeks collected" is slightly larger for respondents than nonrespondents. Overall, the pattern that emerges is that respondents are an older and more stable population than nonrespondents. This is not surprising, since one of the main reasons for nonresponse is inability to locate the respondent.

These differences are also very similar to those found in the 1988 exhaustee-nonexhaustee survey (Corson and Dynarski 1990). The only exception is that respondents to that survey were more likely than nonrespondents to be non-Hispanic whites. No statistically significant racial or ethnic differences between respondents and nonrespondents were found in this survey.

Given these differences, the question that arises is whether we should adjust the weights to account for the differences in response rates among demographic categories. We have chosen not to make this adjustment, for two reasons. First, one main use of the data is to examine differences in the characteristics and labor market experiences of exhaustees and nonexhaustees. Since the differences between respondents and nonrespondents are similar for exhaustees and nonexhaustees, comparisons of the two groups are unlikely to be affected by whether we adjust the weights for differences in response rates by demographic category. Second, another main use of the data is to make comparisons with the 1988 survey of exhaustees and nonexhaustees.

TABLE B.3

CHARACTERISTICS OF RESPONDENTS AND NONRESPONDENTS

	Exhaustees			Nonexhaustees		
	Initial Fielding Respondents	Extended Fielding Respondents	Nonrespondents	Initial Fielding Respondents	Extended Fielding Respondents	Nonrespondents
Extended Fielding States						
Percentage Female	49 ***	44	40	40	43	37
Percentage White, Non-Hispanic	65	59	62	76	68	75
Mean Age	41.6 ***	38.1	39.3	39.8 ***	35.9	38.0
Potential Duration (Weeks)	22.4 ***,#	21.9	21.5	24.0	23.8	23.8
Weekly Benefit Amount (Dollars)	200 **	187	186	220 ***,#	203	200
Weeks Collected	22.4 ***	21.9	21.5	9.1	8.3	9.0
Sample Size	956	99	646	937	85	462
Other States						
Percentage Female	48 ***	n.a.	38	45 ***	n.a.	24
Percentage White, Non-Hispanic	70	n.a.	68	73	n.a.	73
Mean Age	41.1 ***	n.a.	38.7	40.3 ***	n.a.	36.2
Potential Duration (Weeks)	22.7 ***	n.a.	21.9	24.6 ***	n.a.	23.9
Weekly Benefit Amount (Dollars)	217	n.a.	217	226***	n.a.	218
Weeks Collected	22.7 ***	n.a.	21.9	8.7	n.a.	8.4
Sample Size	809	n.a.	565	934	n.a.	620

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: For comparison purposes, the estimates by respondent category (initial fielding respondents, extended fielding respondents, and nonrespondents) are weighted the same across states. For the extended fielding state estimates, states were assigned weights equal to the state share in a 10-state national sample. The states were weighted equally for the other state estimates. The extended fielding states are California, Florida, Idaho, Michigan, Montana, Nevada, Ohio, Pennsylvania, Tennessee, and Texas. The other states are Georgia, Hawaii, Illinois, Iowa, Kentucky, Maine, Minnesota, Mississippi, New Jersey, North Carolina, Oklahoma, Rhode Island, Virginia, Washington, and Wisconsin.

n.a. = not applicable.

*Significantly different from nonrespondents at the .10 level, two-tailed test.
**Significantly different from nonrespondents at the .05 level, two-tailed test.
***Significantly different from nonrespondents at the .01 level, two-tailed test.

#Significantly different from extended fielding respondents at the .10 level, two-tailed test.
##Significantly different from extended fielding respondents at the .05 level, two-tailed test.
###Significantly different from extended fielding respondents at the .01 level, two-tailed test.

Since differences between respondents and nonrespondents to that survey were similar to those found here, and since that survey did not adjust the weights, the comparisons might be misleading if we adjusted the estimates for the current survey.

The final issue that needs to be addressed is whether the extended fielding respondents should be given a disproportionate weight in representing the nonrespondents. The argument for doing that would be that they look more like nonrespondents than the initial fielding respondents (that is, the respondents who complete interviews within 16 weeks of sample release). There is some evidence that this is true: there are two variables where the initial fielding respondents differ statistically from both the nonrespondents and the extended fielding respondents. However, since the sample sizes for the extended fielding respondents are quite small, and since the differences between these respondents and nonrespondents are generally in the same direction as the differences between initial fielding respondents and nonrespondents, we decided not to give the extended fielding respondents a disproportionate weight in representing nonrespondents.

APPENDIX C

THE EFFECTS OF CHANGES IN RECIPIENT CHARACTERISTICS BETWEEN 1988 AND 1998 ON OUTCOMES

To examine possible causes of the poor UI and labor market outcomes discussed in Chapters III, V, and VI, we investigated whether changes in the average characteristics of unemployment insurance (UI) recipients between 1988 and 1998, the two time frames for the studies, could have caused the poor outcomes observed for 1998. We focus on three key outcomes: (1) the exhaustion rate, (2) the weeks to the first post-UI job, and (3) whether recipients went to a Job Service office or one-stop center shortly after they began collecting UI benefits.

The influence of changes in recipient characteristics on these three outcomes varies by outcome. Changes in recipient characteristics are likely to be responsible for a large portion of the increase in the exhaustion rates in the 1990s, compared to historical patterns. In contrast, these changes are unlikely to be responsible for the decrease in Job Service usage, because changes in recipient characteristics that might lead to a decrease in usage are offset by other changes that might lead to an increase in usage. The influence of changes in recipient characteristics on unemployment durations lies somewhere in between—explaining about one quarter to one third of the lengthening unemployment durations observed between 1988 and 1998.

The analyses shown in Tables C.1, C.2, and C.3 involved several steps. We used ordinary least squares (OLS) techniques to regress an outcome variable (such as whether or not a recipient exhausted UI benefits) on demographic, UI program, and labor market characteristics in 1998 to estimate the effects of these characteristics on the outcome. We then used the average characteristics of the 1988 data from the Corson and Dynarski (1990) study, except for the unemployment rate, to predict what the average outcome would have been had the characteristics of UI recipients remained unchanged from 1988 to 1998. We did not change the unemployment rate from the average for 1998 to the average for 1988 because we wanted to estimate the effects

TABLE C.1

SIMULATION RESULTS ON THE CHANGES IN THE PROBABILITY OF EXHAUSTION USING 1988 AND 1998 DATA

	Coefficients from Regression on:		Average Characteristics of:		Probability of Exhaustion Using 1998 Coefficients:			Probability of Exhaustion Using 1988 Coefficients:		
	1998 Data	1988 Data	1998 Data	1988 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Intercept	0.688	0.586	1.000	1.000	0.688	0.688	0.000	0.586	0.586	0.000
Age at Claim Date	-0.001	0.010	39.467	35.455	-0.058	-0.052	-0.006	0.386	0.347	0.039
Age-Squared[a]	0.051	-0.070	1,687.060	1,394.950	0.085	0.071	0.015	-0.118	-0.097	-0.020
Female	-0.087	-0.058	0.446	0.416	-0.039	-0.036	-0.003	-0.026	-0.024	-0.002
African American	0.062	0.078	0.129	0.121	0.008	0.008	0.000	0.010	0.009	0.001
Hispanic	0.120	0.035	0.134	0.090	0.016	0.011	0.005	0.005	0.003	0.002
Other Racial/Ethnic Background	0.059	0.117	0.084	0.024	0.005	0.001	0.004	0.010	0.003	0.007
Married/Cohabiting at Claim Date	-0.043	-0.098	0.561	0.634	-0.024	-0.027	0.003	-0.055	-0.062	0.007
Separated, Widowed, or Divorced at Claim Date	0.017	0.014	0.196	0.146	0.003	0.003	0.001	0.003	0.002	0.001
Female and Married/Cohabiting	0.167	0.143	0.238	0.251	0.040	0.042	-0.002	0.034	0.036	-0.002
Female and Separated, Widowed, or Divorced	0.054	0.036	0.102	0.081	0.005	0.004	0.001	0.004	0.003	0.001
High School Dropout	-0.007	0.018	0.168	0.205	-0.001	-0.001	0.000	0.003	0.004	-0.001
Vocational/Technical/Business Associate's Degree	0.022	-0.014	0.159	0.140	0.003	0.003	0.000	-0.002	-0.002	0.000
Bachelor's Degree	-0.014	-0.007	0.083	0.084	-0.001	-0.001	0.000	-0.001	-0.001	0.000
Other Education	0.068	0.057	0.028	0.019	0.002	0.001	0.001	0.002	0.001	0.001
Months Tenure[a]	0.019	-0.003	73.953	66.483	0.014	0.012	0.001	-0.002	-0.002	0.000

TABLE C.1 (*continued*)

	Coefficients from Regression on:		Average Characteristics of:		Probability of Exhaustion Using 1998 Coefficients:			Probability of Exhaustion Using 1988 Coefficients:		
	1998 Data	1988 Data	1998 Data	1988 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Union	-0.048	0.035	0.228	0.279	-0.011	-0.013	0.002	0.008	0.010	-0.002
Had Regular Layoffs	-0.019	-0.044	0.162	0.198	-0.003	-0.004	0.001	-0.007	-0.009	0.002
State Unemployment Rate (Percent)	0.042	0.009	4.651	6.619	0.194	0.194	0.000	0.061	0.061	0.000
Quit Pre-UI Job	-0.093	-0.011	0.052	0.079	-0.005	-0.007	0.002	-0.001	-0.001	0.000
Fired from Pre-UI Job	0.033	-0.004	0.095	0.112	0.003	0.004	-0.001	0.000	0.000	0.000
Other Reason Left Pre-UI Job (Not a Layoff)	-0.022	-0.154	0.032	0.006	-0.001	0.000	-0.001	-0.005	-0.001	-0.004
Expected Recall	-0.150	-0.105	0.478	0.522	-0.072	-0.078	0.007	-0.050	-0.055	0.005
Had a Definite Recall Date	-0.120	-0.169	0.190	0.224	-0.023	-0.027	0.004	-0.032	-0.038	0.006
Replacement Rate	0.021	-0.030	0.455	0.424	0.010	0.009	0.001	-0.014	-0.013	-0.001
Potential UI Duration	-0.023	-0.019	23.764	24.013	-0.538	-0.544	0.006	-0.445	-0.450	0.005
Construction Occupation	-0.001	-0.087	0.083	0.104	0.000	0.000	0.000	-0.007	-0.009	0.002
Machinist Occupation	0.041	-0.038	0.163	0.248	0.007	0.010	-0.004	-0.006	-0.010	0.003
Sales Occupation	0.064	-0.016	0.063	0.058	0.004	0.004	0.000	-0.001	-0.001	0.000
Manufacturing Industry	-0.031	-0.045	0.340	0.396	-0.011	-0.012	0.002	-0.015	-0.018	0.003
Retail Trade Industry	-0.005	-0.006	0.094	0.086	0.000	0.000	0.000	-0.001	-0.001	0.000
Total Probability of Exhaustion	--	--	--	--	**0.300**	**0.259**	**0.041**	**0.323**	**0.272**	**0.051**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The coefficients are estimated using an ordinary-least-squares (OLS) model. To estimate the exhaustion rates using recipient characteristics from the two time periods, we assumed that the unemployment rates were the same in 1988 and 1998 so that we could isolate the changes of recipient characteristics from changes in the economy.

[a]The coefficients for age-squared are multiplied by 1,000 to aid their presentation. Similarly, the coefficients for months tenure are multiplied by 100.

TABLE C.2

SIMULATION RESULTS ON THE CHANGES IN THE WEEKS TO THE FIRST POST-UI JOB USING 1988 AND 1998 DATA

	Coefficients from Regression on:		Average Characteristics of:		Weeks to the First Job Using 1998 Coefficients:			Weeks to the First Job Using 1988 Coefficients:		
	1998 Data	1988 Data	1988 Data	1998 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Intercept	36.600	29.998	1.000	1.000	36.600	36.600	0.000	29.998	29.998	0.000
Age at Claim Date	0.012	0.441	38.650	34.987	0.468	0.424	0.044	17.058	15.442	1.617
Age-Squared	0.003	-0.004	1,615.430	1,354.930	4.055	3.401	0.654	-6.316	-5.298	-1.019
Female	0.775	-2.169	0.435	0.407	0.337	0.315	0.022	-0.944	-0.882	-0.062
African American	-0.283	0.670	0.128	0.120	-0.036	-0.034	-0.002	0.086	0.080	0.006
Hispanic	5.888	3.406	0.110	0.090	0.651	0.532	0.119	0.376	0.308	0.069
Other Racial/Ethnic Background	0.449	1.855	0.081	0.025	0.036	0.011	0.025	0.150	0.047	0.103
Married/Cohabiting at Claim Date	-3.844	-4.620	0.556	0.632	-2.137	-2.430	0.293	-2.569	-2.920	0.352
Separated, Widowed, or Divorced at Claim Date	1.675	-0.303	0.192	0.143	0.321	0.239	0.082	-0.058	-0.043	-0.015
Female and Married/Cohabiting	3.015	6.299	0.224	0.240	0.676	0.722	-0.046	1.412	1.509	-0.097
Female and Separated, Widowed, or Divorced	-4.331	-0.128	0.101	0.081	-0.437	-0.350	-0.088	-0.013	-0.010	-0.003
High School Dropout	0.551	0.980	0.136	0.198	0.075	0.109	-0.034	0.133	0.194	-0.061
Vocational/Technical/Business Associate's Degree	-0.527	-1.575	0.172	0.142	-0.090	-0.075	-0.016	-0.270	-0.223	-0.047
Bachelor's Degree	-0.465	2.004	0.092	0.083	-0.043	-0.039	-0.004	0.184	0.167	0.017
Other Education	-2.259	2.678	0.033	0.020	-0.073	-0.046	-0.027	0.087	0.055	0.033
Months Tenure[a]	-0.004	-0.010	69.397	65.675	-0.264	-0.250	-0.014	-0.724	-0.685	-0.039

TABLE C.2 (*continued*)

	Coefficients from Regression on:		Average Characteristics of:		Weeks to the First Job Using 1998 Coefficients:			Weeks to the First Job Using 1988 Coefficients:		
	1998 Data	1988 Data	1988 Data	1998 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Union	-3.363	1.846	0.219	0.277	-0.735	-0.933	0.198	0.403	0.512	-0.109
Had Regular Layoffs	-2.700	-0.401	0.174	0.208	-0.469	-0.561	0.093	-0.070	-0.083	0.014
State Unemployment Rate (Percent)	1.290	0.337	4.621	6.583	5.961	5.961	0.000	2.218	2.218	0.000
Quit Pre-UI Job	5.749	1.611	0.055	0.075	0.319	0.429	-0.111	0.089	0.120	-0.031
Fired from Pre-UI Job	1.857	1.687	0.105	0.106	0.195	0.197	-0.002	0.177	0.179	-0.002
Other Reason Left Pre-UI Job (Not a Layoff)	22.019	1.697	0.019	0.003	0.425	0.069	0.356	0.033	0.005	0.027
Expected Recall	-6.836	-6.494	0.465	0.549	-3.178	-3.752	0.575	-3.019	-3.565	0.546
Had a Definite Recall Date	-9.090	-6.575	0.186	0.243	-1.692	-2.211	0.519	-1.224	-1.600	0.376
Replacement Rate	-3.463	-10.752	0.453	0.426	-1.568	-1.475	-0.093	-4.868	-4.580	-0.289
Potential UI Duration	-0.539	-0.428	23.782	24.011	-12.820	-12.943	0.123	-10.189	-10.287	0.098
Construction Occupation	2.169	-1.799	0.081	0.106	0.175	0.230	-0.054	-0.145	-0.190	0.045
Machinist Occupation	3.735	-1.324	0.159	0.252	0.595	0.943	-0.348	-0.211	-0.334	0.123
Sales Occupation	-2.599	0.280	0.068	0.056	-0.177	-0.145	-0.032	0.019	0.016	0.003
Manufacturing Industry	-3.276	-1.381	0.330	0.404	-1.080	-1.322	0.241	-0.456	-0.557	0.102
Retail Trade Industry	-1.022	-1.450	0.099	0.079	-0.102	-0.081	-0.021	-0.144	-0.115	-0.030
Total Probability of Going to Job Service or a One-Stop	--	--	--	--	**25.987**	**23.536**	**2.451**	**21.204**	**19.475**	**1.728**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The coefficients are estimated using an ordinary-least-squares (OLS) model. To estimate the weeks to the first post-UI job using recipient characteristics from the two time periods, we assumed that the unemployment rates were the same in 1988 and 1998 so that we could isolate the changes of recipient characteristics from changes in the economy. Recipients with no post-UI job are excluded from the analysis.

TABLE C.3

SIMULATION RESULTS ON THE CHANGES IN THE PROBABILITY OF GOING TO A JOB SERVICE OFFICE OR ONE-STOP

	Coefficients from Regression on:		Average Characteristics of:		Probability of Going to Job Service Using 1998 Coefficients:			Probability of Going to a Job Service Using 1988 Coefficients:		
	1998 Data	1988 Data	1988 Data	1998 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Intercept	0.510	0.903	1.000	1.000	0.510	0.510	0.000	0.903	0.903	0.000
Age at Claim Date	0.006	0.002	39.497	34.901	0.245	0.217	0.029	0.096	0.085	0.011
Age-Squared[a]	-0.054	-0.004	1,689.350	1,352.390	-0.092	-0.074	-0.018	-0.007	-0.005	-0.001
Female	-0.007	-0.107	0.445	0.404	-0.003	-0.003	0.000	-0.048	-0.043	-0.004
African American	0.015	0.066	0.128	0.122	0.002	0.002	0.000	0.008	0.008	0.000
Hispanic	-0.010	-0.018	0.132	0.108	-0.001	-0.001	0.000	-0.002	-0.002	0.000
Other Racial/Ethnic Background	0.008	0.019	0.083	0.025	0.001	0.000	0.000	0.002	0.000	0.001
Married/Cohabiting at Claim Date	0.020	-0.016	0.561	0.611	0.011	0.012	-0.001	-0.009	-0.010	0.001
Separated, Widowed, or Divorced at Claim Date	0.027	0.046	0.195	0.149	0.005	0.004	0.001	0.009	0.007	0.002
Female and Married/Cohabiting	-0.035	0.067	0.239	0.236	-0.008	-0.008	0.000	0.016	0.016	0.000
Female and Separated, Widowed, or Divorced	-0.011	0.024	0.102	0.076	-0.001	-0.001	0.000	0.002	0.002	0.001
High School Dropout	-0.152	-0.089	0.169	0.194	-0.026	-0.030	0.004	-0.015	-0.017	0.002
Vocational/Technical/Business Associate's Degree	0.030	-0.004	0.158	0.150	0.005	0.004	0.000	-0.001	-0.001	0.000
Bachelor's Degree	0.073	-0.062	0.082	0.107	0.006	0.008	-0.002	-0.005	-0.007	0.002
Other Education	0.029	0.083	0.029	0.023	0.001	0.001	0.000	0.002	0.002	0.000
Months Tenure[a]	-0.012	0.011	74.168	56.021	-0.009	-0.007	-0.002	0.008	0.006	0.002

TABLE C.3 (*continued*)

	Coefficients from Regression on:		Average Characteristics of:		Probability of Going to Job Service Using 1998 Coefficients:			Probability of Going to a Job Service Using 1988 Coefficients:		
	1998 Data	1988 Data	1988 Data	1998 Data	1998 Data	1988 Data	Difference Between 1998 and 1988	1998 Data	1988 Data	Difference Between 1998 and 1988
Union	-0.056	-0.096	0.229	0.222	-0.013	-0.012	0.000	-0.022	-0.021	-0.001
Had Regular Layoffs	-0.013	-0.141	0.163	0.155	-0.002	-0.002	0.000	-0.023	-0.022	-0.001
State Unemployment Rate (Percent)	-0.022	-0.001	4.651	6.719	-0.104	-0.104	0.000	-0.005	-0.005	0.000
Quit Pre-UI Job	-0.068	-0.008	0.053	0.083	-0.004	-0.006	0.002	0.000	-0.001	0.000
Fired from Pre-UI Job	0.024	-0.010	0.094	0.146	0.002	0.004	-0.001	-0.001	-0.001	0.001
Other Reason Left Pre-UI Job (Not a Layoff)	-0.051	0.319	0.032	0.005	-0.002	0.000	-0.001	0.010	0.002	0.008
Expected Recall	-0.101	0.024	0.480	0.395	-0.049	-0.040	-0.009	0.012	0.010	0.002
Had a Definite Recall Date	-0.121	-0.054	0.191	0.094	-0.023	-0.011	-0.012	-0.010	-0.005	-0.005
Replacement Rate	0.176	-0.032	0.455	0.414	0.080	0.073	0.007	-0.015	-0.013	-0.001
Potential UI Duration	-0.004	-0.008	23.786	23.769	-0.107	-0.107	0.000	-0.189	-0.189	0.000
Construction Occupation	-0.071	-0.017	0.084	0.108	-0.006	-0.008	0.002	-0.001	-0.002	0.000
Machinist Occupation	-0.035	0.068	0.163	0.173	-0.006	-0.006	0.000	0.011	0.012	-0.001
Sales Occupation	-0.004	-0.001	0.063	0.073	0.000	0.000	0.000	0.000	0.000	0.000
Manufacturing Industry	0.011	0.046	0.342	0.317	0.004	0.003	0.000	0.016	0.015	0.001
Retail Trade Industry	0.010	0.024	0.093	0.103	0.001	0.001	0.000	0.002	0.002	0.000
Total Probability of Going to Job Service or a One-Stop	--	--	--	--	**0.418**	**0.420**	**-0.002**	**0.745**	**0.725**	**0.020**

SOURCE: Study of UI Exhaustees, Mathematica Policy Research, Inc.

NOTE: The coefficients are estimated using an ordinary-least-squares (OLS) model. To estimate the probability of going to Job Service or a one-stop using recipient characteristics from the two time periods, we assumed that the unemployment rates were the same in 1988 and 1998 so that we could isolate the changes of recipient characteristics from changes in the economy.

[a]The coefficients for age-squared are multiplied by 1,000 to aid their presentation. Similarly, the coefficients for months tenure are multiplied by 100.

of changes in recipient characteristics rather than the effects of changes in the economy. The difference between the 1998 actual outcome and the predicted average outcome for the 1988 sample is our estimate of the difference in actual outcomes that are explained by recipient characteristics, when we use the coefficients estimated from the 1998 sample.

To provide another estimate of the effects of changes in recipient characteristics on outcomes, we performed a similar analysis using coefficients from regressions of the 1988 outcomes on 1988 data. We used OLS techniques to estimate the effects of characteristics on outcomes in 1988, multiplied these coefficients by 1998 average characteristics, and therefore generated a predicted outcome in 1998. The difference between this predicted outcome for 1998 and the actual outcome in 1988 is another estimate of the effects of changes in characteristics on the outcome.

These analyses have some limitations, however. First, the estimated model coefficients and the average characteristics are estimated with error. Because we rely on point estimates, we do not attempt to estimate the effects of this statistical imprecision on the estimate of the difference in the outcome explained by the change in recipients' characteristics. Second, we could not completely ensure that consistent definitions were used to calculate recipient characteristics for the two time periods. This is because, in some instances, questions in the two surveys were asked slightly differently and missing data were handled in different ways. Nevertheless, these analyses provide insight into the extent to which changes in recipient characteristics can explain portions of the changes in outcomes over time.