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Unemployment Insurance and Reemployment among Older Workers

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Unemployment Insurance and Reemployment among Older Workers

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Unemployment Insurance and Reemployment among Older Workers

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EXECUTIVE SUMMARY

Recent years have witnessed an increasing rate of involuntary job loss among older workers. Previous research finds that after job loss, older workers have relatively more difficulty gaining reemployment and also have greater earnings declines than prime age workers. These studies have been based on the Health and Retirement Survey and the Displaced Worker Survey, both of which are retrospective surveys on strategic samples from the general labor force. Neither has explicitly accounted for the availability of unemployment insurance (UI) benefits between jobs.

UI provides temporary partial wage replacement to active job seekers who are involuntarily out of work. For older workers, UI is an important source of income security and a potential influence on work and retirement incentives. In proportion to their share of the labor force, older workers shoulder a relatively small share of the nation's unemployment burden, while enjoying a higher-than-average chance of receiving UI compensation when jobless and seeking work.

This paper examines the adjustment to involuntary unemployment of older and prime age UI claimants. Unlike earlier studies based on surveys of selected samples, our investigation is based on a census of UI claimants constructed from records maintained for program administration. These data have been compiled for use by partners in Administrative Data Research and Evaluation (ADARE) Consortium supported by the U.S. Department of Labor. Using data on UI claimants in a large industrialized Midwestern state, we examine patterns of reemployment, earnings, and employment stability following job loss. We compare the experience of older workers aged 50 years and over with prime age workers aged 30 to 49 following a claim for UI benefits during the major labor market contraction in 2001.

Our data on UI claimants includes UI eligibles, UI ineligible, and UI exhaustees. We look at differences across older and prime age age groups within each of the three subgroups. We then examine contrasting patterns of reemployment, earnings, and employment stability. Our analysis exploits rich data on quarterly claimant earnings in the first 11 quarters following these various groups' claims for UI benefits.

Reemployment Rates

During the first 11 quarters after a UI claim, the reemployment rate each quarter for older UI eligible claimants is consistently below that for prime age UI-eligible claimants. The reemployment rate advantage for prime age claimants is between 1.4 and 6.5 percentage points. Controlling for observable characteristics in estimating differences between the two age groups, the most conservative estimates suggest that the advantage for prime age workers is positive but somewhat smaller in magnitude, ranging from 0.9 to 3.2 percentage points above that of older UI claimants.

Among UI-ineligible claimants, prime age claimants have an even larger advantage over older claimants in returning to work than is the case among UI-eligible claimants. The advantage is most pronounced soon after the UI claim, and it remains when differences are estimated controlling for observable characteristics in either OLS or logit models.

For UI beneficiaries who exhaust their entitlement to UI, there is a statistically significant advantage for prime age workers returning to work, beginning with the second quarter after the UI claim and in each quarter thereafter.

Among UI ineligible claimants, prime age claimants return to employment at higher rates than older claimants, and the greatest reemployment advantage is in the first three quarters after

the UI claim. Older UI claimants ineligible for benefits emerge as particularly vulnerable soon after applying for benefits.

Within a year after the UI claim, the relative advantage of prime age workers begins to decline within all three claimant groups, and it continues to erode over the next two years. Regardless of age, and holding true across all three claimant groups, those who become employed sooner after a UI claim appear to also be more successful in later quarters.

Earnings Recovery

The ratio of average quarterly earnings after the claim divided by average quarterly earnings before the claim is called the post-to-pre UI claim earnings ratio. An unadjusted comparison of older and prime age UI-eligible claimants suggests that older claimants recover about 20 percent less of prior earnings than do prime age claimants. However, controlling for differences in characteristics, the advantage for prime age claimants diminishes in all quarters and disappears in some quarters.

Among UI-ineligible claimants there is a generally greater earnings recovery after a UI claim, regardless of claimant age, than among UI eligibles. Claimants who fail to qualify for UI have relatively low preclaim earnings thereby increasing the likelihood postclaim earnings will be the same or higher. Among the UI-ineligible, unadjusted differences suggest that prime age claimants have modestly higher post-to-pre UI claim earnings ratios than older claimants. However, controlling for observable characteristics in estimating differences among UI ineligible, older claimants employed the first quarter after claim have a statistically significant relative earnings advantage, and there are no significant differences in relative earnings recovery by age for those employed in any other later quarters.

For UI exhaustees the level of earnings recovery is lower than for either other eligible claimants or ineligible claimants. Comparing unadjusted earnings ratios, prime age claimants still have an advantage over older claimants in every quarter observed. Controlling for observable characteristics, the earnings ratio advantage for prime age claimants declines for each quarterly reemployment cohort and remains significantly higher in only three of eleven quarters.

Employment Rates

Among those reemployed in the first six quarters after the UI claim, the subsequent employment rate for prime age UI-eligible claimants exceeds that for older claimants by significant amounts. The employment rates for both age groups decline after the first quarter reemployment cohort, and the advantage for prime age claimants diminishes for those reemployed in later quarters. Controlling for differences in characteristics, the prime age claimants reemployed in the first four quarters and the sixth quarter after claim have significantly higher employment stability after reemployment than do older claimants.

Among UI-ineligible claimants, prime age workers reemployed in the first three quarters after the UI claim have a higher rate of subsequent employment stability than do older claimants. Among the UI ineligible reemployed seven or more quarters after the claim, the older claimants appear to have modestly higher rates of employment.

As would be expected, employment rates among UI exhaustees are depressed in the first two quarters after the claim because of their continuing receipt of benefits. In quarters after that, employment rates for both age groups rise to levels comparable to the full sample of UI-eligible claimants. The pattern of advantage for prime age workers in maintaining steady employment is similar to that for all UI-eligible claimants. The prime age UI claimants getting reemployed in

the first six quarters after the UI claim have higher employment rates, and controlling for observable characteristics the differences are significant for all of the first six quarters except the fifth.

Prime age claimants have an advantage in the first five quarters after a UI claim. After the fifth quarter, the older claimants have relatively higher employment rates among the UI-benefit exhaustees and the UI-ineligible claimants.

Job Tenure

Older workers remain employed with their new employers at a significantly higher rate than prime age workers. Controlling for differences in observable characteristics in estimation, the advantage for older UI-eligible claimants ranges from 1.8 to 6.5 percentage points.

Older UI-ineligible claimants also achieve higher rates of job tenure within the observable period than do their prime age counterparts. The differences are not as large as for UI-eligible claimants, but older workers reemployed in the first six quarters after the UI claim have a statistically significant advantage in subsequent job tenure over their prime age counterparts.

For UI exhaustees, the same pattern of relative job tenure success is observed. Older UI exhaustees enjoy longer job tenure with their new employers after UI claims than do prime age claimants who exhaust UI entitlements. Controlling for observable characteristics, the advantage for older exhaustees ranges from 0.9 to 6.8 percentage points. The most meaningful results come during the first five quarters after the claim, when at least six quarters of subsequent employment are still observable. During this period the adjusted advantage in job tenure for

older UI exhaustees is statistically significant and averages more than 5 percentage points higher than for prime age UI exhaustees.

Regarding overall stability of employment after a UI claim, prime age UI claimants return to more steady regular participation in the labor force, but older workers establish stronger employment bonds with their first employer after a UI claim.

Contrasting Outcomes for UI Eligibles and Ineligibles

UI-eligible claimants are more successful in all of our measures of labor market success than UI-ineligible claimants: They return to work at a higher rate in each of the first 11 calendar quarters after a UI claim, they have statistically significantly higher earnings replacement ratios, they remain employed at a higher rate after gaining reemployment, and they also remain employed with the major employer in the reemployment quarter longer.

Early Return to Work

A general theme in the results of all outcomes is that those who get reemployed sooner have better subsequent labor market success. We examined this question directly on a subsample of UI claimants reemployed in either the first or second quarter after the UI claim. We estimated a regression model explaining the subsequent employment rate for each individual. For each claimant in the sample, the variable measures the proportion of quarters employed since reemployment—including the quarter of reemployment. Our models control for personal characteristics and parameters of UI entitlements. Among those eligible for UI benefits, prime age claimants who get reemployed in the first quarter after their UI claim increase their employment rate by an average of 2.82 percentage points relative to those getting back to work

in the second quarter after their claim. The similar impact estimate for older UI-eligible claimants is a 0.92-percentage-point gain in the employment rate.

Summary

A quick summary of the main findings is presented in Table A for the first four quarters after the UI claim on each outcome for all three claimant groups.

Compared to older UI-eligible claimants, prime age UI-eligible claimants have superior outcomes in terms of most measures of subsequent labor market success. They have higher reemployment rates, and after reemployment they enjoy higher earnings replacement and greater employment stability. Older UI-eligible claimants maintain longer steady employment with the major employer in their reemployment quarter.¹

UI-ineligible claimants have lower gross rates of reemployment in each quarter after the UI claim than do eligible claimants. Still, reemployment rates for prime age claimants are higher than for older claimants. The same pattern of results by age emerges for employment rates after reemployment among UI claimants. Among UI-ineligible claimants, older workers maintain longer attachments to their major employer in the reemployment quarter, and older UI claimants manage to obtain earnings recovery that somewhat exceeds that achieved by prime age workers.

Because of the length of time they have been receiving benefits, UI exhaustees have particularly low gross reemployment rates in the first two quarters after a UI claim; however, the gross reemployment rate rises to become higher than that of other eligible claimants in subsequent quarters. Patterns of differential outcomes by age are comparable to the full sample

¹Many UI claimants have received earnings from more than one employer in a calendar quarter. The major employer is defined as the employer in the quarter paying the greatest share of total quarterly earnings.

of UI-eligible claimants. Prime age claimants have higher reemployment rates, higher earnings recovery, and higher employment rates following reemployment, and they have lower job tenure with the major employer following employment.

Conclusion

Among UI claimants in the administrative records of a major Midwestern state, compared to prime age counterparts, older UI claimants return to work at lower rates, are less successful at returning to prior earnings levels, and have lower employment rates in the near term after reemployment. These are the same qualitative results that emerged in earlier studies of older workers that were based on general survey data on dislocated workers (Farber, Haltiwanger, and Abraham 1997; Chan and Stevens 2001).

One finding not reported in the related literature is that older workers who do gain reemployment after an involuntary job separation maintain better attachment to their new employers than do their prime age counterparts.² This result obtains for all three subsamples of UI claimants: benefit eligible, benefit ineligible and exhaustees of benefit entitlements. The longer employer attachments observed suggest that prospective employers can benefit from hiring older workers.

The relative advantage for prime age UI claimants over older claimants in reemployment, earnings recovery, and subsequent employment is greatest in the first year after the claim for benefits. There is also evidence that those who get back to work in the very first quarter after a UI claim have higher subsequent employment rates than those getting back to work only one

²UI-eligible claimants must have been involuntarily separated from their prior employers, and some of the UI-ineligible claimants may also have been involuntarily separated while failing to qualify for UI benefits because of inadequate levels of prior earnings to be insured against joblessness.

quarter later. Controlling for observable factors, the advantage for prime age workers may be as large as 4 percentage points in the near-term employment rate and as large as 1 percentage point for older workers.

At least two important lessons emerge from this research. First, employers on the demand side of the labor market should be aware when filling their staffing needs of the reliability and loyalty offered by older workers. Second, public employment policy-makers facilitating labor supply should see these results as further evidence that getting dislocated workers back to work quickly can improve their labor market success for the foreseeable future: Early reemployment pays big dividends.

Table A. Prime Age Means and Older Differences by UI Claimant Group

Outcome	Quarters after the UI Claim	UI Eligible		UI Ineligible		UI Exhaustee	
		Prime Age Mean	Older Difference	Prime Age Mean	Older Difference	Prime Age Mean	Older Difference
Reemployment Rate	1	0.676	-0.019**	0.620	-0.048**	0.326	-0.004
	2	0.405	-0.032**	0.286	-0.037**	0.271	-0.020**
	3	0.267	-0.032**	0.189	-0.032**	0.295	-0.035**
	4	0.206	-0.032**	0.128	-0.021**	0.243	-0.039**
Earnings Recovery	1	1.085	-0.009	1.329	0.123*	0.810	-0.005
	2	1.071	-0.042**	1.269	0.025	0.970	-0.051*
	3	0.912	-0.058*	1.236	0.057	0.904	-0.064*
	4	0.841	-0.043	1.201	0.100	0.824	-0.035
Employment Rate	1	0.865	-0.056**	0.791	-0.035**	0.672	-0.075**
	2	0.793	-0.041**	0.728	-0.058**	0.763	-0.053**
	3	0.777	-0.040**	0.681	-0.078**	0.787	-0.038**
	4	0.763	-0.032**	0.684	-0.056*	0.770	-0.027**
Job Tenure	1	0.598	0.050**	0.417	0.106**	0.266	0.063**
	2	0.557	0.060**	0.434	0.091**	0.435	0.053**
	3	0.486	0.065**	.0462	0.094**	0.472	0.068**
	4	0.507	0.047**	0.493	0.022	0.501	0.047**

* (**) Statistically significant in a two-tailed test at the 90 percent (95 percent) confidence level.

1. INTRODUCTION

In recent years an increasing proportion of older workers have suffered involuntary job loss (Farber, Haltiwanger, and Abraham 1997, p. 59). Prime age workers experience a disproportionately large share of job layoffs. However, after being laid off, older workers have relatively more difficulty gaining reemployment and recovering to their former earnings level (Chan and Stevens 2001, p. 484). The greater earnings decline among older job losers has been attributed to their longer job tenure and higher earnings before separation (Kuhn and Sweetman 1999, p. 671–672). This paper investigates reemployment and earnings patterns following a claim for unemployment insurance (UI) benefits by older workers. This sheds light on the role of UI in adjustment to involuntary unemployment for older workers relative to prime age workers.

Although they experience greater earnings declines, older workers are more likely to qualify for UI and to draw more benefits during jobless periods (O’Leary and Wandner 2001, p. 87). The shares of older workers among the labor force, the total unemployed, and the insured unemployed in the United States for 2002 are reported in Table 1. The figures are based on monthly averages for the year and indicate that those aged 45 years and over made up one-third of the labor force, encompassed only one-quarter of those experiencing unemployment, but included two-fifths of all UI beneficiaries. The national average numbers suggest that older workers shoulder a proportionately smaller share of the unemployment burden and enjoy a higher than average chance of receiving UI compensation while jobless and seeking work.

UI provides temporary partial-wage replacement to active job seekers who are involuntarily out of work. For older workers, UI is an important source of income security and a potential influence on work and retirement incentives. Using data on UI claimants in a large

industrialized Midwestern state, we examine patterns of reemployment, earnings, and employment stability following job loss. These data have been compiled for use by partners in Administrative Data Research and Evaluation (ADARE) Consortium supported by the U.S. Department of Labor. Starting from administrative records that provide a census of all UI claimants, we compare the experience of older workers aged 50 years and over with prime age workers aged 30 to 49 following a claim for UI benefits during the labor market contraction in 2001.

This paper proceeds by describing our sample of UI claimants for analysis and comparing the characteristics of subsamples of UI eligibles, UI ineligible, and UI exhaustees. We look at differences across older and prime age age groups within each of the three subsamples. We then present an overview of our methodology for analysis of reemployment, earnings, and employment stability. In Section Four we examine contrasting patterns of reemployment. Section Five presents results about earnings recovery, and Section Six reports on employment stability as measured by the observable job tenure with a post-UI claim employer. To put the differential findings by age into perspective, Section Seven provides a quick examination of reemployment, earnings, and employment stability between UI-eligible and -ineligible claimants. The final section offers a summary and conclusion.

2. SAMPLES FOR ANALYSIS

Starting from administrative records that provide a census of all UI claimants, we selected a sample of claimants aged 30 and over so as to compare the experience following a job separation of older workers aged 50 years and over with prime age workers aged 30 to 49. Our sample for analysis is based on UI claims in a major industrial Midwestern state during the labor market contraction in 2001.

Our full sample includes 329,935 UI claimants aged 30 and over, of whom 28.1 percent are aged 50 or older. Table 2 summarizes the composition of our sample in terms of UI eligibility and exhaustion of UI entitlement for benefit years started in calendar year 2001. Overall, 83.6 percent of claimants were UI eligible, and 29.5 percent of eligible claimants exhausted their initial entitlement of regular UI benefits. Older claimants had an appreciably higher rate of UI benefit eligibility (88.7 percent compared to 81.7 percent for prime age claimants), but among UI-eligible claimants older workers exhausted benefit entitlements at about the same rate as prime age claimants (29.8 percent compared to 29.4 percent for prime age claimants).

The means of outcome variables and claimant characteristics for our three analysis samples are summarized in Table 3. The first three rows in the table are common UI outcomes measured over the benefit year: weeks of UI benefits drawn, the fraction of UI entitlement used, and the proportion drawing their full monetary entitlement—the UI benefit exhaustion rate. Among those eligible for UI, there are no appreciable differences between older and prime age UI claimants in terms of UI weeks drawn or the rate of exhausting UI benefit entitlements. Neither are there significant differences for the two age groups from the overall mean of 14.9 weeks of UI drawn in the benefit year and 58.2 percent of entitled benefits drawn. The mean

duration of UI weeks drawn by older and prime age exhaustees of regular UI benefits was not significantly different: being 25.7 weeks for older claimants and 25.6 weeks for prime age claimants. The maximum duration of regular UI benefits is 26 weeks.

Among UI eligibles, there is virtually no difference between older and prime age claimants in terms of the new U.S. Department of Labor performance indicator for reemployment. Checking for the presence of earnings in quarterly UI wage records in the quarter after the benefit year begin date (BYB), we find that 67.5 percent of older claimants and 67.6 percent of prime age claimants show earnings as evidence of reemployment.³ Naturally, UI benefit exhaustees have a lower rate of being employed one quarter after the quarter of the BYB. Furthermore, ineligible UI claimants are less successful at gaining reemployment than are UI-eligible claimants. A difference across the age groups exists in terms of reemployment among both UI ineligibles and benefit exhaustees. For both groups, a smaller share of the older group gains reemployment relative to the prime age group.

The similarities in outcomes between older and prime age UI-eligible claimants occur despite significant differences between the two groups in terms of some measurable characteristics. Older eligible claimants are more likely to be white and to have a lower level of educational attainment than prime age claimants. Older workers also had significantly higher levels of prior earnings: their income in the base period—the 12 months before claiming unemployment benefits—was nearly \$7,000 higher.⁴

³ Like the performance indicator we use earnings as evidence of employment. Since earnings in the UI claim quarter could lie before or after the claim, we start checking employment in the calendar quarter after the claim.

⁴The UI program base period for earnings is the first four of the five completed calendar quarters immediately preceding the quarter of the UI claim for benefits. The level of base period earnings is a measure of the degree of labor force attachment and a prime factor in determining eligibility for UI benefits.

In terms of UI program entitlements among eligible claimants, the mean entitled duration was 25.8 weeks for both older and prime age groups, the average weekly benefit amount (WBA) was \$5 higher for older claimants at \$277, the percentage at the state WBA maximum was 3.4 percentage points higher for prime age claimants, and the percentage exempt from job search was 5.9 percent higher for older claimants.⁵

Claimants not eligible for UI benefits are somewhat more likely to be younger, female, nonwhite, less educated, and to have lower base period earnings than UI-eligible claimants. Compared to all eligible claimants, UI benefit exhaustees are more likely to be female, nonwhite, more educated, and to have moderately lower base-period earnings.

⁵Most UI claimants must register for active job search with the state employment service to maintain continuing eligibility for UI. Exemptions from registration include claimants designated by their employer as being on a fixed-term layoff awaiting recall to a prior job, union members who get job referrals from union hiring halls, and participants in job training approved by the state employment commissioner (O'Leary 2006).

3. BACKGROUND

Earnings impacts of involuntary job loss for the average worker have been estimated to be on the order of one-quarter of his or her prior earnings levels (Jacobson, Lalonde, and Sullivan 1993). We also know that peak life-cycle earnings tend to occur around the age of 50 (Heckman 1974). As workers age, the work-leisure decision increasingly includes the option of retirement. As they approach retirement age, it is common for them to work reduced hours on the career job or to migrate to a “bridge” job as a step in the transition toward full retirement out of the labor market (Quinn 1999).

If involuntary job separation means the career job is no longer available, the shift to another job involves the loss of firm-specific human capital and, most likely, lower earnings potential. The shift to another job can also involve a change in occupations and further loss in value of accumulated occupation-specific human capital. For members of industrial unions, reemployment in new industries may mean the loss of union rents in earnings.

As people approach the end of their working years they also tend to be reaching lifetime peak levels of asset accumulation. Furthermore, as their age approaches 60 years, the potential to make withdrawals from 401k retirement accounts without penalty arrives. In their mid to late 60s full Social Security entitlements become available, and during their 70th year compulsory withdrawals from pretax retirement savings accounts must begin. All of these events make it easier for older workers to transition into bridge jobs or full retirement.

Receipt of UI benefits tends to increase the duration of jobless spells (Decker 1997, p. 285–298). The maximum entitled duration of regular UI benefits in nearly all states is 26 weeks, and typically about one-third of beneficiaries exhaust their benefit entitlement. For older

workers UI benefits could act as additional severance income, easing the transition to a bridge job or to full retirement.

In this paper we contrast the post–UI claim experience for three types of older and prime age claimants: UI eligible, UI ineligible, and UI exhaustees. Dividing the sample in this way illuminates the influence of UI on return to work among older workers. We examine differences in rates of reemployment, reemployment earnings, and employment stability between older and prime age UI claimants.

Given the greater range of post–job separation options for older workers, we expect that reemployment rates would be somewhat lower for older workers and that UI benefit eligibility would reinforce these lower reemployment rates for older workers.

Furthermore, given the higher levels of pre-UI claim earnings for older workers, we expect that older workers will suffer larger relative earnings declines upon reemployment following an involuntary job separation.

Among those who do gain reemployment following a UI claim, theory does not guide us as to whether older or prime age claimants will experience greater job stability in new jobs. It may be the case that older workers, having accumulated more general human capital, could more easily adapt to new working situations. If this is true, older workers may be more stable in new jobs, but this is an empirical question.

4. EMPIRICAL STRATEGY

With a full year of UI claims inflow for a major midwest industrial state, we have a wealth of data with which to inform our view of employment, earnings, and employment stability. Our data includes quarterly earnings records for each UI claimant provided by employers to the state employment security agency. The data includes at least six quarters preceding the quarter of UI claim and at least eleven quarters after the claim for all claimants in our analysis sample. We examine the earnings data directly and use earnings data as evidence of employment in a quarter.⁶ Among those eligible for benefits, the duration of UI receipt could be used as an indirect measure of jobless duration, but that measure is not available for UI-ineligible claimants.⁷

We examine reemployment rates, earnings, and subsequent employment stability in sequence, using similar empirical strategies for each. We begin by tabulating the rate of first-time reemployment observed in each quarter after the calendar quarter of UI benefit claim. We then perform unadjusted tests for differences in mean values of outcomes across the subgroups of interest. In doing this we present mean values of outcome variables (x) for older (o) and prime age (p) groups. Differences are computed as:

$$(1) \quad E(x_o) - E(x_p),$$

⁶Any positive level of earnings reported for the quarter is taken as evidence of employment in that quarter. Our results were virtually unchanged when we tried an alternative threshold of \$100 in earnings for the quarter—the Social Security Administration’s definition of insured employment.

⁷Quarterly earnings are a direct measure of reemployment, observable for all UI claimants regardless of UI eligibility. The great majority of earned income in the United States is captured in wage records, since 99 percent of employers are covered by UI. Only a small percentage of UI claimants apply for benefits while still working.

where E is the expectation operator yielding means of the random variables, x is an outcome of interest, and the index o denotes the sample of older UI claimants while p denotes the sample of prime age claimants. Tests of significance are done using t -statistics on the difference in means.

The result of the computation stated in Equation (1) is equivalent to the slope coefficient estimated by ordinary least squares (OLS) applied to a simple bivariate regression model. That is, program impacts can be estimated by running the OLS model,

$$(2) \quad x_i = a_0 + a_1 O_i + u_i,$$

on a pooled sample of older and prime age claimants, where x is the outcome of interest, a_1 is the difference in the outcome for the older claimants, a_0 is the mean value of the outcome for prime age claimants, O is a dummy variable with a value of 1 for older UI claimants and 0 otherwise, u_i is a normally distributed mean zero error term, and i is an index denoting individuals in either the prime age or older samples. Tests for significance of differences are simply t -tests on the parameter a_1 .

Since older and prime age UI claimants differ significantly in terms of observable characteristics, it would not be surprising to observe different labor market outcomes across the groups. That is, observed outcomes may differ by age because of characteristics associated with age, rather than because of the difference in age alone. To remove the influence of covariates when comparing outcomes for the two different age groups, Equation (2) may be augmented by a set of variables representing n observable characteristics, z_k ($k = 1, \dots, n$). To estimate the difference between older and prime age UI claimants, controlling for characteristics, we can run the following multivariate regression model,

$$(3) \quad x_i = a_0 + a_1 O_i + b_1 z_{1i} + b_2 z_{2i} + \dots + b_n z_{ni} + u_i,$$

by ordinary least squares (OLS) on the pooled sample of older and prime age UI claimants. Our list of covariates z_i includes variables that can affect the decision of older workers to return to work, such as the presence of income from private pensions, severance pay, vacation pay, social security, or other sources of income affecting UI benefit entitlement.⁸ The method of Equation (3) yields differences adjusted for observable characteristics.

Since the main dependent variable of interest—proportion returning to work—is a fraction between zero and one, the regression model predicts the probability of re-employment. The OLS estimation is a linear probability model, which may yield biased estimates. OLS estimates may be biased since the range of variation in the dependent variable is constrained to the zero-one interval. Maddala (1982, pp. 22–27) suggests using the logit estimator in such cases:

$$(4) \quad x_i = f(O_i, z_{1i}, \dots, z_{ni}, u_i; \mathbf{B}),$$

⁸Control variables z_i in our models are as follows: county unemployment rate in the quarter of UI claim, the change in the county unemployment rate (the rate in the UI claim quarter minus the rate in the prior quarter), indicator for older claimant (age 50–65), indicator for sex (male = 1), race indicators (six categories), education indicators (four categories), UI base period earnings (earnings in the first four of the five calendar quarters preceding the quarter of the UI claim), the number of employers in UI earnings base period, the UI weekly benefit amount (WBA), an indicator for the individual WBA value being at the state allowed maximum of \$289, entitled weeks of UI compensation (maximum 26 weeks), job search–exempt (principally on stand-by awaiting employer recall or a member of a union hiring hall), indicators for benefit year begin (BYB) date in each of four calendar quarters, indicator variable for “has dependents,” indicator for “has a handicap,” indicator for “deductions made from UI for severance pay,” indicator for “deductions made for vacation pay,” indicator for “deductions made for company pension income,” indicator for “deductions made for social security benefit income,” indicator for “deductions made for other reasons,” indicators for “prior industry of employment (21 NAICS groups),” indicators for “county of residence,” and a set of indicator variables for residence in neighboring states.

where B is a vector of regression model parameters, and the error term u_i is assumed to vary according to the logistic distribution. The problem of bias in estimation is usually most severe when the bulk of probability clusters at one or the other extreme of the zero-one interval. Since reemployment probabilities for prime age and older UI claimants generally range from about 40 to 80 percent, the limited range of the dependent variable is not a likely source of severe bias in estimating parameters by OLS. Nonetheless, we present estimates of the difference in outcomes estimated by all three methods outlined: simple unadjusted, OLS regression adjusted, and logit regression adjusted.

5. REEMPLOYMENT RATES

To examine the quarterly time pattern of reemployment after a UI claim, we compute the ratio of those who gain reemployment for the first time in a quarter to the UI claimants yet to return to work. This concept is called a conditional hazard rate to reemployment, or the exit rate from joblessness. Denoting time zero ($t = 0$) as the quarter of UI claim, and r_t as the number of period t claimants yet to have earnings at the start of quarter t , then $h(t)$ is the conditional reemployment hazard rate in quarter t ,

$$(5) \quad h(t) = (r_t - r_{t+1})/r_t .$$

The hazard rate each quarter is a conditional measure of a change in behavior because it depends on the number who had yet to gain reemployment at the start of each quarter (r_t). The expression $h(t)$ is the popular Kaplan-Meier hazard rate, which is discussed thoroughly by Kiefer (1988). The number of UI claimants still seeking reemployment at the start of each time period (r_t) is called the risk set because it is the number of job seekers “at risk” of changing their labor market status in the subsequent quarter. For UI claimants, Table 4 presents reemployment hazard rate estimates computed according to Equation (5) for the three subgroups of UI claimants.

The top panel of Table 4 presents results of hazard rate computations for older and prime age UI claimants eligible for benefits, the middle panel presents results of similar computations for claimants not eligible for UI, and the bottom panel presents results for UI benefit exhaustees. Rows in each panel present results for quarters following the quarter of the benefit year begin (BYB) date that falls in the quarter of the UI claim ($t = 0$). The columns headed “reemployment rate” list hazard rates of exit to reemployment for each quarter ($t = 1, \dots, 11$) after the quarter of

claim for prime age and older claimants. After the first quarter ($t = 1$), the exit rate for older eligible UI claimants is consistently below that for prime age eligible claimants. This can be seen graphically in the top panel of Figure 1; after the first period the hazard rate curve for older claimants is strictly below the curve for prime age claimants.

Statistical tests of the simple difference in the reemployment rates also suggest an advantage for prime age workers in every quarter after the first one following the UI claim. The estimates indicate the range of advantage is between 1.4 and 6.5 percentage points. Because older and prime age claimants differ in ways that can affect their ability and desire to gain reemployment, it is important to control for characteristics when estimating the difference in rates of returning to work by age. Table 3 summarizes the observable ways that the groups differ. Tests for differences in the hazard rates were done by ordinary least squares regression models, controlling for these and other factors listed in the previous section. Controlling for observable factors increases the estimated advantage for prime age workers in gaining reemployment each quarter after a UI claim. The range of estimated advantage is 2.1 to 5.8 percentage points. Since the dependent variable reemployment hazard rate is a fraction limited to range between zero and one, the OLS model is a linear probability model which can alternatively be estimated as a logit. The logit estimator constrains estimated parameters of the model to assure that predicted probabilities from the model fall in the zero-to-one range. The logit model yields more conservative estimates of the reemployment advantage for prime age workers. The logit range of estimates is 0.9 to 3.2 percentage points over older UI claimants.

Among those eligible for UI, the rate of returning to work by prime age workers exceeds that for older workers by the greatest margin in Quarters 2 through 5 after the claim for benefits. Given that they maintain continuing UI benefit eligibility by remaining able, available, and

actively seeking work, and not refusing any offers of suitable work, beneficiaries may draw out available benefits during a 52-week period starting from their benefit year begin (BYB) date. That period is called the UI benefit year. Since the maximum benefit entitlement is 26 weeks at the full weekly benefit amount (WBA), entitlements may be exhausted during Quarters 2 through 4 after the calendar quarter of the BYB. These quarters include the period when prime age workers show a greater rate of returning to work than older workers.

We also examine reemployment hazards by age group for UI claimants who are not eligible for benefits. The unadjusted results in the second panel in Table 4 suggest that among those not eligible for UI, prime age workers have an even larger advantage over older workers than is the case among UI-eligible claimants. The advantage is most pronounced early on after the UI claim, and remains when differences are estimated, controlling for observable characteristics in either OLS or logit models. The most conservative logit results indicate a range of advantage for prime age workers starting at 4.8 percentage points in the first quarter and declining to 1.0 in the eleventh quarter after the UI claim. These differences are presented graphically in the second diagram in Figure 1. The hazard curve for prime age claimants lies strictly above that for older claimants.

Among UI beneficiaries who exhaust their entitlement to UI, the average rate of return to work is greatly depressed in the early quarters following the claim, compared to all eligible and ineligible claimants. Exhaustion of the 26-week entitlement can take place in one continuous uninterrupted spell of 26 weeks from the BYB, or exhaustion may occur later in the benefit year. The week of benefit entitlement exhaustion would be delayed if benefit payments are less than the WBA in any week because of factors like earnings, severance pay, or receipt of pension

income or Social Security benefits.⁹ Alternatively, exhaustees may experience multiple spells of joblessness punctuated by spells of employment or income sufficient to result in a week of zero UI compensation. There is a statistically significant advantage for prime age workers starting with the second quarter after the UI claim and in each quarter thereafter.

The differences between older and prime age UI claimants in returning to work is clearly illuminated in Figure 2. The graphs in this figure present simple and regression adjusted differences by quarter. The curves show that the OLS adjusted estimates track the simple unadjusted differences closely, and that the logit adjusted estimates of differences are uniformly more modest. Reemployment advantages for prime age claimants are greatest in the first quarters after claim, then diminish. However, Table 4 reports that the absolute rates of first time reemployment in these later quarters—nearly three years after the claim—are very low, falling in a range between 2 and 7 percent.

The logit estimates of the prime age claimant reemployment-rate advantage across the three samples are combined and presented in Figure 3. The greatest reemployment advantage for prime age claimants occurs in the first three quarters after claim and is found among those ineligible for UI benefits. Older UI claimants ineligible for benefits emerge as particularly vulnerable soon after applying for benefits. Within a year after the UI claim, the relative advantage of prime age claimants converges among the three claimant groups, and the advantage continues to erode over the next two years.

⁹In 1976, new federal UI amendments (Public Law 94-566) required a dollar-for-dollar reduction of UI payments against “any governmental or other pension, retirement or retired pay, annuity, or any other similar periodic payment which is based on the previous work of such individual” (USDOL 2006, p. 4–19). The rule applies only to payments from plans established by the base period or UI chargeable employer. States may disregard pension income if established by other than a base period employer, except in the case of Social Security and Railroad Retirement benefits, which reduce UI dollar-for-dollar, regardless of when entitlement was established. Also, states are permitted to reduce UI by less than each dollar of pension income if an employee’s own contributions helped establish the pension benefit (O’Leary and Wandner 2001, p. 108).

6. REEMPLOYMENT EARNINGS

Involuntary job loss has been estimated to significantly reduce future earnings (Jacobson, Lalonde, and Sullivan 1993). Furthermore, earnings loss is believed to be greater among older workers (Chan and Stevens 2001). In this paper we compare quarterly earnings before and after a UI claim between older and prime age workers.

The outcome we examine is the ratio of average quarterly earnings after the claim to average quarterly earnings before the claim. We call this the post-to-pre UI claim earnings ratio. After the claim we average earnings across all quarters in which earnings are greater than zero. Before the claim we average earnings across Quarters Three through Six prior to BYB. This computation for prior earnings better approximates permanent earnings levels by excluding quarters when earnings of displaced workers commonly decline below their customary levels—an earnings pattern often referred to as the Ashenfelter (1978) dip in earnings. The value of the ratio for any quarter is computed on the sample of older and prime age workers first reemployed in that quarter.¹⁰

Among UI-eligible claimants, prime age workers who get reemployed in the first or second quarter after claim appear to have higher average quarterly earnings after the claim than before. This can be seen in the top panel of Table 5 and in the top graph in Figure 4. Among UI-eligible prime age claimants, the average ratio of post-to-pre UI claim earnings is less than one among claimants gaining first reemployment more than two quarters after the UI claim.

Figure 4 suggests that older claimants consistently recover about 20 percent less of prior

¹⁰Sample sizes in Table 5 are based on the reemployment rates listed in Table 4. Further sample reductions are due to the fact that claimants with average prior quarterly earnings of less than \$100 were excluded to eliminate outliers. Regressions to estimate adjusted differences in earnings between prime age and older claimants also include a variable for the number of postunemployment quarters with earnings, because the reemployment quarter is most likely a quarter with less than full-time quarterly hours of work.

earnings than do prime age claimants. This differential is borne out in the simple differences in the top panel of Table 5. However, when we control for differences in characteristics, the prime age claimant advantage diminishes in all quarters and disappears in some quarters. The top graph in Figure 5 illustrates the degree to which observable characteristics explain the prime age claimant advantage in earnings recovery.

Among those not eligible for UI benefits, there is uniformly a greater earnings recovery after UI claim, and a smaller advantage for prime age UI claimants. Controlling for observable characteristics in estimating differences among UI ineligible, older claimants employed the first quarter after claim have a significant relative earnings advantage. There are no significant differences in relative earnings recovery by age for those employed in later quarters.

For UI benefit exhaustees, the level of earnings recovery is lower than for both other eligible claimants and ineligible claimants. Comparing unadjusted earnings ratios, prime age claimants still have an advantage over older claimants in every quarter observed. Controlling for observable characteristics, the earnings ratio advantage for prime age claimants declines for each quarterly reemployment cohort and remains significantly higher in only three of eleven quarters. Regression adjusted differences between older and prime age UI claimants in post-to-pre claim earnings ratios are summarized in Figure 6 for UI eligibles, ineligibles, and exhaustees. The figure shows that among those getting reemployed in the first year after a UI claim, earnings recovery is best for older UI ineligibles. This is largely due to the low pre-UI claim earnings levels for ineligibles. For UI-ineligibles gaining reemployment after the first quarter following the claim, there are no statistically significant differences in post-to-pre UI claim earnings ratios between older and prime age claimants. This is reflected in the volatility of the curve in Figure 6. For UI-eligibles, including exhaustees, the figure provides a graphic view of an approximately

10 percent advantage for prime age claimants getting reemployed in the first two years after a UI claim.

7. EMPLOYMENT STABILITY

Two different measures of employment stability are examined. First, we look at the proportion of quarters a UI claimant is employed after reemployment, and second, we check to see how long the claimant stays working for the major employer in his or her reemployment quarter. The latter is a measure of short-term job tenure; we call the former an employment rate. We track both outcomes for older and prime age claimants who are UI eligible, UI ineligible, and UI exhaustees. Both outcomes are measured during the 11 observable quarters after the UI claim.

7.1 Employment Rates

To measure the employment rate for a claimant employed the first quarter after the claim, the denominator of the employment rate is 11, and the numerator is the number of quarters with earnings. For a claimant who first gains reemployment in the fifth quarter after the claim, the employment rate is based on the seven observable quarters—including the quarter of reemployment. The number of quarters in the computation depends on when the client becomes reemployed. While comparisons between older and prime age reemployed in a given period are valid, comparisons between those reemployed in different quarters after the BYB are not valid because of differences in the number of quarters observed after reemployment.

The employment rate for prime age UI-eligible claimants reported in the top panel of Table 6 exceeds that for older claimants by significant amounts for those reemployed in the first six quarters after the UI claim. The rate for older claimants is 81.4 percent and the rate for prime age workers is 85.6—4.2 percentage points higher. As seen in the top graph of Figure 7, the rates for both groups decline from the first quarter, and the advantage for prime age claimants

diminishes in later quarters but appears to reemerge in Quarters nine and ten. However, these later quarters reflect only very short term employment. Controlling for differences in characteristics, the prime age claimants reemployed in the first four quarters and the sixth quarter after claim have significantly higher employment stability after reemployment than do older claimants.

Among those not eligible for UI benefits, prime age workers reemployed in the first three quarters after the UI claim have a higher rate of employment stability than do older claimants. The second graph in Figure 7 illustrates how employment rates for both groups flip-flop thereafter. Figure 8 presents graphs of the simple and regression adjusted differences in employment rates, and among the UI ineligible reemployed seven or more quarters after the claim, the older claimants appear to have modestly higher rates of employment.

As would be expected, employment rates among UI exhaustees are depressed in the first two quarters after the claim. In quarters after that, employment rates for both age groups rise to levels comparable to the full sample of UI-eligible claimants. The pattern of advantage for prime age workers in maintaining steady employment is also similar to all UI-eligible claimants. The prime age UI claimants getting reemployed in the first six quarters after the UI claim have a higher employment rate, controlling for observable characteristics, and the differences are significant for all quarters except the fifth.

Regression-adjusted estimates of the older minus the prime age employment rates are summarized in Figure 9. The graph shows prime age claimants to have an advantage in the first five quarters after UI claim. After the fifth quarter the older claimants have relatively higher employment rates among the UI-benefit exhaustees and the UI-ineligible claimants.

7.2 Job Tenure

Quarterly UI wage records for a particular claimant often contain earnings from more than one employer in a given quarter. We define the major employer for a claimant in a quarter as being the employer paying the most wages to the claimant in that quarter. We measure job tenure by counting the quarters with the major employer from the reemployment quarter. Table 7 gives the ratio of the number of quarters with the same major employer starting with the quarter of reemployment, divided by the number of quarters with earnings since reemployment.

Older workers remain employed with their new employers at a significantly higher rate than prime age workers. Table 7 reports that among UI eligibles the simple unadjusted advantage for older workers after the reemployment quarter ranges from 1.5 to 11.3 percentage points higher than prime age workers. Controlling for observable characteristics in estimation, the advantage for older UI-eligible claimants ranges from 1.8 to 6.5 percentage points.¹¹ These results can be viewed graphically in Figure 10, where the top panel shows older claimants to maintain longer job tenure among the reemployed. The top panel of Figure 11 shows that this advantage diminishes somewhat each quarter, but that tenure is higher for older claimants among each reemployment quarter cohort.

Older UI-ineligible claimants also achieve higher rates of job tenure within the observable period than do their prime age counterparts. The differences are not as large as for UI-eligible claimants, but the first six reemployment-quarter cohorts of older workers have a statistically significant advantage in subsequent job tenure over their prime age counterparts. These results can be seen graphically in the middle panels of Figures 10 and 11.

¹¹In addition to the control variables listed above, the job tenure regressions include a variable for the number of postreemployment quarters with earnings. This factor adjusts for the fact that the job tenure rate tends to be higher for those with fewer observable quarters remaining after reemployment.

For UI exhaustees, the same pattern of relative job-tenure success is observed. Older UI exhaustees enjoy longer job tenure with their new employers after UI claims than do prime age claimants who exhaust UI entitlements. The simple unadjusted advantage for older UI exhaustees ranges from 0.6 to 8.8 percentage points. Controlling for observable characteristics, the advantage for older exhaustees ranges from 0.9 to 6.8 percentage points. The most meaningful results occur during the first five quarters after the claim, when at least six quarters of subsequent employment are observable. During this period, the adjusted advantage in job tenure for older UI exhaustees is statistically significant and averages more than 5 percentage points higher than for prime age UI exhaustees.

The job tenure results on age differentials are summarized in Figure 12, which presents regression adjusted estimates across UI eligibles, UI ineligible, and UI exhaustees. With an exception only for UI-ineligible claimants reemployed in Quarter 8 after the claim (a result that is not statistically significant), all three curves in the graph indicate a positive advantage for older UI claimants in job tenure with their first employer after the UI claim.

Regarding overall stability of employment after a UI claim, prime age UI claimants return to more steady regular participation in the labor force, but older workers establish stronger employment bonds with their first employer after a UI claim.

8. DIFFERENCES BY UI ELIGIBILITY STATUS

Our focus on contrasting reemployment and earnings outcomes for older claimants with those for prime age claimants may have obscured a more fundamental comparison between UI-eligible and -ineligible claimants. We now briefly compare these two samples on three things: exit rates to reemployment, post-to-pre UI claim earnings ratios, and employment stability. For the last one we examine both employment in any job and steady employment with the major employer starting with the quarter of reemployment. We present both unadjusted estimates of differences in outcomes, and differences adjusted for characteristics of the samples. As we saw in Table 3, compared to UI-eligible claimants, the UI ineligible are more likely to be prime age, female, African American, have a lower educational attainment, and have lower base period earnings.

In each quarter after the UI claim, beneficiaries eligible for UI compensation return to work at a higher rate than UI-ineligible claimants. The unadjusted reemployment hazard curves summarize this graphically in Figure 13. As reported in Table 8, the positive difference in the rate of return to work each quarter for UI-eligible claimants is statistically significant in all of the first nine quarters after the claim. Controlling for observable characteristics, this pattern holds for all except the first quarter after the claim. After the benefit claim, the unadjusted advantage for UI-eligible claimants is 5.8 percentage points in the first quarter but jumps to 12.5 percentage points in the second quarter. The smaller difference for the first quarter results from the long benefit receipt spells by UI exhaustees, who constitute nearly 23 percent of the UI-eligible sample.

Among those gaining reemployment in the first or second quarter after their UI claim, the UI eligibles have statistically significantly higher earnings-replacement ratios than UI-ineligible

claimants. Table 9 reports that the ratios of average reemployment earnings to average earnings preceding the claim are higher for UI-eligible claimants in the first two quarters after the claim, but that there are no statistically significant differences among claimants first reemployed in subsequent quarters. These results are presented graphically in Figure 14. Controlling for observable characteristics, the UI-eligible claimants also have higher earnings ratios in Quarters four and eleven after the claim. No clear pattern emerges about relative earnings. For both eligible and ineligible UI claimants, we see that the post-to-pre earnings ratio tends to decline as the quarter of reemployment is delayed. These results do not refute the thesis that those who return to work sooner after a UI claim do better in recovering to prior earnings levels.

After gaining reemployment, UI-eligible claimants remain employed at a higher rate than UI-ineligible claimants. Table 10 summarizes the results of unadjusted and regression-adjusted estimates of the difference in employment rates after reemployment among UI-eligible and UI-ineligible claimants. The employment rates, unadjusted over time, are presented graphically in Figure 15 for the first 11 quarters after the UI claim. The proportion of UI eligibles maintaining employment ranges from 74.6 to 91.0 percent, and the advantage for UI eligibles over ineligibles ranges from 2.8 to 9.5 percentage points.

In addition to maintaining a steadier earnings pattern after reemployment as seen in Table 11, UI-eligible claimants also remain employed with the major employer in the reemployment quarter at a higher rate than UI-ineligible claimants. The difference is greatest for those employed in the first two quarters after the UI claim: the major employer retention rates among UI eligibles are 63.1 and 57.7 percent as a percentage of the several remaining observable quarters. The rate of staying with the major employer after hiring is presented graphically in Figure 16. A higher rate of employer retention occurs for UI-eligible claimants in all quarters

observed, but, if we control for observable characteristics, the difference between UI-eligible and UI-ineligible claimants is statistically significant only in the first two quarters after the claim.

9. EARLY RETURN TO WORK

In reviewing the collection of results reported in this paper, a general theme emerges: following a UI claim, those who get reemployed sooner have better subsequent labor market success. To investigate whether this is indeed the case, we created subsamples of claimants reemployed in either the first or second quarter after the UI claim. We then estimated regression models having as the dependent variable the employment rate for each individual. For each claimant in the sample, the variable measures the proportion of quarters employed since reemployment—including the quarter of reemployment. This dependent variable, similar to the concept examined in Section 7 above, is a fraction ranging between zero and one. For example, someone getting reemployed in the first quarter after the claim and having earnings in only three of the other 10 observable quarters would have a value of the dependent variable equal to 4/11.

We estimated OLS linear probability models of the employment rate on UI-eligible claimants reemployed in either the first or second quarter after the UI claim. The aim of the model is to determine whether there is a subsequent advantage to getting employed in the first quarter as opposed to the second quarter after a UI claim. By confining our analysis to this simple question, we avoid issues of small sample sizes and misleading values for the dependent variable based on reemployment late in the observable period.

Our models include an indicator (dummy) variable for being employed in the first quarter after the UI claim, a dummy variable for older workers aged 50 to 65 years, and an interaction between these two variables. The models control for sex, race, educational attainment, base period earnings, number of employers in the base period, WBA, WBA at state maximum, entitled duration of UI benefits in weeks, the change in the county unemployment rate, and the calendar quarter of the BYB. We also include indicator variables for work search exemption for

the presence of dependents, a handicap that may affect work abilities, and deductions from UI payments for: severance pay, vacation pay, company pension payments, and Social Security payments. Other control variables were included for industry of prior employment (22 NAICS categories) and county of residence in the state. Results of estimation for UI-eligible claimants are presented in Table 12.

Among those eligible for UI benefits, prime age claimants who get reemployed in the first quarter after their UI claim increase their subsequent employment rate by an average 2.82 percentage points relative to those getting back to work in the second quarter after their claim. The similar impact estimate for older UI-eligible claimants is a 0.92-percentage-point gain in the employment rate. These estimates were computed in a regression model controlling for observable differences. This is further evidence of the value of quickly returning to work, and it supports public policies facilitating speedy reemployment. Research evidence on the effectiveness of public reemployment programs related to UI is provided by O’Leary (2006). An enumeration of public employment and training programs and the participation in them by older workers is provided by Simonetta (2004).

The parametric model of employment also suggests that among UI-eligible claimants who get employed in the first or second quarter after a UI claim, older claimants have a subsequent employment rate that is an average of 4.66 percentage points below that for prime age claimants, and males have an employment rate 3.24 percentage points below that for females. Estimates are also presented for the effects on employment rates of other characteristics among UI-eligible claimants. Among the UI program parameters it should be noted that those with higher base-period earnings, higher WBAs, and higher entitled duration of benefits also had higher employment rates.

10. CONCLUSION

Among UI claimants in the administrative records of a major Midwestern state, compared to prime age counterparts, older UI claimants return to work at lower rates, are less successful at returning to prior earnings levels, and have lower employment rates in the near term after reemployment. These are the same qualitative results that emerged in earlier studies of older workers based on general survey data on dislocated workers.

One finding not reported in the earlier related literature is that older workers who do gain reemployment after an involuntary job separation maintain better attachment to their new employers than do their prime age counterparts.¹² This result pertains to all three subsamples of UI claimants: benefit eligibles, benefit ineligibles, and exhaustees of benefit entitlements. The longer employer attachments suggest that older workers could be a valuable asset for prospective employers.

The relative advantage for prime age UI claimants in reemployment, earnings recovery, and subsequent employment is greatest in the first year after the claim for benefits. There is also evidence that those who get back to work in the very first quarter after a UI claim have higher near-term employment rates than those getting back to work only one quarter later. Controlling for observable factors, the advantage for prime age workers may be as large as a 4 percentage point gain in the near-term employment rate, and as much as 1 percentage point for older workers.

At least two important lessons emerge from this research. First, employers on the demand side of the labor market should be aware when filling their staffing needs of the

¹²A condition of this finding is that UI-eligible claimants must have been involuntarily separated from their prior employers. Some of the UI-ineligible claimants may also have been involuntarily separated while failing to qualify for UI benefits because of inadequate levels of prior earnings to be insured against joblessness.

reliability and loyalty offered by older workers. Second, public employment policymakers facilitating labor supply should see these results as further evidence that getting dislocated workers back to work quickly can improve their labor market success for the foreseeable future. In short, early reemployment pays big dividends.

REFERENCES

- Ashenfelter, Orley. 1978. "Estimating the Effect of Training Programs on Earnings," *Review of Economics and Statistics*, 60(1): 47–57.
- Chan, Sewin, and Ann Huff Stevens. 2001. *Job Loss and Employment Patterns of Older Men*. *Journal of Labor Economics* 19(2): 484–521.
- Decker, Paul T. 1997. "Work Incentives and Disincentives," in *Unemployment Insurance in the United States: Analysis of Policy Issues*, Christopher J. O'Leary and Stephen A. Wandner, eds. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, pp. 285–320.
- Farber, Henry, John Haltiwanger, and Katherine Abraham. 1997. "The Changing Face of Job Loss in the United States, 1981-1995." *Brookings Papers on Economic Activity: Microeconomics*, pp. 55–128.
- Heckman, James J. 1974. "Life Cycle Consumption and Labor Supply: An Explanation of the Relationship Between Income and Consumption Over the Life Cycle," *American Economic Review*, 64(1): 188-94.
- Jacobson, Louis, Robert LaLonde, and Daniel Sullivan. 1993. "Earnings Losses of Displaced Workers," *American Economic Review*, 83(4): 685–709.
- Kiefer, Nicholas M. 1988. "Economic Duration Data and Hazard Functions." *Journal of Economic Literature*, 26(2): 646–679.
- Kuhn, Peter, and Arthur Sweetman. 1999. "Vulnerable Seniors: Unions, Tenure, and Wages Following Permanent Job Loss," *Journal of Labor Economics* 17(4, part 1): 671–693.
- Maddala, G.S. 1982. *Limited-Dependent and Qualitative Variables in Econometrics*. London: Cambridge University Press.

- O’Leary, Christopher J., and Stephen A. Wandner. 2001. “Unemployment Compensation and Older Workers,” in *Ensuring Health and Income Security for an Aging Workforce*, Peter P. Budetti, Richard V. Burkhauser, Janice M. Gregory and H. Allan Hunt, eds. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, pp. 85–133.
- O’Leary, Christopher J. 2006. “State UI Job Search Rules and Reemployment Services,” *Monthly Labor Review*, 129(6): 27–37.
- Quinn, Joseph. 1999. “New Paths to Retirement.” In *Forecasting Retirement Needs and Retirement Wealth*, Brett Hammond, Olivia Mitchell and Anna Rappaport, ed. Philadelphia, PA: University of Pennsylvania Press.
- Simonetta, Jonathan. 2004. “The Participation of Older Workers in Employment and Training Administration Programs” in *A Compilation of Selected Papers from The Employment and Training Administration’s 2003 Biennial National Research Conference*, J. Riley, A. Branch, S. Wandner, and W. Gordon, eds., Washington, DC: U.S. Department of Labor, Employment and Training Administration, Office of Policy Development, Evaluation and Research. <http://wdr.doleta.gov/conference/pdf/BOOK1.pdf> Accessed July 20, 2006.
- U.S. Department of Labor. 2006. *Comparison of State Unemployment Insurance Laws*. Washington, DC: Unemployment Insurance Service, Employment and Training Administration. <http://workforcesecurity.doleta.gov/unemploy/uilawstable.asp#400> Accessed July 20, 2006.

Table 1. Labor Force, Unemployment, and UI Receipt by Age for the U.S., 2002

	Total	<=24	25-34	35-44	45-54	55-64	>=65
Labor Force ^a (thousands)	144,863	22,366	32,196	36,926	32,597	16,309	4,469
Percent of the Labor Force		15.4	22.2	25.5	22.5	11.3	3.1
Total Unemployed ^b (thousands)	8,378	2,683	1,890	1,691	1,315	635	163
Percent of Total Unemployed		32.0	22.6	20.2	15.7	7.6	1.9
Percent of Insured Unemployed ^c		9.7	23.6	26.6	24.0	12.6	2.9

NOTES:

^aData from the Handbook of U.S. Labor Statistics, Seventh Edition, 2004, Table 1-7.

^bData from the Handbook of U.S. Labor Statistics, Seventh Edition, 2004, Table 1-28.

^cAge information not available for 0.6 percent of beneficiaries. Data from the U.S. Department of Labor, Office of Workforce Security, www.adare_older_UI_claimants.doc, accessed January 9, 2006.

Table 2. Sample Size of UI Claimants, 2001

Description	Overall	Older	Prime Age
(1) UI Claimants	329,935	92,811	237,124
(2) UI Eligible	275,943	82,288	193,655
(3) UI Ineligible	53,992	10,523	43,469
(4) UI Exhaustees	81,539	24,523	57,016
UI Eligibility and Benefit Exhaustion Rates			
UI Eligibility Rate (2)/(1)	0.836	0.887	0.817
UI Benefit Exhaustion Rate (4)/(2)	0.295	0.298	0.294

SOURCE: Tabulation of state UI agency data for claimants aged 30 and over. Older claimants aged 50 years and over, prime age aged 30 to 49 years.

Table 3. Means of Outcomes and Characteristics of UI Claimants

Description	UI Eligible			UI Ineligible			UI Exhaustees		
	Overall	Older	Prime Age	Overall	Older	Prime Age	Overall	Older	Prime Age
Full-Time Equivalent Weeks of UI	14.9	14.8	15.0	na	na	na	25.7	25.7	25.6
Fraction of Entitlement/Benefits Used	0.582	0.574	0.585	na	na	na	1.000	1.000	1.000
Exhausted Regular UI	0.295	0.298	0.294	na	na	na	1.000	1.000	1.000
Employed One Quarter After BYB	0.676	0.675	0.676	0.606	0.550	0.620	0.322	0.311	0.326
Age as of BYB	43.3	54.7	38.5	41.0	54.5	37.7	43.4	54.8	38.5
Gender, Female	0.329	0.323	0.332	0.461	0.465	0.461	0.366	0.355	0.371
Race, White	0.834	0.856	0.824	0.692	0.752	0.677	0.791	0.837	0.772
Race, African American	0.124	0.105	0.132	0.262	0.204	0.276	0.167	0.125	0.185
Race, Hispanic	0.020	0.015	0.022	0.021	0.016	0.022	0.018	0.012	0.021
Education, Less than High School	0.198	0.223	0.187	0.258	0.251	0.260	0.201	0.204	0.200
Education, High School Grad / GED	0.510	0.489	0.519	0.450	0.417	0.458	0.458	0.432	0.470
Education, Some College	0.195	0.189	0.198	0.210	0.219	0.208	0.220	0.226	0.217
Education, Bachelors Degree or Higher	0.097	0.098	0.096	0.082	0.113	0.074	0.120	0.138	0.113
Base Period Earnings	32,224	37,121	30,144	17,840	20,875	17,106	29,041	33,296	27,212
Entitlement Length (Weeks)	25.8	25.8	25.8	25.7	25.8	25.7	25.6	25.7	25.6
Weekly Benefit Amount	274	277	272	219	228	218	263	267	261
WBA at Maximum	0.219	0.196	0.228	0.082	0.083	0.082	0.178	0.164	0.184
Work Search Exempt	0.345	0.386	0.327	0.112	0.131	0.107	0.120	0.103	0.127
Sample size	275,943	82,288	193,655	53,992	10,523	43,469	81,539	24,523	57,016

SOURCE: Tabulation of state UI agency data for claimants aged 30 and over.

Table 4. Comparison of Reemployment Rates between Older and Prime Age UI Claimants
 Comparison of Reemployment Rates between Older and Prime Age UI Claimants

UI Eligibles										
Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference		Logit Difference	
	Prime Age	Older	Prime Age	Older	Prime Age	T-Stat	Difference	T-Stat	Difference	T-Stat
1	193,655	82,288	0.676	0.675	0.000	-0.23	-0.028	-14.59	-0.019	-13.86
2	62,794	26,720	0.405	0.340	-0.065	-18.34	-0.049	-13.59	-0.032	-13.38
3	37,340	17,628	0.267	0.207	-0.061	-15.48	-0.055	-13.37	-0.032	-13.29
4	27,352	13,987	0.206	0.147	-0.060	-14.79	-0.058	-13.69	-0.032	-13.55
5	21,706	11,935	0.140	0.097	-0.043	-11.51	-0.046	-11.54	-0.024	-11.51
6	18,660	10,777	0.115	0.074	-0.042	-11.54	-0.045	-11.65	-0.022	-11.63
7	16,507	9,984	0.086	0.052	-0.034	-10.33	-0.035	-9.82	-0.016	-9.68
8	15,081	9,462	0.065	0.040	-0.025	-8.32	-0.029	-8.91	-0.013	-8.95
9	14,095	9,080	0.063	0.049	-0.014	-4.46	-0.023	-6.86	-0.011	-7.05
10	13,202	8,632	0.052	0.033	-0.019	-6.67	-0.022	-7.30	-0.010	-7.30
11	12,511	8,345	0.048	0.027	-0.020	-7.32	-0.021	-6.97	-0.009	-6.91

Comparison of Reemployment Rates between Older and Prime Age UI Claimants

UI Ineligibles										
Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference		Logit Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat	Difference	T-Stat
1	43,469	10,523	0.620	0.550	-0.070	-13.13	-0.071	-13.47	-0.048	-13.25
2	16,519	4,731	0.286	0.211	-0.075	-10.26	-0.059	-7.84	-0.037	-7.99
3	11,790	3,731	0.189	0.126	-0.063	-8.91	-0.055	-7.44	-0.032	-7.62
4	9,562	3,262	0.128	0.086	-0.042	-6.38	-0.039	-5.77	-0.021	-5.93
5	8,341	2,981	0.099	0.050	-0.049	-8.17	-0.046	-7.38	-0.024	-7.59
6	7,514	2,831	0.083	0.045	-0.039	-6.74	-0.033	-5.49	-0.017	-5.66
7	6,887	2,704	0.063	0.034	-0.029	-5.70	-0.024	-4.46	-0.012	-4.49
8	6,453	2,613	0.054	0.023	-0.031	-6.39	-0.033	-6.45	-0.015	-6.49
9	6,104	2,552	0.053	0.024	-0.030	-6.10	-0.028	-5.40	-0.013	-5.57
10	5,780	2,492	0.051	0.025	-0.026	-5.26	-0.026	-5.08	-0.012	-5.18
11	5,486	2,429	0.042	0.020	-0.023	-5.04	-0.020	-4.21	-0.010	-4.46

Comparison of Reemployment Rates between Older and Prime Age UI Claimants

UI Exhaustees										
Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference		Logit Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat	Difference	T-Stat
1	57,016	24,523	0.326	0.311	-0.016	-4.43	-0.006	-1.62	-0.004	-1.55
2	38,411	16,908	0.271	0.220	-0.051	-12.70	-0.031	-7.59	-0.020	-7.70
3	28,019	13,196	0.295	0.227	-0.068	-14.56	-0.058	-11.93	-0.035	-11.95
4	19,758	10,207	0.243	0.170	-0.073	-14.52	-0.067	-12.82	-0.039	-12.82
5	14,956	8,470	0.163	0.115	-0.049	-10.15	-0.049	-9.83	-0.026	-9.82
6	12,511	7,497	0.135	0.085	-0.050	-10.64	-0.052	-10.46	-0.026	-10.53
7	10,821	6,857	0.102	0.059	-0.044	-10.14	-0.042	-9.26	-0.021	-9.37
8	9,713	6,454	0.076	0.046	-0.031	-7.88	-0.032	-7.58	-0.015	-7.73
9	8,970	6,160	0.073	0.047	-0.026	-6.55	-0.030	-7.03	-0.014	-7.08
10	8,316	5,872	0.060	0.037	-0.023	-6.21	-0.025	-6.36	-0.011	-6.37
11	7,818	5,656	0.055	0.030	-0.025	-6.94	-0.024	-6.37	-0.011	-6.37

Table 5 Comparison of Post-to-Pre UI Claim Earnings Ratios Between Older and Prime Age Claimants

Comparison of Post-to-Pre UI Claim Earnings Ratios Between Older and Prime Age Claimants
UI Eligibles

Quarters After BYB	Sample Size		Post-to-Pre Ratio		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	129,650	55,287	1.085	0.940	-0.146	-23.47	-0.009	-1.39
2	25,041	8,982	1.071	0.886	-0.185	-10.09	-0.042	-2.24
3	9,807	3,615	0.912	0.706	-0.206	-7.07	-0.058	-1.94
4	5,574	2,031	0.841	0.674	-0.168	-6.01	-0.043	-1.56
5	2,989	1,149	0.809	0.691	-0.118	-2.32	0.007	0.14
6	2,116	778	0.854	0.590	-0.264	-4.77	-0.096	-1.69
7	1,391	519	0.814	0.595	-0.219	-3.25	-0.034	-0.50
8	966	373	0.858	0.538	-0.320	-3.09	-0.193	-1.74
9	870	441	0.729	0.642	-0.087	-0.72	0.136	1.01
10	676	283	0.692	0.508	-0.184	-2.50	0.079	0.98
11	584	226	0.621	0.373	-0.247	-3.34	-0.165	-1.97

Comparison of Post-to-Pre UI Claim Earnings Ratios Between Older and Prime Age Claimants
UI Ineligibles

Quarters After BYB	Sample Size		Post-to-Pre Ratio		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	25,211	5,438	1.329	1.237	-0.092	-2.32	0.123	3.07
2	4,364	914	1.269	1.076	-0.193	-2.26	0.025	0.28
3	2,037	431	1.236	0.906	-0.330	-3.01	0.057	0.51
4	1,135	255	1.201	1.071	-0.130	-0.72	0.100	0.54
5	761	139	1.095	0.880	-0.215	-1.05	-0.208	-0.93
6	569	114	1.213	1.100	-0.113	-0.50	-0.007	-0.03
7	403	85	0.928	0.792	-0.136	-0.93	-0.018	-0.10
8	309	50	1.217	0.475	-0.743	-1.82	-0.603	-1.25
9	296	55	1.079	0.873	-0.206	-0.74	0.134	0.43
10	269	57	0.825	0.969	0.145	0.69	0.269	1.10
11	211	42	0.672	0.506	-0.166	-0.70	-0.361	-1.08

Comparison of Post-to-Pre UI Claim Earnings Ratios Between Older and Prime Age Claimants
UI Exhaustees

Quarters After BYB	Sample Size		Post-to-Pre Ratio		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	18,372	7,563	0.810	0.656	-0.153	-9.24	-0.005	-0.29
2	10,178	3,658	0.970	0.764	-0.206	-6.98	-0.051	-1.71
3	8,121	2,969	0.904	0.705	-0.200	-5.84	-0.064	-1.81
4	4,742	1,719	0.824	0.686	-0.138	-4.56	-0.035	-1.15
5	2,401	968	0.794	0.689	-0.105	-1.76	-0.002	-0.04
6	1,661	628	0.818	0.586	-0.233	-3.77	-0.089	-1.39
7	1,082	401	0.805	0.547	-0.258	-3.30	-0.037	-0.47
8	729	287	0.727	0.549	-0.177	-2.72	-0.088	-1.29
9	639	284	0.656	0.585	-0.071	-1.09	0.026	0.38
10	488	212	0.648	0.508	-0.140	-1.79	0.077	0.88
11	425	167	0.586	0.374	-0.212	-2.52	-0.181	-1.96

NOTES: Dependent variable is the average of post-to-pre unemployment earnings ratios beginning with the quarter of reemployment. Pre-unemployment earnings are the average quarterly earnings for quarters three through six prior to BYB. Persons with average prior quarterly earnings less than \$100 are excluded to control outliers. Regressions include a variable for the number of post-unemployment quarters with earnings.

Table 6. Comparison of Employment Rates after Reemployment between Older and Prime Age UI Claimants

Comparison of Employment Rates Between Older and Prime Age UI Claimants
UI Eligible

Quarters After BYB	Sample Size		Employment Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	130,861	55,568	0.856	0.814	-0.042	-33.72	-0.056	-43.87
2	25,454	9,092	0.793	0.751	-0.042	-13.49	-0.041	-12.86
3	9,988	3,641	0.777	0.747	-0.030	-5.41	-0.040	-7.14
4	5,646	2,052	0.763	0.738	-0.025	-3.21	-0.032	-4.06
5	3,046	1,158	0.751	0.733	-0.019	-1.76	-0.016	-1.54
6	2,153	793	0.766	0.744	-0.023	-1.87	-0.050	-4.02
7	1,426	522	0.782	0.777	-0.006	-0.38	-0.020	-1.28
8	986	382	0.813	0.808	-0.005	-0.32	-0.020	-1.14
9	893	448	0.840	0.813	-0.027	-1.97	-0.003	-0.18
10	691	287	0.915	0.895	-0.020	-1.47	-0.025	-1.63

Comparison of Employment Rates Between Older and Prime Age UI Claimants
UI Ineligibles

Quarters After BYB	Sample Size		Employment Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	16,487	2,996	0.791	0.761	-0.030	-5.37	-0.035	-6.19
2	2,676	471	0.728	0.684	-0.044	-2.94	-0.058	-3.73
3	1,243	241	0.681	0.635	-0.046	-2.07	-0.078	-3.18
4	724	134	0.684	0.641	-0.044	-1.43	-0.056	-1.65
5	469	83	0.704	0.704	0.000	0.00	-0.006	-0.12
6	345	69	0.700	0.664	-0.035	-0.86	0.017	0.34
7	266	51	0.735	0.796	0.061	1.36	0.058	1.02
8	194	34	0.774	0.787	0.012	0.23	0.031	0.45
9	188	27	0.793	0.790	-0.002	-0.04	-0.002	-0.03
10	171	35	0.874	0.914	0.040	1.01	0.017	0.33

Comparison of Employment Rates Between Older and Prime Age UI Claimants
UI Exhaustees

Quarters After BYB	Sample Size		Employment Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	18,605	7,615	0.672	0.575	-0.097	-23.50	-0.075	-17.90
2	10,392	3,712	0.763	0.706	-0.057	-10.55	-0.053	-9.71
3	8,261	2,989	0.787	0.758	-0.029	-4.85	-0.038	-6.17
4	4,802	1,737	0.770	0.749	-0.020	-2.44	-0.027	-3.16
5	2,445	973	0.760	0.739	-0.021	-1.85	-0.011	-0.95
6	1,690	640	0.765	0.740	-0.025	-1.86	-0.046	-3.30
7	1,108	403	0.792	0.772	-0.019	-1.18	-0.026	-1.45
8	743	294	0.813	0.810	-0.002	-0.12	-0.023	-1.13
9	654	288	0.832	0.846	0.014	0.82	0.026	1.42
10	498	216	0.918	0.887	-0.031	-1.97	-0.024	-1.31

NOTES: Dependent variable is the proportion of quarters employed starting with the quarter of reemployment through 11 quarter after the client's BYB. Therefore, the number of quarters observed varies depending upon when the client becomes reemployed. While comparisons between older and prime age reemployed in a given period are valid, comparisons between those reemployed in different quarters subsequent to the BYB are not valid due to differences in the number of quarters observed between reemployment and BYB+11.

Table 7. Comparison of the Rate of Staying with the First Major Employer after Reemployment between Older and Prime Age UI Claimants

Comparison of the Rate of Staying with the First Major Employer After Reemployment between Older and Prime Age UI Claimants
UI Eligible

Quarters After BYB	Sample Size		Same Employer Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	126,973	53,224	0.598	0.711	0.113	52.48	0.050	24.06
2	24,435	8,510	0.557	0.635	0.078	14.85	0.060	11.39
3	9,406	3,347	0.486	0.574	0.089	10.42	0.065	7.39
4	5,189	1,798	0.507	0.577	0.070	5.97	0.047	3.88
5	2,687	984	0.564	0.644	0.080	5.09	0.052	3.16
6	1,931	684	0.635	0.675	0.040	2.20	0.026	1.32
7	1,250	452	0.684	0.732	0.048	2.15	0.038	1.57
8	857	340	0.703	0.746	0.043	1.66	0.026	0.90
9	765	391	0.786	0.821	0.034	1.49	0.022	0.83
10	564	225	0.866	0.881	0.015	0.58	0.018	0.58
11	na	na	na	na	na	na	na	na

Comparison of the Rate of Staying with the First Major Employer After Reemployment between Older and Prime Age UI Claimants
UI Ineligibles

Quarters After BYB	Sample Size		Same Employer Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	24,415	5,093	0.417	0.552	0.135	21.54	0.106	16.76
2	4,190	843	0.434	0.549	0.115	7.57	0.091	5.84
3	1,884	380	0.462	0.601	0.139	6.08	0.094	3.92
4	1,019	211	0.493	0.563	0.070	2.25	0.022	0.65
5	679	125	0.524	0.630	0.106	2.62	0.060	1.30
6	502	99	0.596	0.764	0.167	3.79	0.165	3.23
7	343	75	0.642	0.716	0.074	1.42	0.056	0.89
8	260	41	0.693	0.792	0.099	1.56	-0.010	-0.12
9	240	47	0.764	0.794	0.030	0.49	0.033	0.42
10	195	45	0.830	0.918	0.088	1.55	0.020	0.29
11	na	na	na	na	na	na	na	na

Comparison of the Rate of Staying with the First Major Employer After Reemployment between Older and Prime Age UI Claimants
UI Exhaustees

Quarters After BYB	Sample Size		Same Employer Rate		Simple Difference		OLS Difference	
	Prime Age	Older	Prime Age	Older	Difference	T-Stat	Difference	T-Stat
1	16,957	6,401	0.266	0.345	0.079	14.20	0.063	11.16
2	9,829	3,389	0.435	0.511	0.076	9.06	0.053	6.27
3	7,816	2,758	0.472	0.560	0.088	9.38	0.068	7.07
4	4,420	1,542	0.501	0.571	0.070	5.52	0.047	3.57
5	2,189	831	0.559	0.644	0.086	4.98	0.054	2.95
6	1,517	550	0.635	0.681	0.046	2.24	0.034	1.54
7	978	350	0.686	0.738	0.052	2.06	0.043	1.54
8	646	263	0.691	0.751	0.059	1.99	0.045	1.31
9	559	250	0.784	0.820	0.036	1.28	0.017	0.54
10	408	165	0.868	0.874	0.006	0.21	0.009	0.24
11	na	na	na	na	na	na	na	na

NOTES: The dependent variable is the number of quarters after the quarter of reemployment where the major employer is the one from the reemployment quarter divided by the number of quarters of employment after the reemployment quarter. Regressions include a variable for the number of post-reemployment quarters with earnings.

Table 8. Comparison of Reemployment Rates between Eligible and Ineligible UI ClaimantsComparison of Reemployment Rates
between Eligible and Ineligible UI Claimants

Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference		Logit Difference	
	Ineligible	Eligible	Ineligible	Eligible	Difference	T-Stat	Difference	T-Stat	Difference	T-Stat
1	31,537	275,943	0.618	0.676	0.058	20.70	-0.023	-8.56	-0.013	-6.95
2	12,054	89,514	0.261	0.386	0.125	26.73	0.075	16.17	0.054	16.31
3	8,907	54,968	0.167	0.248	0.081	16.79	0.073	14.69	0.052	14.89
4	7,423	41,339	0.116	0.186	0.071	14.76	0.069	13.97	0.048	13.93
5	6,565	33,641	0.084	0.125	0.041	9.39	0.044	9.83	0.029	9.83
6	6,013	29,437	0.069	0.100	0.031	7.54	0.028	6.58	0.018	6.73
7	5,599	26,491	0.057	0.074	0.017	4.49	0.017	4.44	0.010	4.39
8	5,282	24,543	0.043	0.056	0.013	3.68	0.014	3.79	0.007	3.80
9	5,054	23,175	0.043	0.058	0.015	4.33	0.012	3.21	0.006	3.17
10	4,839	21,834	0.043	0.045	0.002	0.68	0.003	0.78	0.001	0.75
11	4,633	20,856	0.036	0.040	0.003	1.10	0.005	1.66	0.002	1.56

Table 9. Comparison of Post-to-Pre UI Claim Earnings Ratios between Eligible and Ineligible UI Claimants

Comparison of Post-to-Pre UI Claim Earnings Ratios between Eligibles and Ineligibles

Quarters After BYB	Sample Size		Post-to-Pre Ratio		Simple Difference		OLS Difference	
	Ineligible	Eligible	Ineligible	Eligible	Difference	T-Stat	Difference	T-Stat
1	19,255	184,937	0.988	1.042	0.054	5.83	0.111	11.93
2	3,104	34,023	0.879	1.022	0.143	5.04	0.146	5.11
3	1,462	13,422	0.844	0.857	0.012	0.30	0.023	0.55
4	840	7,605	0.775	0.797	0.021	0.55	0.069	1.84
5	548	4,138	0.850	0.776	-0.074	-1.02	-0.017	-0.23
6	408	2,894	0.897	0.783	-0.114	-1.55	-0.073	-1.00
7	315	1,910	0.741	0.754	0.013	0.17	0.052	0.67
8	222	1,339	0.770	0.769	-0.001	-0.01	0.034	0.27
9	214	1,311	0.646	0.699	0.053	0.37	0.146	0.95
10	203	959	0.718	0.638	-0.080	-0.98	-0.012	-0.14
11	164	810	0.486	0.552	0.066	0.82	0.148	1.71

Table 10. Comparison of Employment Rates after Reemployment between Eligible and Ineligible UI Claimants

Comparison of Employment Rates after Reemployment
between Eligible and Ineligible UI Claimants

Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference	
	Ineligible	Eligible	Ineligible	Eligible	Difference	T-Stat	Difference	T-Stat
1	19,483	186,429	0.787	0.844	0.057	30.19	0.023	11.92
2	3,147	34,546	0.721	0.782	0.061	12.50	0.055	11.26
3	1,484	13,629	0.674	0.769	0.095	11.97	0.078	9.78
4	858	7,698	0.678	0.757	0.079	7.25	0.058	5.30
5	552	4,204	0.704	0.746	0.042	3.02	0.034	2.53
6	414	2,946	0.694	0.760	0.067	4.30	0.041	2.54
7	317	1,948	0.744	0.781	0.036	2.09	0.022	1.22
8	228	1,368	0.776	0.811	0.035	1.83	0.042	2.06
9	215	1,341	0.792	0.831	0.039	2.22	0.045	2.35
10	206	978	0.881	0.910	0.028	1.89	0.017	1.05

NOTES: Dependent variable is the proportion of quarters employed starting with the quarter of reemployment through 11 quarters after the client's BYB. Therefore, the number of quarters observed varies depending upon when the client becomes reemployed. While comparisons between eligibles and ineligibles reemployed in a given period are valid, comparisons between those reemployed in different quarters subsequent to the BYB are not valid due to the difference in number of quarters observed between reemployment and BYB+11.

Table 11. Comparison of the Probability of Staying with the First Major Employer after Reemployment between Eligible and Ineligible UI Claimants

Comparison of the Probability of Staying with First Major Employer After Reemployment between Eligible and Ineligible UI Claimants

Quarters After BYB	Sample Size		Reemployment Rate		Simple Difference		OLS Difference	
	Ineligible	Eligible	Ineligible	Eligible	Difference	T-Stat	Difference	T-Stat
1	18,496	180,197	0.406	0.631	0.225	69.68	0.079	25.32
2	2,940	32,945	0.426	0.577	0.151	18.73	0.093	11.58
3	1,327	12,753	0.468	0.509	0.040	3.31	0.019	1.55
4	748	6,987	0.487	0.525	0.039	2.34	0.023	1.37
5	480	3,671	0.554	0.585	0.031	1.52	0.003	0.16
6	356	2,615	0.614	0.645	0.032	1.35	0.019	0.77
7	272	1,702	0.640	0.696	0.056	2.09	0.011	0.38
8	189	1,197	0.707	0.715	0.008	0.27	0.006	0.17
9	173	1,156	0.751	0.798	0.046	1.50	0.059	1.72
10	154	789	0.822	0.870	0.049	1.61	0.022	0.63

Table 12. Pooled Sample of Older and Prime Age Workers Eligible for UI in 2001; Advantage of Early Reemployment Using Sample of Those Reemployed in BYB+1 or BYB+2; Dependent Variable is the Employment Rate Subsequent to and Including Reemployment Quarter

Variable	Description	Parameter Estimate	Standard Error	T-Value
firstempl	Reemployed in BYB+1	0.0282	0.0019	14.60
older	Older Workers, Age 50-65	-0.0466	0.0034	-13.79
older_firstempl	Older x Reemployed in BYB+1	-0.0190	0.0036	-5.24
male	Gender, Male	-0.0324	0.0014	-22.50
race2	Race, African American	-0.0158	0.0020	-8.01
race3	Race, Hispanic	0.0195	0.0043	4.57
race4	Race, Native American	-0.0421	0.0110	-3.81
race5	Race, Asian/Pacific Islander	0.0064	0.0078	0.82
race6	Race, Not Available	-0.0226	0.0052	-4.37
educ1	Education, Less than High School	-0.0300	0.0016	-19.17
educ3	Education, Some College	-0.0099	0.0016	-6.16
educ4	Education, Bachelor Degree or Higher	-0.0225	0.0023	-9.59
bpe	Base Period Earnings (\$10,000)	0.0048	0.0004	11.66
base_empnum	Number of Employers in Base Period	-0.0010	0.0005	-1.89
wba1	Weekly Benefit Amount	0.0277	0.0013	22.18
wba_max	WBA at Maximum	-0.0167	0.0022	-7.61
entitlement	Entitlement Length	0.0191	0.0007	28.40
search_exempt	Job Search Exempt	0.0796	0.0014	56.57
unrate_change1	Unemp Rate Change, BYB to BYB+1	0.0360	0.1479	0.24
qtr1	BYB in 1st Calendar Quarter	0.0026	0.0019	1.37
qtr2	BYB in 2nd Calendar Quarter	-0.0021	0.0013	-1.60
qtr3	BYB in 3rd Calendar Quarter	-0.0083	0.0011	-7.53
qtr4	BYB in 4th Calendar Quarter	0.0047	0.0017	2.73
dependents	Has Dependents	0.0026	0.0015	1.68
handicap	Handicap	-0.0642	0.0083	-7.70
severance1	Deductions Made for Severance Pay	-0.0184	0.0034	-5.45
severance2	Deductions Made for Vacation Pay	0.0082	0.0052	1.59
severance3	Deductions Made for Company Pension	-0.1414	0.0075	-18.97
severance4	Deductions Made for Social Security	-0.2254	0.0129	-17.42
severance5	Deductions Made for Other Reasons	-0.2294	0.0195	-11.77

Figure 1. Comparison of Reemployment Rates between Older and Prime Age UI Claimants

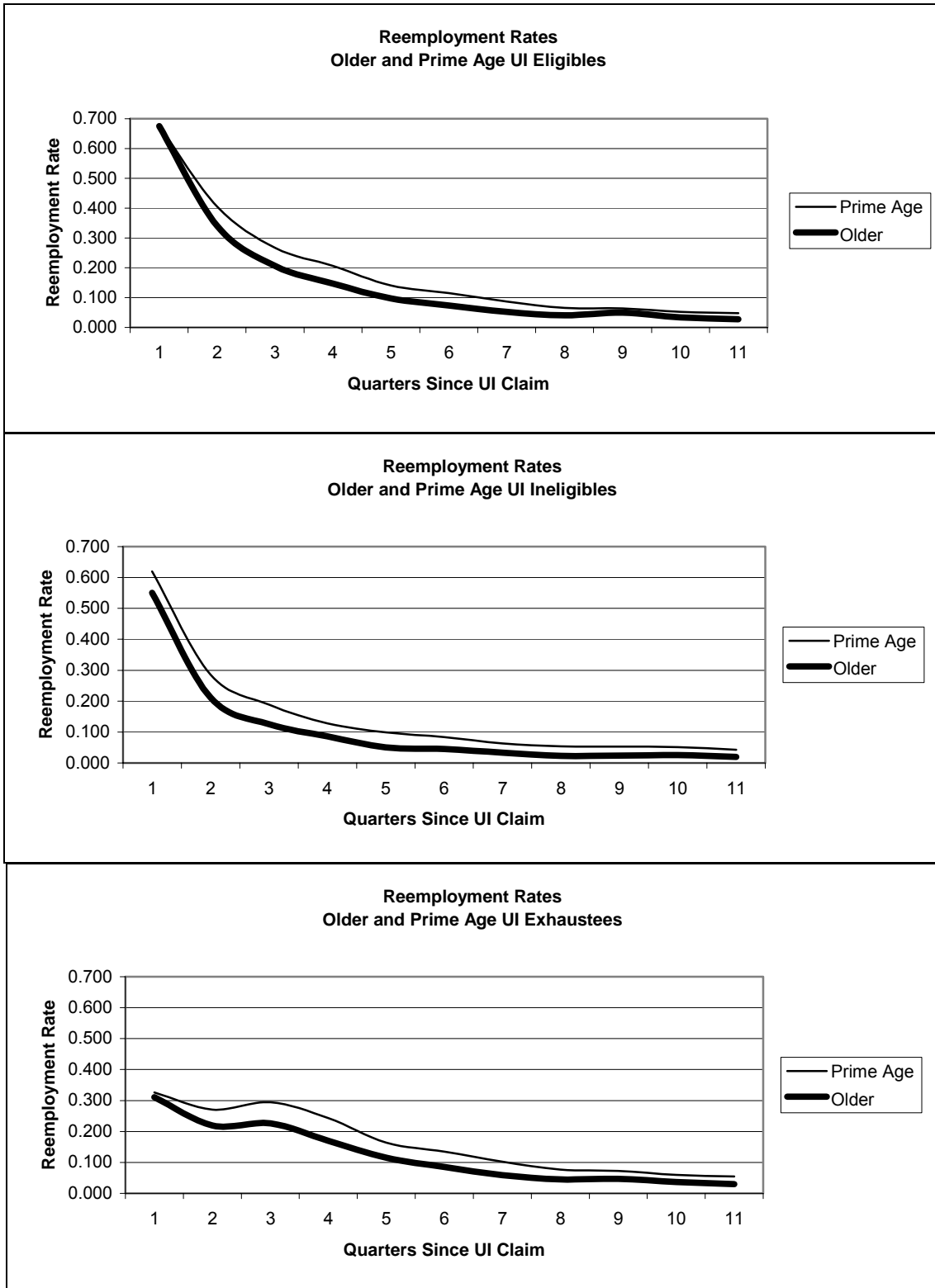


Figure 2. Differences in Reemployment Rates between Older and Prime Age UI Claimants

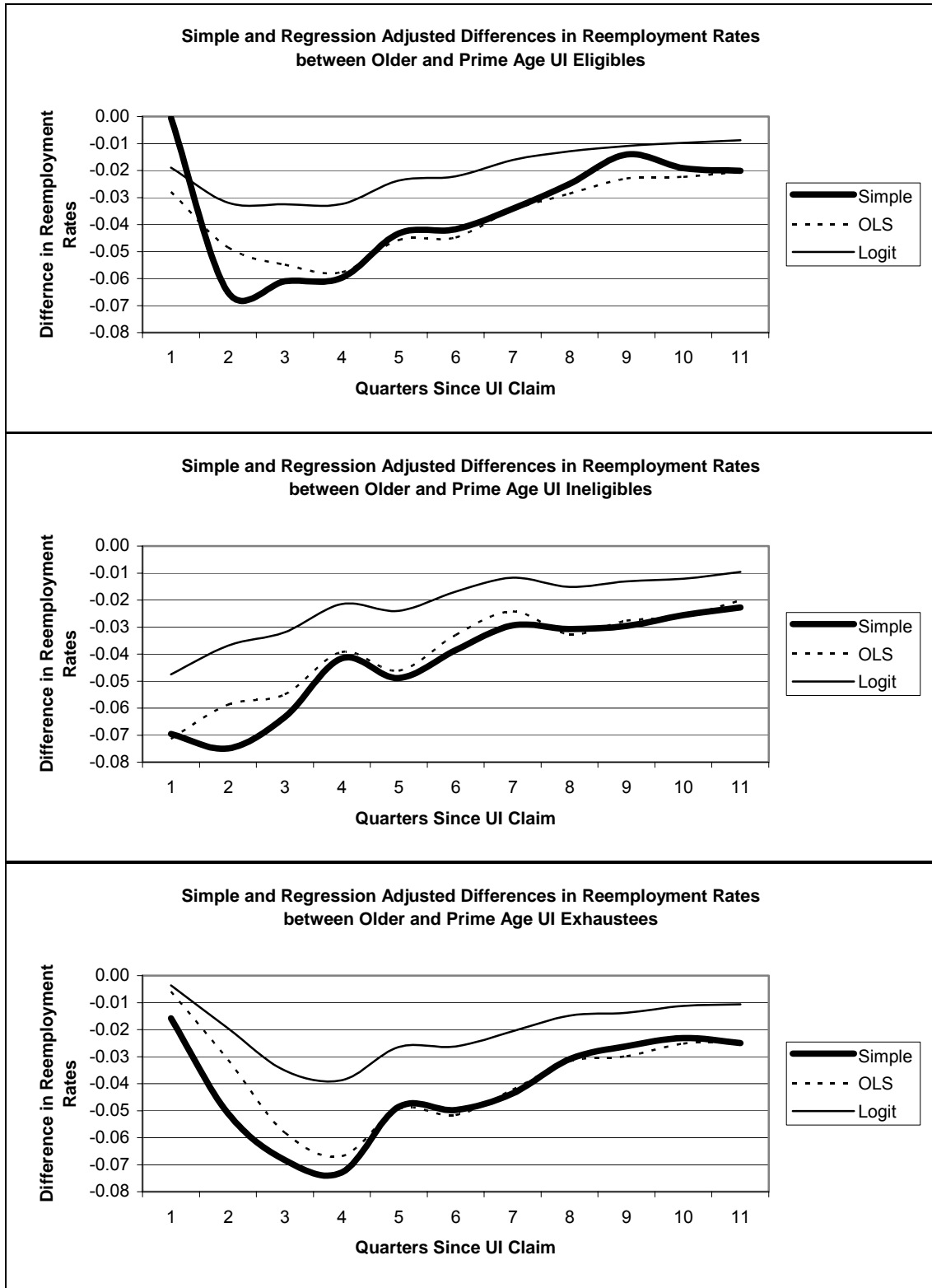


Figure 3. Logit Adjusted Differences in Reemployment Rates between Older and Prime Age UI Claimants

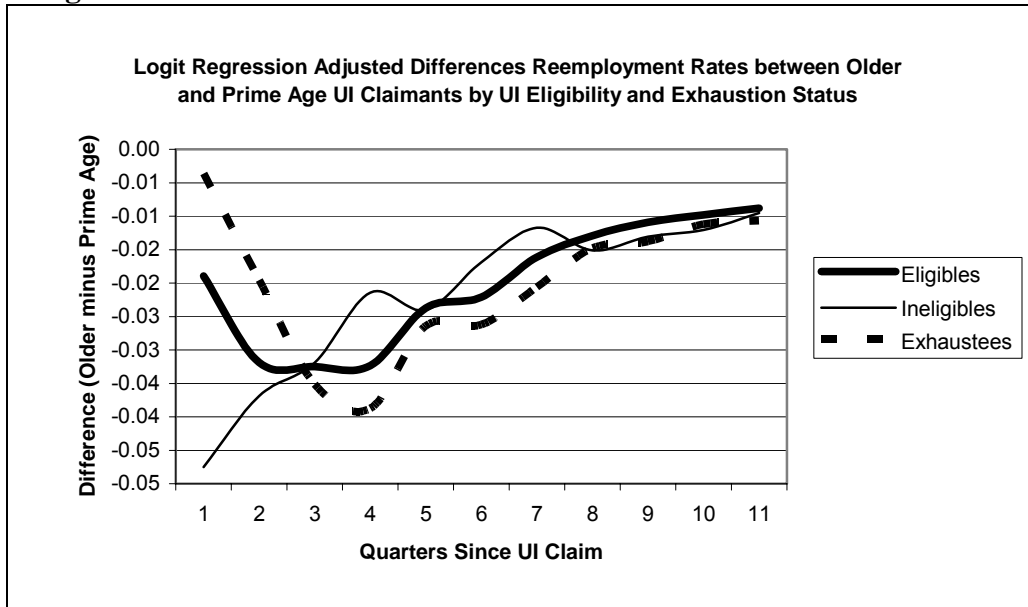


Figure 4. Comparison of Post-to-Pre UI Claim Earnings Ratios between Older and Prime Age Claimants

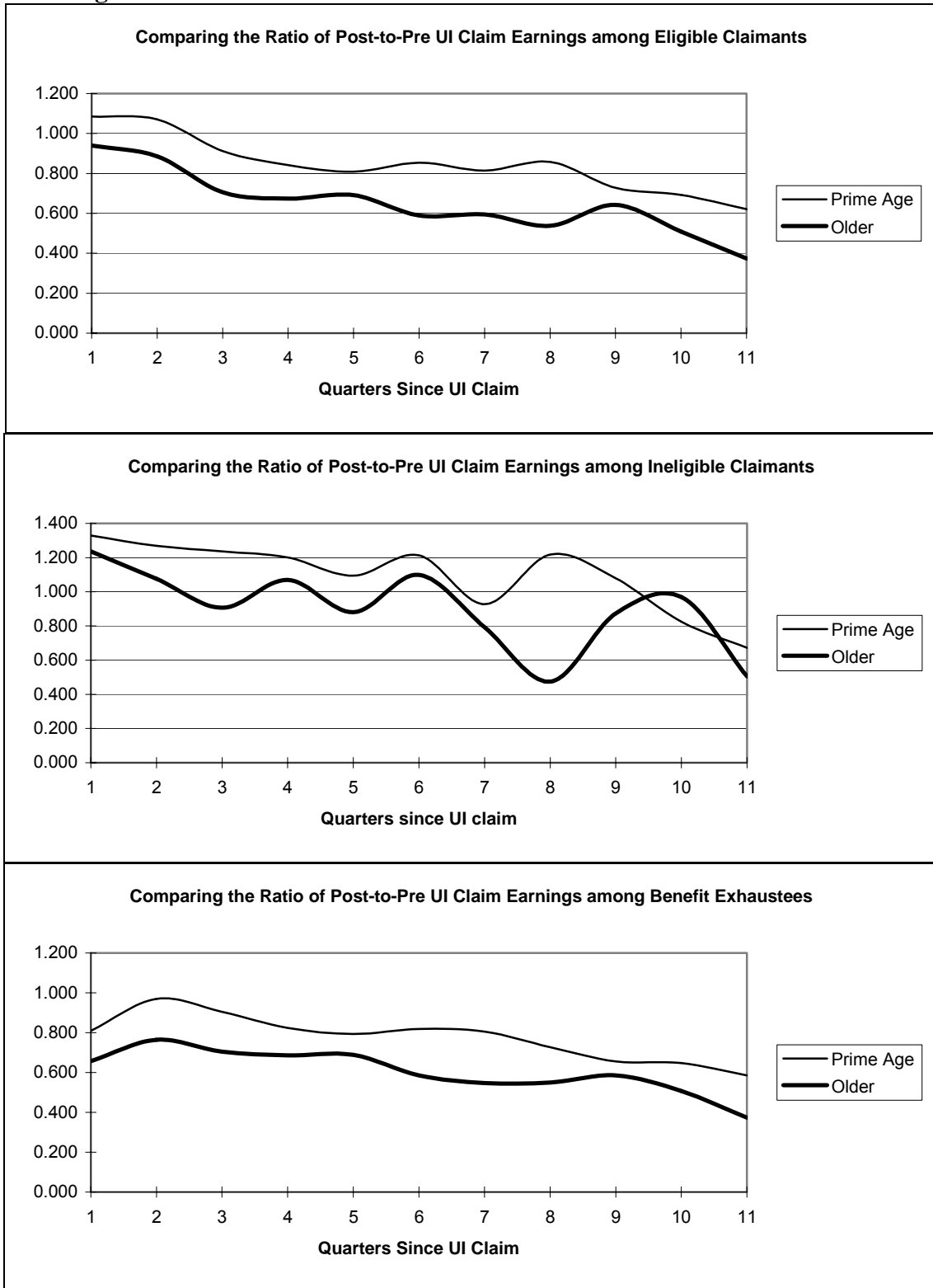


Figure 5. Differences in Post-to-Pre UI Claim Earnings Ratios between Older and Prime Age Claimants

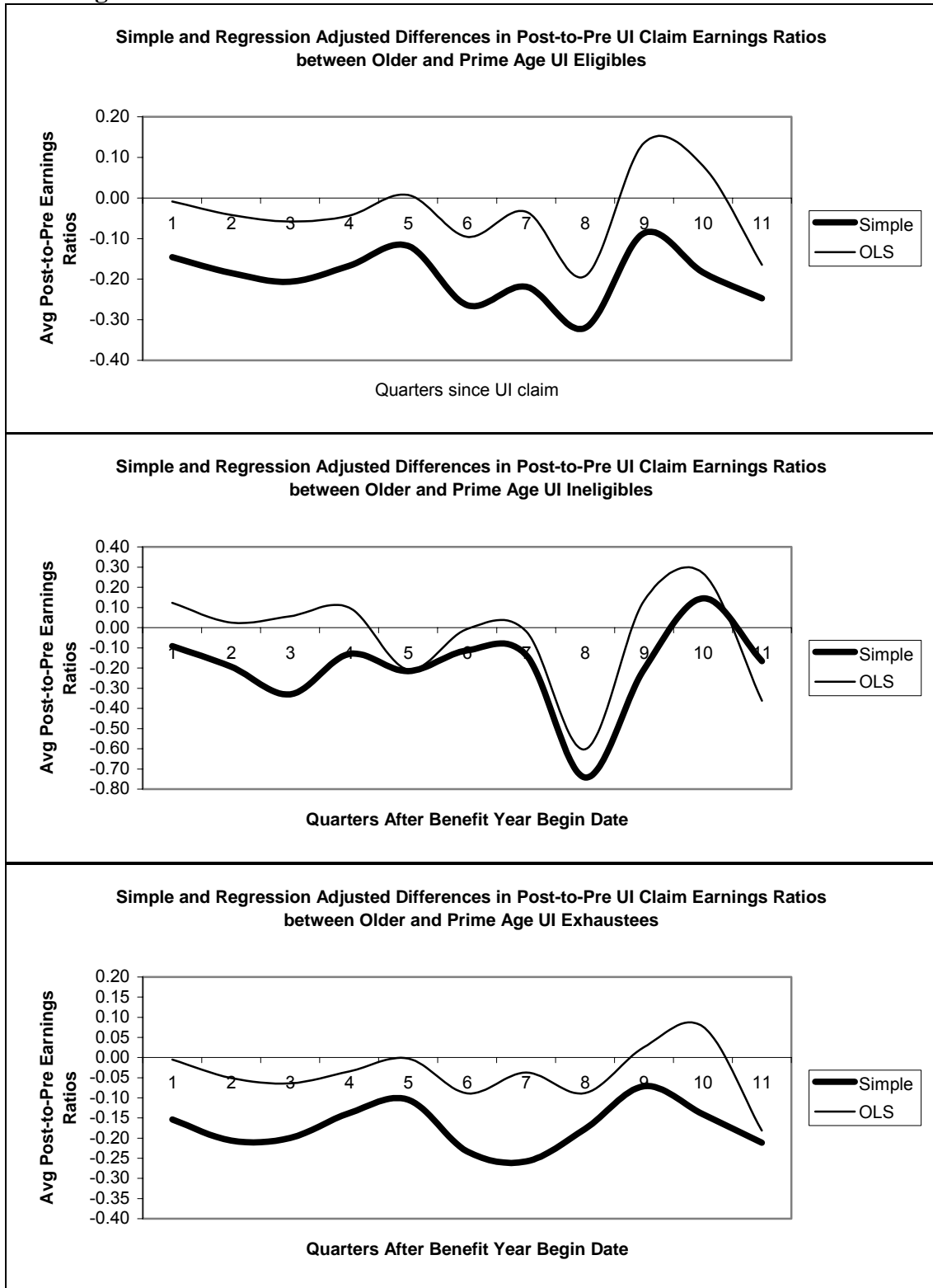


Figure 6. OLS Adjusted Differences in Post-to-Pre UI Claim Earnings Ratios between Older and Prime Age Claimants

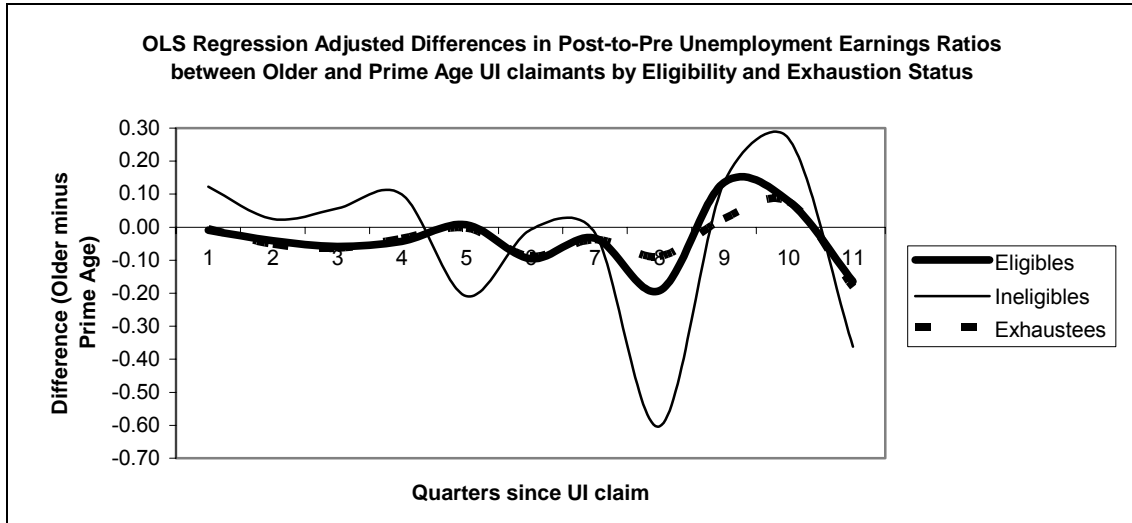


Figure 7. Comparison of Employment Rates after Reemployment between Older and Prime Age UI Claimants

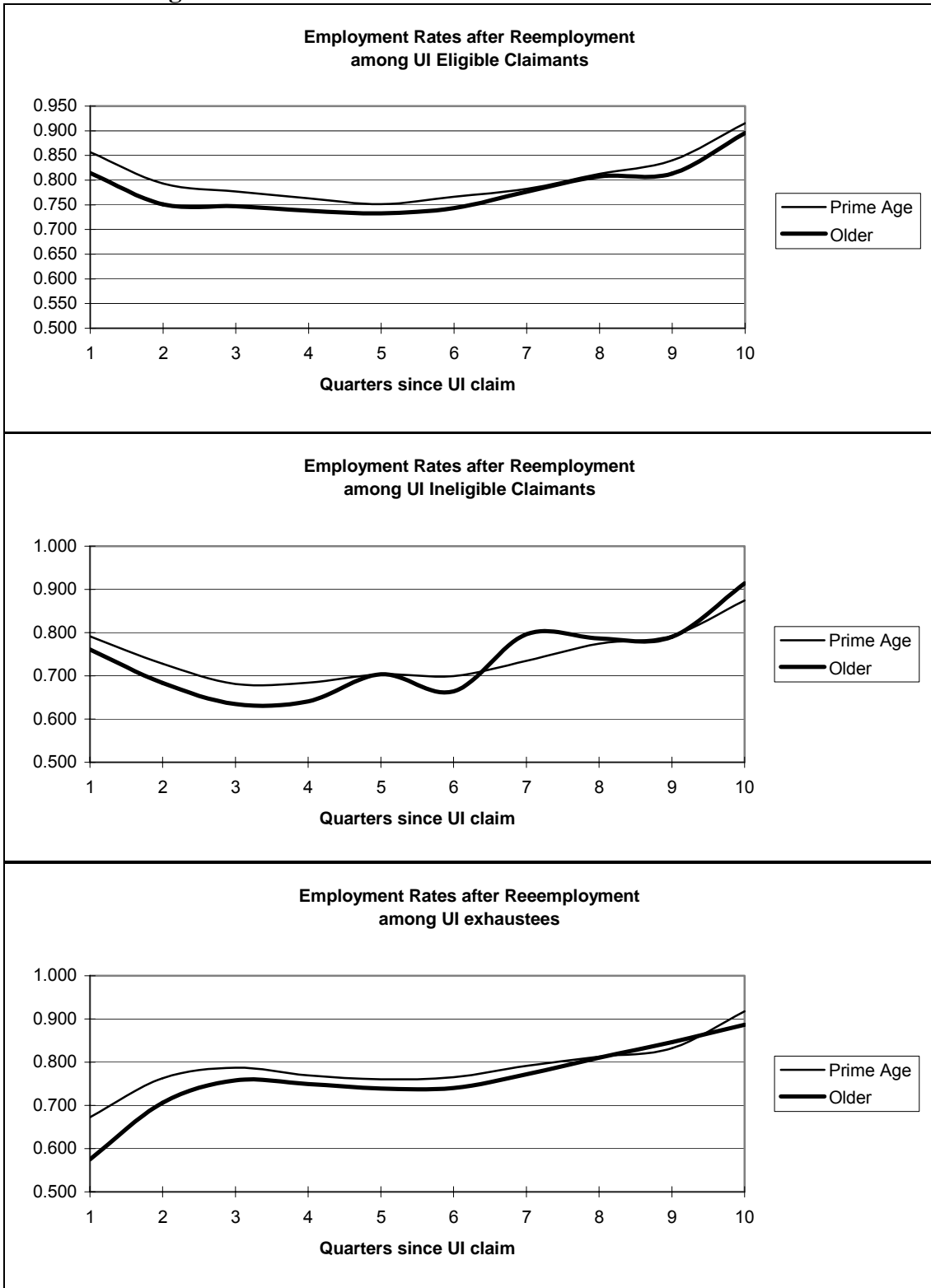


Figure 8. Differences in Employment Rates after Reemployment between Older and Prime Age UI Claimants

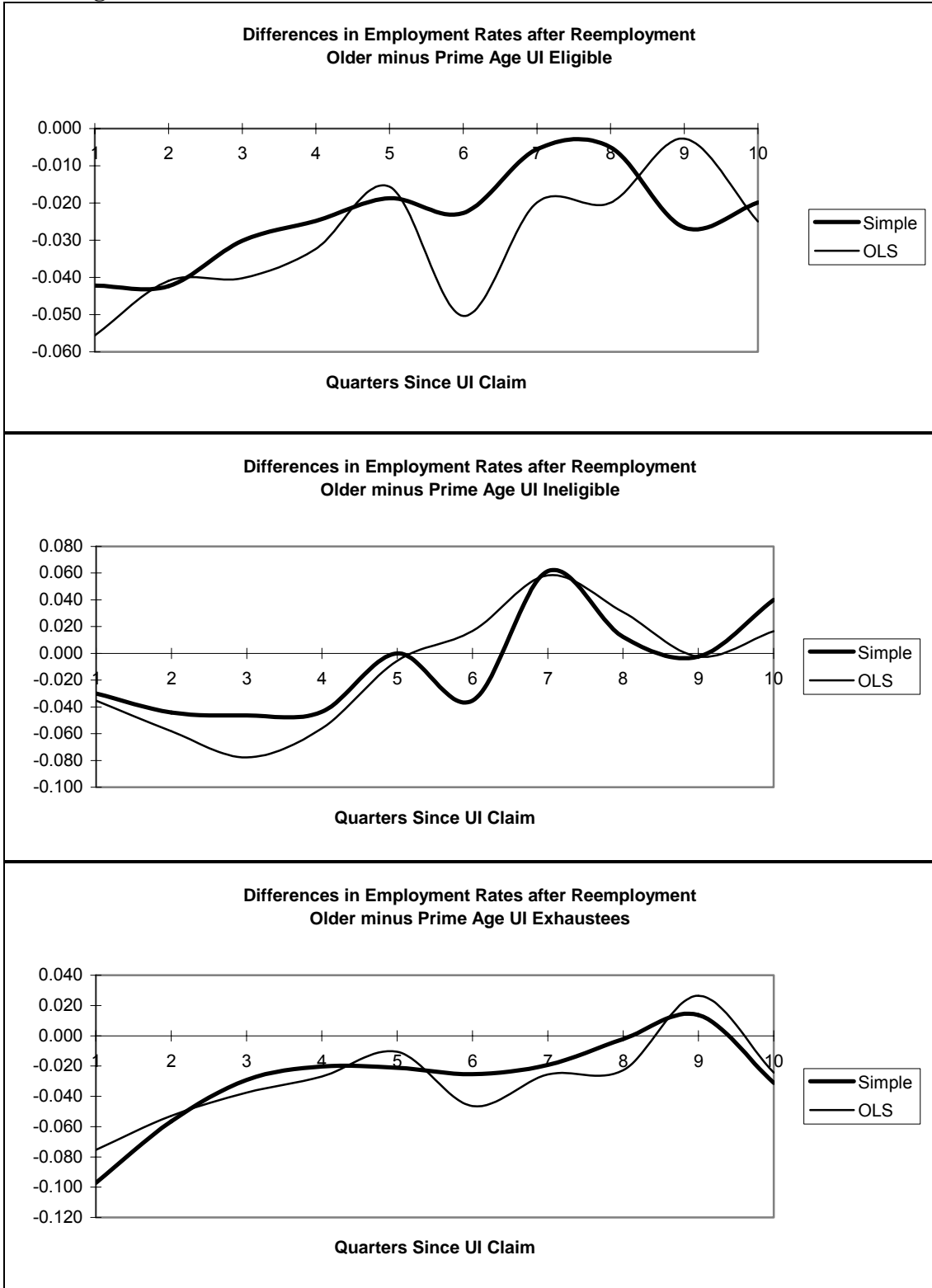


Figure 9. OLS Adjusted Differences in Employment Rates after Reemployment between Older and Prime Age UI Claimants

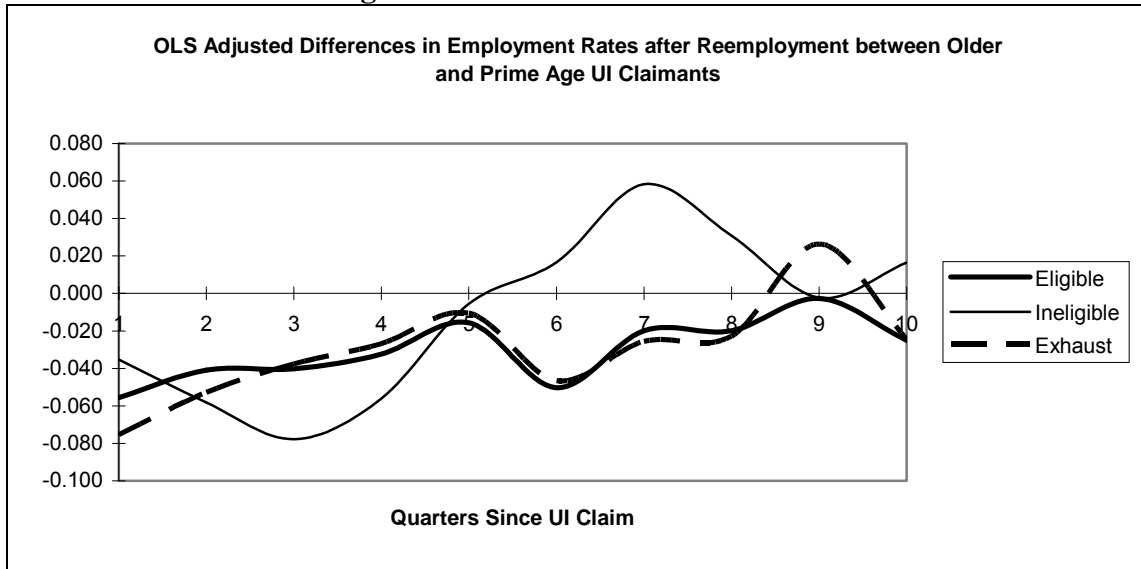


Figure 10. Comparison of Rates of Staying with the First Major Employer after Reemployment between Older and Prime Age UI Claimants

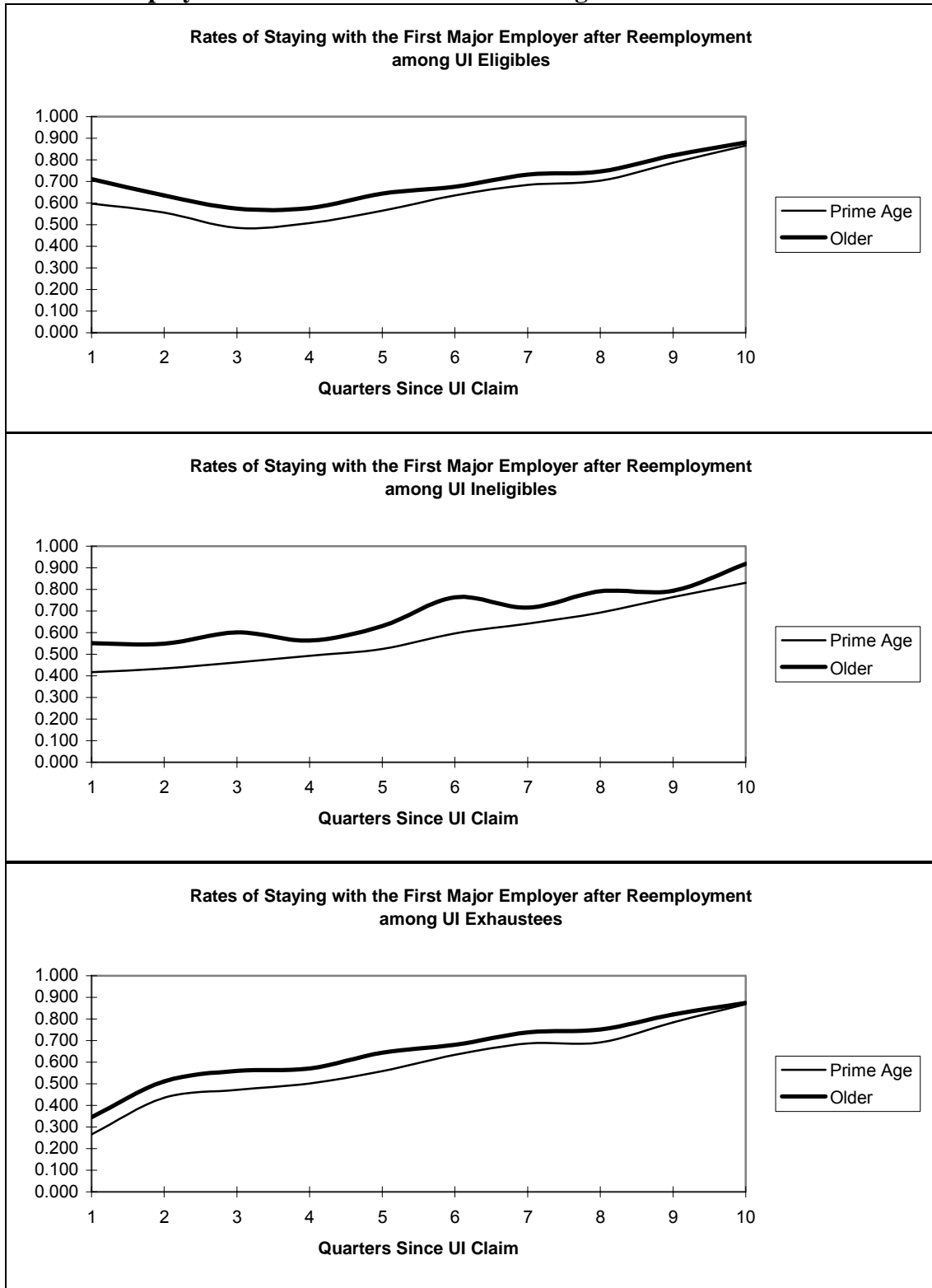


Figure 11. Differences in Rates of Staying with the First Major Employer after Reemployment between Older and Prime Age UI Claimants

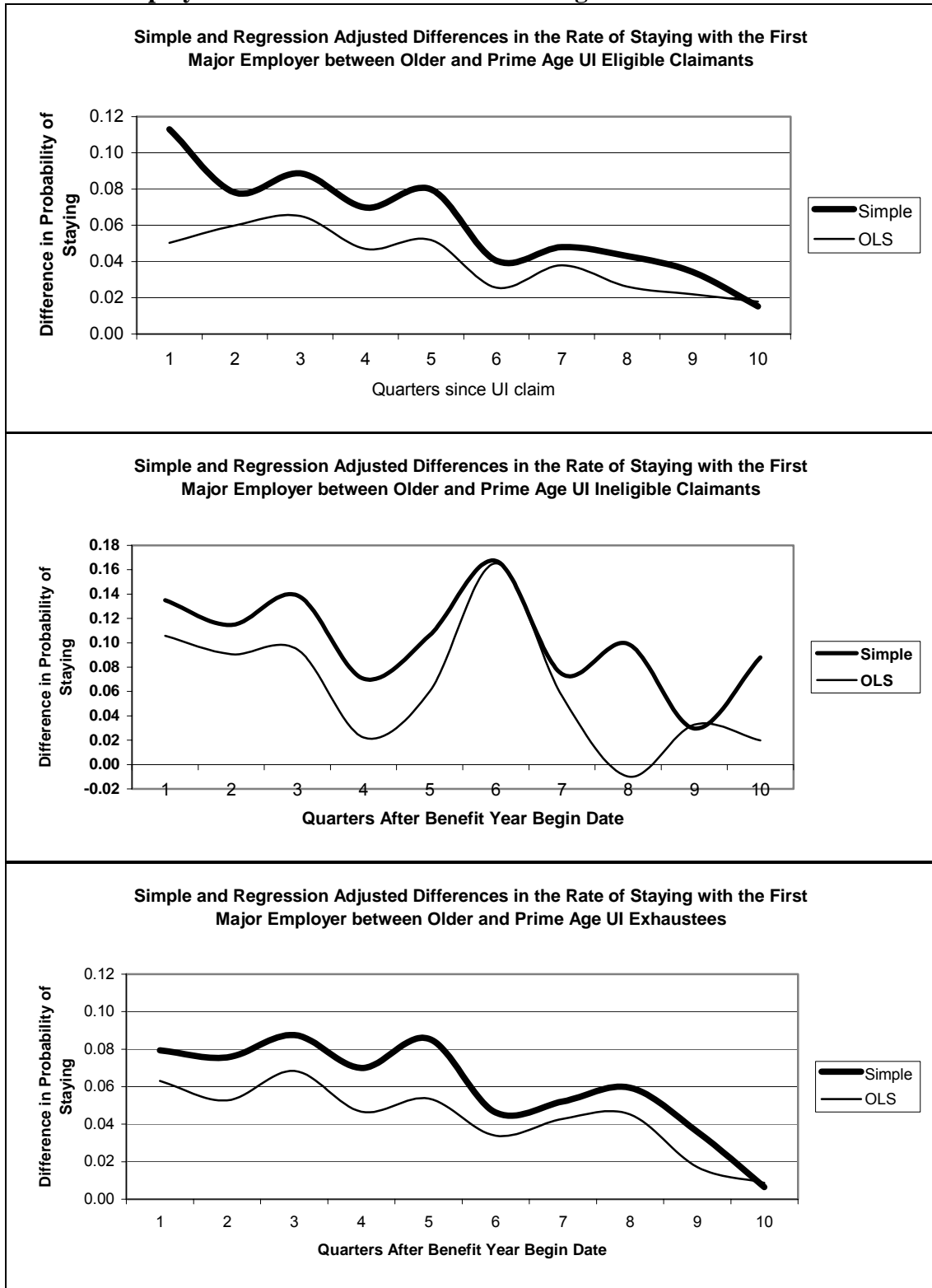


Figure 12. OLS Adjusted Differences in Rates of Staying at First Major Employer after Reemployment between Older and Prime Age UI Claimants

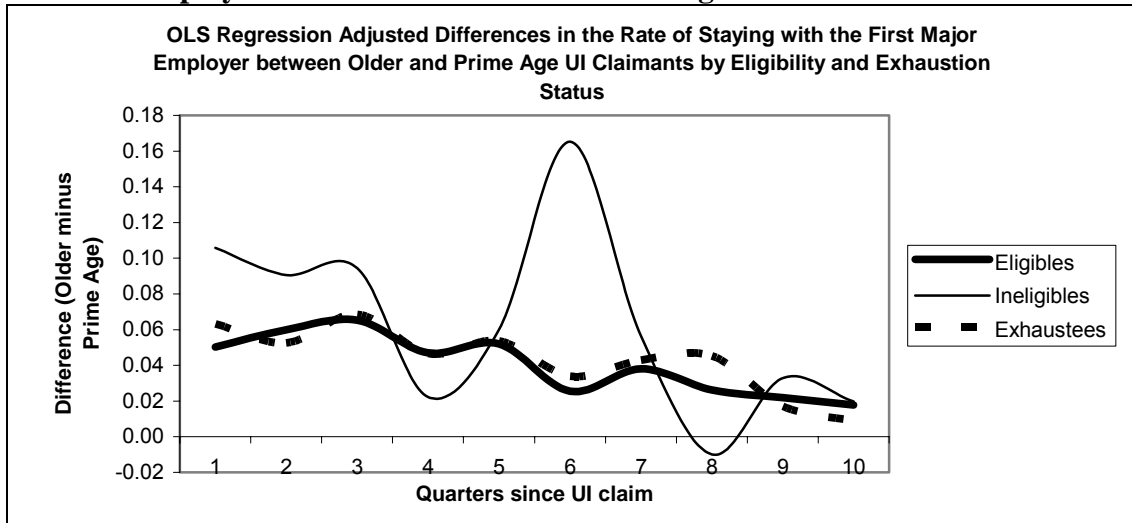


Figure 13. Comparison of Reemployment Rates between Eligible and Ineligible UI Claimants

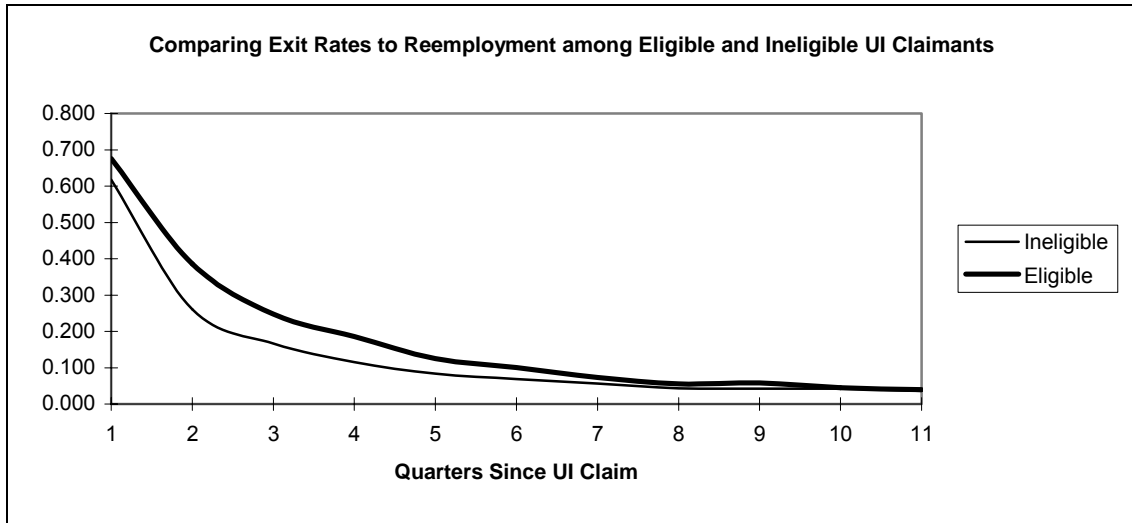


Figure 14. Comparison of the Post-to-Pre UI Claim Earnings Ratios between Eligible and Ineligible UI Claimants

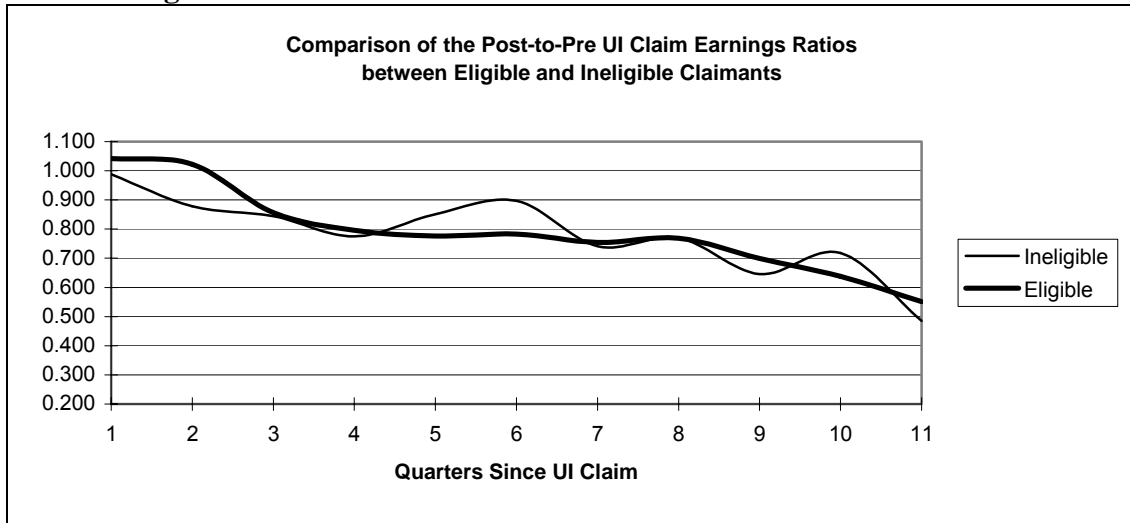


Figure 15. Comparison of Employment Rates after Reemployment between Eligible and Ineligible UI Claimants

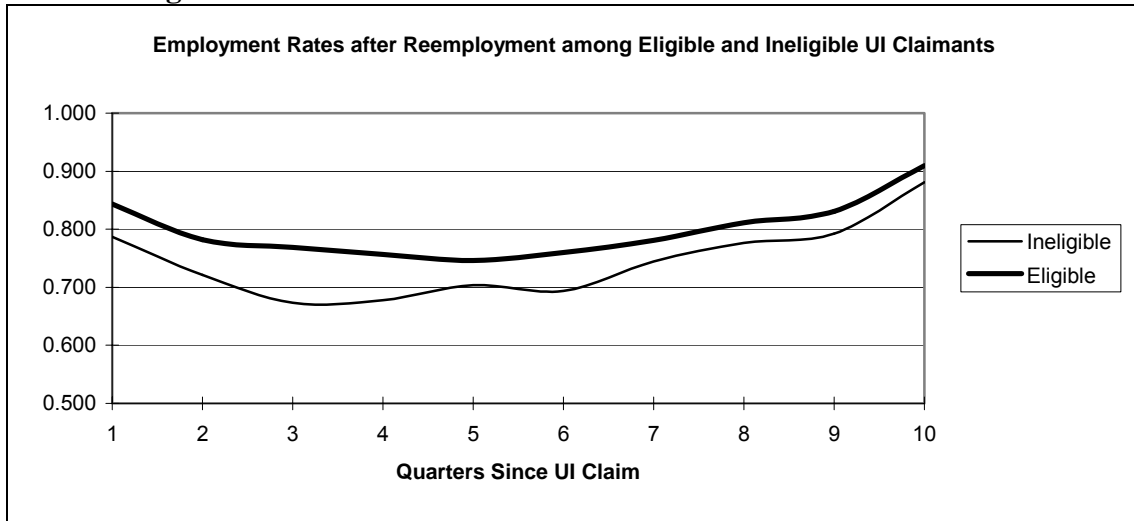


Figure 16. Comparison of the Rate of Staying with the First Major Employer after Reemployment between Eligible and Ineligible UI Claimants

