THE EFFECT OF MASS LAYOFFS ON EARNINGS OF CONNECTICUT'S OLDER WORKERS

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RESEARCH GOAL AND OVERALL FINDINGS

This paper provides detailed estimates of earnings losses of older workers (ages 40 and over) who experience mass layoffs relative to a continuously employed comparison group. The analysis makes use of information from the unemployment insurance system for the state of Connecticut. These administrative records contain payroll information for virtually all workers in the state and, relative to previous research based on survey data, contain many more observations of workers displaced due to mass layoff. The data provide the basis for detailed, disaggregated estimates by age, gender, and industry of employment. The results indicate that earnings losses associated with displacement rise sharply with age and are larger for those subsequently re-employed in different industry sectors. These findings are consistent with the idea that earnings decline in situations of displacement due to loss of firm specific knowledge and skills. Earnings reductions are larger for men than women but are proportionately very similar. These findings suggest that reemployment efforts are most favorable when focused on industries or occupations that require the same or very similar job functions.

DETAILED FINDINGS

- On average, older workers' earnings losses six years after job displacement due to mass layoff remain 26% below those who do not experience a layoff.

- Workers age 40 still have a reduction in earnings amounting to 14% six years after displacement relative to those who are continuously employed. Those who lose jobs at age 55 still have earnings losses of 37% six years later.

- Six years after displacement, the percentage losses in earnings by gender are almost identical (28% for men versus 25% for women).

- Across industry groupings, the largest sustained percentage losses in earnings six years after job loss are observed for workers displaced from manufacturing (33%), finance and insurance (28%), and professional and business services (34%).

- Those individuals displaced from manufacturing and re-employed in the non-manufacturing sector suffer average quarterly earnings losses amounting to $5,551 six years after the job loss. The comparable figure for those displaced from non-manufacturing and re-employed in manufacturing is $3,651.

- For those individuals displaced from and re-employed in the same detailed industry within the manufacturing sector average quarterly earnings losses amount to $1,211 six years after displacement. The comparable figure for non-manufacturing is $1,655.

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INTRODUCTION

Earnings losses of displaced older workers are common and have a significant impact on current and future economic well-being (Couch 1998; Chan and Stevens 1999; Chan and Stevens 2001a; Chan and Stevens 2004). Prior studies have used survey data, and the samples have been too small to allow disaggregated analysis. In order to conduct a more detailed analysis, work histories for workers ages 40 and older are constructed using administrative records drawn from the unemployment insurance (UI) system in the state of Connecticut. More than 14 thousand displaced workers are identified. This sample is used to provide estimates of detailed earnings losses due to mass layoff by age, gender, and industry of employment.

Researchers' interest in studying earnings losses due to job displacement originates from at least two sources. First, basic human capital theory suggests that a significant determinant of wages is the portion attached to firm specific skills (Becker 1962). Moreover, the theory indicates that those skills should have a distinct pattern over both the lifecycle as well as the industry of employment. Thus, when workers lose a job due to events largely beyond their control and subsequently become re-employed, the pattern of earnings reductions experienced by age and across industry groups can be used to assess the relevance of the theory.

Second, from a policy perspective, events such as plant closures are largely seen as originating from external competitive forces rather than from the actions of individual workers.[1] In examining the extent to which the social costs of economic competition fall upon individuals, calculations of earnings losses for displaced workers assess one important dimension of those costs. The prior literature has confirmed those costs extend into other areas such as the spending down of savings, marital dissolution (Couch 1998; Charles and Stephens 2004), increased risk of stroke and heart attack (Gallo et al. 2007), and other choice-related health behaviors such as smoking and alcohol consumption (Gallo et al. 2001; Falba et al. 2005).

The Health and Retirement Study (HRS) has been the primary source of information previously used to conduct studies on not only the earnings losses and other financial consequences of job loss, but also the attendant health outcomes. While both the survey and the quality of these studies are high, the data do have some shortcomings when used to examine older displaced workers. Couch's (1998) study, which used the first wave of the HRS, relied on 204 observations of displaced workers for the analysis. More recently, Chan and Stevens (2004) used the 1992 through 1998 waves of the HRS to examine earnings losses and other financial consequences of older displaced workers. Their analysis identified 1,132 displaced workers for use in the analysis.

The difficulty in using the HRS to conduct disaggregated studies of job displacement can be seen by considering that in the initial year of the HRS, it surveyed workers ages 50 to 61. In 1998, the oldest sample

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[1] Although, there is a line of argument beginning with Gibbons and Katz (1991) that displaced workers who are at the factory when it closes are not randomly selected. Couch and Placzek (2007) show the empirical impact of selection of this type on estimates of earnings losses is small.

members are 67. Therefore, even a sample size of 1,132 workers, when divided by age and gender would leave an average of 31 workers in each category. While the HRS contains detailed information on the individuals and is the premier data set for studying the population over the age of 50 in the United States, administrative wage records do have advantages in studying patterns of work.

State administrative records provide the opportunity to obtain much larger samples of workers. The records themselves originate from payrolls that firms report to the state UI system for use in calculating benefits. They are virtually universal, primarily excluding the self-employed. The drawback of this data source is that relatively little information is available in the files other than wages, and basic information such as industry of employment, age, and gender must be matched to them from other sources. Nonetheless, Jacobson, LaLonde, and Sullivan (1993a), in a well-known study on workers in Pennsylvania, used UI data to obtain estimates of earnings losses for prime aged workers. Couch and Placzek (2007) provide a similar analysis for prime age workers in Connecticut. Neither of those studies focused on older workers and their observed earnings losses in the context of mass layoff.

Using a file containing 60% of the UI wage records for the state of Connecticut, workers older than age 40 who are continuously employed from 1993 through 1998 are selected for this study. From this group, 14,080 workers who changed jobs in the period from 1999 through 2004 within a year of a reduction of employment of 30% or more (mass layoff) at their original firm were identified. The analysis compares the experiences of the workers who experienced a mass layoff to those who remained continuously employed over the same interval.

On average, older workers' earnings losses six years after job displacement due to mass layoff remain 26% below those of the comparison group. These losses increase dramatically with age. Workers age 40 still have a reduction in earnings amounting to 14% six years after displacement relative to those who are continuously employed. Those who lose jobs at age 55 still have earnings losses of 37% six years later. Estimates of the dollar losses are consistently larger for men than for women, but as a percentage, they are similar to those of women.

Across industry groupings, the largest sustained percentage losses in earnings six years after job loss are observed for workers displaced from manufacturing (33%), finance and insurance (28%), and professional and business services (34%). More importantly, the earnings losses are concentrated among those who change industry sectors to find new employment. Earnings losses that increase with age and that are larger when workers change employment sectors are consistent with predictions of human capital theory regarding the underlying determinants of wage growth.

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PREVIOUS RESEARCH

Researchers who study displaced workers' earnings typically restrict their samples to relatively younger workers to avoid the selection problem of retirement (Jacobson et al. 1993a; Chan and Stevens 2001b). Since the majority of the literature focuses on these workers, this review begins with these papers. Using data from the Panel Study of Income Dynamics (PSID), Stevens (1997) finds that earnings of displaced workers decline approximately 25% the year of displacement; but within four years, the earnings reductions shrink to no more than 10%. Ruhm (1991) also uses PSID data and finds that earnings decline by 16% the year following displacement and these losses are maintained over the period observed in his sample. Jacobson et al. (1993a) use administrative wage records for Pennsylvania and report much larger losses the year after job displacement, amounting to more than 40% of prior earnings. They also find that six years after job loss, the earnings reductions are maintained at roughly 25% below those of a continuously employed comparison group. The Jacobson et al. (1993a) paper is important because it developed a basic panel estimation methodology still in use in this literature and employed in this paper. However, a recent study for Connecticut (Couch and Placzek 2007) using administrative data constructed similarly to that of the Jacobson et al. (1993a) study reports long-term earnings losses of 12 to 15 percent. Thus, a reasonable conclusion is that the very large earnings losses found in the Jacobson et al. (1993a) research are largely due to the severe economic downturn in Pennsylvania at the time their analytical sample was drawn.

Becker (1962) explains the impact of firm specific capital on wages, and these explanations can be applied to wage changes during employment transitions for older workers. Since older workers tend to have more specific human capital, the wages they earn at their pre-displacement firm are higher than they would be elsewhere. Therefore, when they change jobs involuntarily, their earnings should decline more than for younger workers. Prior research has demonstrated that part of the component of wages that Becker (1962) conceptually linked to a specific firm can be retained if a displaced worker is re-employed in the same industry. However, it appears to be almost completely lost when workers change industries altogether (Neal 1995).

Empirical research on displaced older workers has confirmed that wage losses are larger among older workers when displacement occurs. Using the 1992 wave of the HRS, Couch (1998) shows displaced workers between ages 51 and 60 have annual earnings losses ranging from 30% to 39% the year after displacement. Chan and Stevens (2001a) also use the early HRS (waves 1992, 1994, and 1996) and focus on older workers who are at least 50 years old. The authors find that reemployed displaced men and women suffer annual earnings losses amounting to 32% the year following job loss. Six or more years after displacement, the earnings losses still range from 23% to 29%. As expected, the authors find that more tenure on the pre-displacement job is associated with larger earnings losses. In a later paper, Chan and Stevens (2004) show that men between the ages of 50 and 75 who experience displacement and are re-employed have wage losses of 50% below expectations the year following job loss. The wage reductions remain 40% below expectations four years after job loss.

DATA AND ESTIMATION METHODOLOGY

DATA

The Office of Research at the Connecticut Department of Labor (DOL) provided the UI wage records for the analysis presented here.[2] Each record contains a worker's social security number (SSN) and employer identification number (EIN). Using the EIN, the UI records were matched to firm records contained in the Quarterly Census of Employment and Wages (QCEW). The QCEW records provide employer information regarding firm size and industrial classification as defined by the North American Industrial Classification System (NAICS).

The UI wage files were also matched to Connecticut Department of Motor Vehicles (DMV) license records using a worker's SSN. This match provides the demographic information on age and gender. The CT DMV began requiring individuals to provide their SSNs with license applications and renewals in a law that became effective in July of 2002. Because the process of renewing licenses is roughly random, one would expect that the resulting matches would also be roughly random and thus highly representative of workers in the state. A detailed analysis of matched workers' wages and sectors of employment show this to be the case.

A detailed appendix describing the data construction involved in this project and a comparison of the analysis file with the entire UI wage file is available upon request. Here, some of the key results from that appendix are briefly described. In conducting the empirical analysis for this project, workers are required to have positive earnings the first quarter of the sample, 1993:1. Everyone in the sample is also required to report some positive earnings every calendar year. When these restrictions are placed on the entire UI wage file, 1,009,876 individuals meet these criteria. Of these records, 615,973 were successfully matched to the DMV files, thus yielding 60.99% coverage.

A key issue is whether the wage distributions in the analytical file and the universe of records from which it is drawn are similar. The differences in median and average quarterly earnings between the entire UI file and the matched records (those for whom demographic information is available) are small, $265 and $385, respectively. The industrial distributions also are similar. Comparing the percentage of employment for 21 two-digit NAICS industries between all records in the UI wage file and those for whom DMV matches are obtained, 14 industries are within 0.2 percentage points of one another. The largest deviation, 1 percentage point, occurs in the manufacturing industry.

The data exclude people who reside in Connecticut and work out of state and vice versa. Conceptually, this is consistent with the statistical definition of resident workers for the state of Connecticut. In any one year,

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[2] These UI wage data are confidential and all computations for the analysis were carried out by staff of the CT DOL using their facilities. Use of the data is by permission of the Director of the Office of Research, at the CT DOL. Inquiries regarding their use should be directed to that office. Additional permission is required to link components of the QCEW data to the wage records.

data from the 2000 decennial census indicate that a number of workers, equal to about 7% of total Connecticut employment, either commute to other states to work or live elsewhere but work in Connecticut.

The wages available in the UI record are total quarterly wages. They are converted to real 2000 dollars using the consumer price index for all urban consumers. In addition, wages have been top coded at $155,000.[3] The quarterly data are available from 1993:1 to 2004:4. In order to be included in the estimation sample, each individual must (1.) report positive earnings in 1993:1, (2.) have positive earnings at least one quarter per year, (3.) have continuous employment in the screening period from 1993:1 to 1998:4, and (4.) have known demographic information. In addition, individuals working for firms with less than fifty employees are removed from the dataset. Finally, since this study focuses on older displaced workers, the sample is restricted to those individuals born no later than 1964. After implementing these filters, the sample contains 91,254 individuals with 12 years of quarterly wage information.

All of the workers in the sample are continuously employed from 1993:1 through 1998:4. This identifies long-tenure workers who are at risk of losing a job. To determine when workers change jobs, the EINs associated with an individual's employer are examined over time. The EINs themselves have to be corrected for situations where the codes have changed due to administrative reasons such as a firm contracting with a new payroll vender. Once the consistent coding of the firm identifiers is done, changes in them are used to identify the timing of job separations.

Additionally, between 1993 and 1998, each firm's highest level of quarterly employment is identified. If a job loss occurs within a year either before or after a quarter in which employment of the firm is 30% less than the maximum in the screening period, the job separation is associated with a mass layoff. This is the same rule for identifying mass layoffs used in the work of Jacobson et al. (1993a) and Couch and Placzek (2007). Using this method, 14,080 of the 91,254 workers in the sample are found to have experienced a mass layoff.

This dataset has several advantages over the HRS, the Displaced Worker Survey (DWS), and National Longitudinal Survey of Older Men, data typically utilized for studying older displaced workers. First, the data provide much larger sample sizes of displaced workers than are available in any other data source. This allows researchers to perform a more detailed analysis while simultaneously getting estimates that are more precise. Second, the administrative data contain workers' earnings histories for 12 years. Therefore, one is able to track long-term earnings adjustments. Finally, the data do not come from individuals' self-reports. This implies that the administrative data are virtually free of measurement error and recall bias, common problems for survey-based studies.

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[3] This was done because there were a small number of very high wage earners affecting the parameter estimates. Jacobson et al. (1993a) top coded their wage data at $100,000 1987 dollars as described in Jacobson et al. (1993b). This study's top code is equivalent to theirs once one takes into account inflation and rounds to the nearest $5,000. Sensitivity analyses indicate that the exact inflation index used to deflate the wage data has little impact on estimated earnings losses.

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Despite these advantages, the administrative data do have several disadvantages. First, the data only cover Connecticut. Second, the only demographic information available is age and gender. Finally, this definition of displacement does not delineate between displacement, quits, and firing for cause. However, if a firm loses more than 30% of its maximum employment, then a mass layoff most likely did occur in that firm.

ESTIMATION METHODOLOGY

In estimating the pattern of older displaced workers' earnings losses, a fixed-effects model is utilized as is common in this literature (Jacobson et al. 1993a).[4] The model estimated can be written as:

$$Y_{it} = \alpha_i + \gamma_t + \sum_{k \geq -6} D_{is}^k \delta_k + \varepsilon_{it} \quad (1)$$

Here, Y_{it} is total quarterly earnings of person i in quarter t, α_i is an individual specific fixed effect that controls for unobserved heterogeneity (differences across people), γ_t are quarterly dummy variables, and ε_{it} is a stochastic random error term. D_{is} is a set of dummy variables equal to one if the individual is displaced in year s. k indexes these dummy variables beginning six years before the displacement. Since the data are available quarterly and the displacement dummy variables indicate displacement on a yearly basis, one should interpret the δ_k as the effect displacement has on the average quarterly earnings in that specific year.

Equation (1) is estimated by selecting sub-samples of data. Since the analysis focuses on the patterns of earnings losses by age, gender, and industry, samples are selected that consist of those groups. Estimates of the parameters associated with the typical quarterly earnings loss in a year, $\delta_{k,}$ are provided in the tables. In initial estimates in the paper, these parameters are estimated for samples of workers at specific ages. In that case, age is measured as the year of displacement. Displacement could occur within a six-year window, 1999 through 2004. If the person were displaced in 1999 at age 50, then an appropriate comparison would be a continuously employed person age 49 in 1998. By that logic, the comparison group for those who are age 50 the year of displacement includes those in the sample ages 44 through 49 in 1998. Similar comparison groups are drawn for each category or combination of ages. Estimates of the parameters capturing the average quarterly earnings loss in each year from equation (1) are also provided by detailed age categories of males and females separately.

In addition, estimates are calculated by age and gender for individuals displaced from the following industries: manufacturing, wholesale and retail trade, finance and insurance (including insurance and real estate), business and professional services, education and health services, and other. When estimating by industry, the relative sample size of displaced workers becomes thin. Because of this, individuals are grouped into five-year age brackets. Further aggregation is necessary when estimating by industry and gender.

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[4] Other models such as random growth specifications are also often estimated. Because the prior literature shows that results do not vary greatly across these methods, to conserve space, only results from a fixed-effects model are presented here.

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EMPIRICAL RESULTS

Table 1 contains descriptive information for the sample in 1998. The sample consists of 91,254 individuals, of which 14,080 experience a mass layoff between 1999 and 2004. Differences across those who experience a mass layoff and the comparison group are quite small in the last year of the sample before job losses begin to occur. The average age in 1998 of the mass layoff group is 49.08 versus 48.72 for the continuously employed comparison group. Average 1998 quarterly earnings equal $14,418 for subsequently displaced workers and $14,761 for the continuously employed.

Table 2 shows the parameter estimates from equation (1) by the age of workers at the time of displacement. The rows of the table refer to the age at the time of displacement and the column headings refer to the period, measured in years, relative to the job loss. The largest drop in average quarterly earnings for most displaced workers occurs in the year immediately following job loss.[5] The estimated earnings losses increase almost monotonically over the individual ages where enough observations are available to provide detailed estimates, from -2,743 at age 40 to -7,033 at age 64. In the group of workers ages 65-69, quarterly earnings losses the first year after job loss are -7,346, but for those ages 70 and over is -4,875.

Not only do earnings drop more as one becomes older, but they also generally recover faster at younger ages. The next to last column of the table contains average quarterly earnings the year before job loss. The last column calculates the estimated percentage reduction in earnings six years after job loss. At age 40, the earnings losses six years after displacement are 14% below the comparison group. At age 60, the estimated average quarterly earning losses are 53% below the comparison group. Thus, there is a pronounced pattern towards larger levels of earnings losses as well as greater percentage reductions at older ages.

Between ages 56 and 62, there is a distinct pattern of earnings losses that is likely associated with partial retirement. Earnings losses recover until approximately three years after displacement. Afterwards, they begin trending downwards again. For example, at age 58, earnings drop -7,479 the year immediately following job loss and recover to -5,560 below expectations three years later. Then the estimated earnings losses increase in years t+4 through t+6. This is consistent with older displaced workers retiring and taking part-time bridge employment (Haveman 2001). Nationally, two-thirds of men retire between the ages of 62 and 65 (Borjas 2005). Thus, the estimates presented here for workers over age 55 are undoubtedly affected by individual retirement decisions because the study follows them for up to six years following job loss.

Table 3 provides the parameter estimates from equation (1) by age and gender. Table 3 does not include the pre-displacement variables since Table 2 indicates that these variables are rarely statistically significant and

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[5] This does not occur for ages 57, 58, 60, 61, and 62. For these ages, the parameter estimates in t+6 are larger than the estimates in t+1. This is explained later in the text.

never economically meaningful.[6] In general, losses are larger for men than for women. Although, what is most interesting in this table is that the proportionate reductions for men and women are similar. For example, the bottom row of Table 3 indicates that in period t+6 earnings losses amount to 28% and 25% of pre-displacement earnings for men and women, respectively. In the year following displacement, the respective percentages are 37 and 34. For the estimates of workers ages 40 and over, the difference in percentage earnings losses for men and women is never more than five points apart.

Tables 4 and 5 present parameter estimates from equation (1) by industry (Table 4) and by industry and gender (Table 5). The same trends that appear in Table 2 are found in Table 4. The drop in earnings the year after displacement increases with each age group. In some instances, the drop in earnings more than doubles from the youngest age group to the oldest. This is most prevalent in the education and health services industry. In this industry, the drop in earnings for people 60 years old and over is 6.5 times larger than the drop in earnings for people between 40 and 44 years old. The business and professional services industry has the smallest comparable ratio of losses by age of 1.8.

Table 4 shows that on average, the largest quarterly drop in earnings occurs in the business and professional services industry (-7,590) followed by manufacturing (-6,035). In order to obtain the percentage loss in earnings, average quarterly earnings the year before the job loss are again calculated for displaced workers ages 40 and over. Business and professional services and manufacturing have the largest drop in earnings the year following displacement (43% and 42% respectively). The finance and insurance sector has the smallest percentage loss despite the fact that it has one of the larger reductions in terms of lost dollars. Workers displaced from the finance and insurance sector do not see their earnings recover.

Table 5 provides estimation results by industry and gender. In almost every instance, the dollar value of the average quarterly male earnings loss is larger than the corresponding figure for females. For men relative to women, the drop in earnings the year following displacement is larger for each successive age grouping in most industries. The only exception to this is in educational and health services. Here, women between the ages of 40 and 49 have a very slight drop in earnings with an instantaneous recovery.

Even though men's earnings losses tend to be larger in absolute dollar values, the percentage reductions, calculated relative to average quarterly earnings the year prior to displacement, between men and women are relatively similar for workers ages 40 and over. For each post-displacement period, the average difference in earnings losses between men and women never exceeds five percentage points.

Theory predicts that workers with more specific skills will have greater earnings losses when they involuntarily change jobs. To gauge the importance of specific skills in determining earnings losses, the

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[6] Tables including the pre-displacement variables are available upon request.

experiences of displaced workers who find employment outside of the major industry group in which they used to work are contrasted with others who were employed in the same industry or even the same exact NAICS industry classification at a six-digit level. Table 6 presents the results. If one thinks of employment in a firm within the same NAICS as being closest in skill requirements to the prior job, being employed in the same major industry grouping as being less similar, and transitions across groups requiring different skills, then one would expect the estimated earnings losses to increase monotonically across these three groups. The results in Table 6 largely confirm this prediction.

The first two rows of Table 6 contain estimated earnings losses for workers who are able to find jobs after a mass layoff in the same exact industry as indicated by the highly detailed six-digit NAICS codes for workers in manufacturing and non-manufacturing jobs. Six years after displacement, the respective quarterly losses are $1,211 and $1,655. Contrasting those estimates with comparable figures obtained for workers who are able to stay within the broad group of all manufacturing or non-manufacturing jobs but not the same specific industry within which they used to work demonstrates the importance of the post-displacement sector of employment in determining earnings losses. The losses for those in manufacturing and other industries rise to $3,767 and $3,607, respectively. Estimated earnings losses for both sets of workers more than double when they cannot find new employment in the same specific industry from which they were displaced even though they remain in the same broader grouping of employers.

When workers originally in manufacturing find subsequent employment in non-manufacturing industries, their average earnings losses increase even more. Workers from non-manufacturing jobs who make transitions into the manufacturing sector do not appear to experience larger losses than for those re-employed in the non-manufacturing sector. This is consistent with prior research that has found that firm specific skills are relatively more important in explaining earnings losses for workers from manufacturing industries (Fallick 1996; Kletzer 1998).

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CONCLUSIONS

Findings presented in this paper indicate that earnings losses for older workers are sizeable and sustained six years after displacement. The average quarterly reduction in earnings six years after displacement is $3,737. The losses also rise steeply with age. Six years after displacement, the losses are estimated at 14% for workers aged 40 but are more than 50% for all workers ages 57 or older. While the earnings losses for older workers no doubt are due in part to the decision to partially retire, they nonetheless point to the large reductions in earnings that occur when employment is lost late in the normal years of employment and the financial difficulties this is likely to pose for the workers and their families (Couch 1998).

The results also show that earnings losses on average are much larger for males than females. For the average worker age 40 and older in the sample, earnings losses six years after displacement are estimated to be $4,644 for men and $2,755 for women. Despite these large differences in levels, the percentage losses in earnings by gender at the same point are almost identical (28% versus 25%).

Earnings losses vary meaningfully across industry groups. Workers who experience mass layoffs in manufacturing, business and professional services, and finance and insurance have sustained average quarterly losses six years after displacement that are more than double those observed for workers from wholesale and retail trade. However, the pre-displacement earnings of workers in these industries are much higher than for workers in wholesale and retail trade. The patterns of earnings loss by gender and industry are similar to those that were observed by age.

Finally, as other studies have shown, earnings losses are larger for workers who become re-employed in different sectors when compared to workers who become re-employed in the same specific industry. Workers who transition from manufacturing to non-manufacturing jobs experience the largest percentage reduction in their earnings.

The clear finding in this study is that older workers and those who have to change industrial sectors to find new employment experience larger earnings losses, and this is consistent with the basic theory that workers develop skills that are useful to specific employers or industries and that the value of those skills grows over time. Thus, when older workers lose long held jobs, they have larger losses of earnings and, when forced to change industries to find new employment, the losses are even worse.

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TABLES

Table 1: Sample Characteristics

A. Age in 1998	Observations	Mean	Median	Std. Dev.	10th %tile	90th %tile
Entire Sample:	**91,254**	**49.11**	**48**	**6.59**	**41**	**58**
Separators:						
All	32,725	49.82	49	6.82	41	59
Males	16,156	49.75	49	6.85	41	59
Females	16,569	49.90	49	6.79	41	59
Non-manufacturing	23,992	49.95	49	6.92	41	59
Manufacturing	8,733	49.47	49	6.54	41	58
Non-mass layoffs	18,645	50.38	50	7.05	42	60
Mass layoffs	14,080	49.08	48	6.43	41	58
Continuously employed:	58,529	48.72	48	6.42	41	57
B. 1998 Earnings	**Observations**	**Mean**	**Median**	**Std. Dev.**	**10th %tile**	**90th %tile**
Entire Sample:	**91,254**	**$15,074.12**	**$13,191.50**	**$11,376.28**	**$6,411.50**	**$22,893.00**
Separators:						
All	32,725	$14,613.19	$12,674.00	$11,037.79	$5,938.60	$22,853.40
Males	16,156	17,470.92	14,858.00	13,121.90	8,170.50	26,401.20
Females	16,569	11,826.70	10,468.00	7,550.84	4,954.00	19,534.00
Non-manufacturing	23,992	14,437.30	12,638.50	10,917.37	5,504.00	22,634.80
Manufacturing	8,733	15,096.43	12,747.00	11,348.65	7,127.40	23,437.00
Non-mass layoffs	18,645	14,760.75	12,897.00	11,213.13	5,873.00	22,889.40
Mass layoffs	14,080	14,417.80	12,432.00	10,798.51	6,016.60	22,764.50
Continuously employed:	58,529	15,331.83	13,464.00	11,553.31	6,683.00	22,914.00

Table 2: Fixed Effects Results by Age, Both Genders - Dependent Variable Total Quarterly Wages

Age Group	t - 6	t - 5	t - 4	t - 3	t - 2	t - 1	t + 1	t + 2	t + 3	t + 4	t + 5	t + 6	Average Earnings	% Loss at t + 6
40	-57	107	92	-46	-137	-11	-2,743	-1,721	-1,639	-1,964	-1,832	-1,881	13,487	-14%
41	-44	28	-90	-348 *	-494 *	-121	-2,764	-1,668	-1,687	-2,123	-2,298	-2,279	13,370	-17%
42	78	13	-27	-223 *	-221 *	203 *	-3,214	-2,182	-2,025	-2,094	-1,872	-2,051	14,356	-14%
43	10	-11	-107	-244 *	-307 *	51	-2,963	-2,245	-1,971	-2,059	-2,792	-2,355	13,673	-17%
44	49	-29	-52	-216 *	-393 *	79	-3,455	-2,462	-2,529	-2,608	-2,427	-3,050	14,513	-21%
45	28	-8	-50	-144	-348 *	-70	-3,827	-2,649	-2,132	-2,352	-1,917	-2,231	13,842	-16%
46	129	113	14	-108	-243 *	338 *	-3,624	-2,317	-2,436	-2,331	-2,766	-3,249	14,674	-22%
47	66	-91	-249 *	-405 *	-505 *	-322 *	-3,886	-2,707	-2,374	-2,580	-2,354	-2,404	13,984	-17%
48	120	55	-83	-127	-448 *	162	-3,798	-2,695	-2,568	-2,660	-3,071	-3,016	14,831	-20%
49	-6	-38	-149	-292 *	-328 *	32	-3,801	-3,014	-2,834	-3,035	-2,915	-2,882	14,922	-19%
50	72	69	118	-63	-203 *	319 *	-3,948	-2,801	-3,218	-3,207	-3,308	-3,132	14,922	-21%
51	-164	-327 *	-227 *	-385 *	-675 *	-206 *	-4,131	-2,908	-2,857	-2,495	-3,247	-2,490	14,979	-17%
52	-187 *	-339 *	-287 *	-519 *	-622 *	-95	-5,043	-3,768	-3,811	-3,797	-3,930	-3,301	14,801	-22%
53	-201 *	-303 *	-395 *	-524 *	-633 *	-418 *	-5,104	-3,885	-3,351	-3,089	-3,390	-3,369	15,330	-22%
54	-89	-183	-235 *	-454 *	-535 *	-545 *	-5,527	-4,427	-4,129	-4,243	-4,318	-4,797	14,050	-34%
55	-221 *	-266 *	-267 *	-443 *	-616 *	-157	-6,419	-5,159	-4,911	-4,749	-5,203	-5,389	14,735	-37%
56	-231 *	-225 *	-278 *	-436 *	-594 *	-134	-6,460	-5,409	-5,135	-5,171	-5,297	-5,611	14,260	-39%
57	-165	-137	-272 *	-334 *	-587 *	-311 *	-7,369	-6,407	-6,305	-6,699	-7,130	-7,772	15,584	-50%
58	-55	-100	-102	-261 *	-365 *	43	-7,479	-5,452	-5,560	-5,966	-6,911	-7,513	15,102	-50%
59	-118	-280 *	-272 *	-401 *	-327 *	275 *	-7,269	-6,632	-5,960	-5,659	-6,113	-4,784	14,800	-32%
60	-165	-235	-354 *	-532 *	-394 *	-48	-7,477	-6,911	-6,940	-7,099	-7,708	-7,844	14,782	-53%
61	-70	-77	-329 *	-409 *	-377 *	-236	-7,572	-7,072	-7,144	-6,806	-7,097	-7,932	13,366	-59%
62	216	137	-63	-326 *	-346 *	-190	-7,826	-7,554	-7,286	-7,577	-8,238	-8,595	13,251	-65%
63	62	491 *	514 *	174	263	-317	-8,657	-7,501	-7,740	-7,806	-6,798	-7,005	12,707	-55%
64	12	144	-155	-209	42	-374	-7,033	-7,015	-7,102	-7,063	-7,090	-6,844	12,034	-57%
65-69	79	-62	-138	-230	-273	-919 *	-7,346	-6,827	-6,618	-6,293	-6,111	-5,432	10,846	-50%
70+	-179	-734 *	-1,036 *	-1,172 *	-1,467 *	-1,259 *	-4,875	-4,443	-4,600	-4,899	-3,672	-4,582	7,268	-63%
40+	-182 *	-234 *	-315 *	-493 *	-567 *	-229 *	-5,069	-3,915	-3,703	-3,704	-3,792	-3,737	14,160	-26%

*All post-displacement variables are significant at the 1% level. * Indicates significance at the 5% level or better.*

THE EFFECT OF MASS LAYOFFS ON EARNINGS OF CONNECTICUT'S OLDER WORKERS

Table 3: Fixed Effects Results by Age and Gender - Dependent Variable Total Quarterly Wages

Age Group	Males								Females							
	t + 1	t + 2	t + 3	t + 4	t + 5	t + 6	Average Earnings	% Loss at t+6	t + 1	t + 2	t + 3	t + 4	t + 5	t + 6	Average Earnings	% Loss at t + 6
40	-3,353	-2,256	-2,150	-2,368	-1,978	-2,097	15,370	-14%	-2,061	-1,103	-1,045	-1,481	-1,620	-1,589	11,472	-14%
41	-2,591	-1,054	-1,193	-1,653	-1,994	-1,063 *	15,326	-7%	-2,949	-2,346	-2,245	-2,660	-2,639	-3,400	11,066	-31%
42	-3,256	-2,006	-2,100	-1,929	-1,848	-2,197	16,211	-14%	-3,163	-2,409	-1,926	-2,316	-1,899	-1,893	11,907	-16%
43	-3,421	-2,705	-2,253	-2,366	-3,293	-2,925	15,675	-19%	-2,402	-1,692	-1,628	-1,684	-2,197	-1,676	11,404	-15%
44	-3,542	-2,378	-2,479	-2,735	-2,956	-3,775	17,065	-22%	-3,307	-2,498	-2,536	-2,414	-1,799	-2,286	11,734	-19%
45	-4,536	-3,250	-2,606	-2,974	-2,156	-2,908	16,110	-18%	-2,959	-1,884	-1,538	-1,590	-1,581	-1,452	11,197	-13%
46	-5,073	-3,446	-3,573	-3,002	-3,436	-4,283	17,215	-25%	-1,969	-1,081	-1,233	-1,603	-2,045	-2,282	11,706	-19%
47	-4,618	-2,864	-2,420	-3,060	-2,357	-2,845	15,957	-18%	-3,008	-2,520	-2,329	-2,008	-2,344	-1,893	11,671	-16%
48	-4,693	-3,356	-3,224	-3,108	-3,730	-3,697	17,531	-21%	-2,698	-1,868	-1,762	-2,115	-2,318	-2,253	11,548	-20%
49	-5,120	-4,299	-4,170	-4,022	-4,341	-3,847	17,648	-22%	-2,314	-1,593	-1,411	-1,984	-1,510	-1,907	11,630	-16%
50	-4,798	-3,329	-3,897	-3,976	-4,421	-4,005	17,761	-23%	-3,054	-2,226	-2,481	-2,407	-2,181	-2,227	11,887	-19%
51	-5,073	-3,713	-3,523	-2,985	-3,904	-2,190	18,561	-12%	-3,129	-2,069	-2,179	-1,985	-2,576	-2,754	11,169	-25%
52	-6,146	-4,828	-4,959	-4,766	-5,048	-3,362	18,228	-18%	-3,832	-2,622	-2,601	-2,807	-2,788	-3,185	10,965	-29%
53	-6,543	-5,137	-4,413	-3,934	-4,821	-5,054	18,859	-27%	-3,661	-2,644	-2,286	-2,242	-1,932	-1,817	11,560	-16%
54	-6,688	-5,302	-4,938	-5,520	-5,498	-5,198	16,808	-31%	-4,294	-3,543	-3,316	-2,984	-3,190	-4,373	11,001	-40%
55	-7,713	-6,319	-6,063	-5,782	-6,677	-6,054	17,713	-34%	-4,774	-3,720	-3,509	-3,556	-3,548	-4,655	10,746	-43%
56	-7,815	-6,922	-6,429	-6,399	-6,631	-7,714	17,242	-45%	-4,944	-3,740	-3,690	-3,875	-3,963	-3,681	10,310	-36%
57	-9,032	-7,925	-7,583	-8,198	-8,807	-9,869	18,943	-52%	-5,245	-4,366	-4,546	-4,669	-4,664	-4,573	10,701	-43%
58	-8,897	-6,863	-7,185	-7,732	-8,934	-9,468	17,890	-53%	-5,764	-3,785	-3,623	-3,729	-4,447	-5,353	11,263	-48%
59	-9,288	-8,576	-7,604	-7,028	-7,454	-5,812	18,390	-32%	-4,470	-3,956	-3,727	-3,873	-4,288	-3,417	9,837	-35%
60	-9,365	-8,776	-8,594	-8,873	-10,146	-9,122	18,495	-49%	-5,078	-4,353	-4,668	-4,783	-4,597	-6,315	9,376	-67%
61	-8,996	-8,539	-8,720	-8,036	-8,737	-9,241	16,241	-57%	-5,819	-5,235	-5,250	-5,233	-5,170	-6,610	9,848	-67%
62	-9,599	-8,863	-8,277	-8,551	-9,369	-9,689	15,989	-61%	-5,475	-5,602	-5,554	-5,616	-6,068	-6,468	9,250	-70%
63	-10,247	-8,660	-9,107	-9,432	-7,806	-7,899	15,000	-53%	-5,744	-5,072	-4,818	-4,463	-4,137	-4,306	9,052	-48%
64	-9,173	-8,955	-8,168	-8,107	-8,170	-7,973	14,666	-54%	-4,919	-4,950	-5,858	-5,730	-5,720	-5,528	8,881	-62%
65-69	-8,941	-8,202	-7,779	-7,457	-7,233	-6,138	13,761	-45%	-5,504	-5,095	-5,022	-4,749	-4,715	-4,519	7,447	-61%
70	-6,036	-5,752	-5,935	-6,421	-4,483	-5,850	8,783	-67%	-3,516	-2,756	-2,657	-2,627	-2,509	-2,980	5,596	-53%
40+	-6,258	-4,934	-4,683	-4,654	-4,855	-4,644	16,878	-28%	-3,694	-2,736	-2,574	-2,626	-2,614	-2,755	10,869	-25%

*All post-displacement variables are significant at the 1% level unless indicated by *. * Indicates significance at the 5% level or better.*

Table 4: Fixed Effects Results by Age and Industry, Both Genders - Dependent Variable Total Quarterly Wages

Industry	Age Group	t-6	t-5	t-4	t-3	t-2	t-1	t+1	t+2	t+3	t+4	t+5	t+6	Average Earnings	% Loss at t+6
Manufacturing	40-44	-351 *	-439 *	-557 *	-837 *	-958 *	-909 *	-4,249	-3,022	-2,955	-3,308	-3,344	-3,185	13,416	-24%
	45-49	-261 *	-406 *	-579 *	-718 *	-886 *	-525 *	-5,222	-3,703	-3,363	-3,607	-3,680	-3,295	14,268	-23%
	50-54	-353 *	-524 *	-620 *	-1,036 *	-1,081 *	-627 *	-5,439	-4,068	-3,871	-4,082	-4,880	-4,627	14,663	-32%
	55-59	-196 *	-316 *	-519 *	-704 *	-827 *	85	-7,524	-5,829	-5,477	-5,815	-6,439	-6,532	15,590	-42%
	60+	-15	-153	-378 *	-692 *	-811 *	-468 *	-8,736	-8,131	-8,212	-8,382	-9,036	-9,582	14,104	-68%
	40+	-303 *	-445 *	-623 *	-924 *	-1,027 *	-623 *	-6,035	-4,660	-4,406	-4,644	-4,961	-4,765	14,408	-33%
Trade	40-44	120	186	93	-91	-29	-34	-2,261	-1,284	-1,128	-1,272	-1,295	-815 *	10,913	-7%
	45-49	-121	-247	-169	-372 *	-642 *	-531 *	-3,277	-2,400	-2,256	-2,074	-2,191	-2,541	11,453	-22%
	50-54	30	-74	-141	-388 *	-489 *	-1,046 *	-4,099	-3,093	-2,831	-2,201	-2,003	-2,019	11,062	-18%
	55-59	-49	-159	-60	-206	-437 *	-546 *	-4,935	-4,340	-4,378	-4,157	-4,729	-4,462	10,916	-41%
	60+	-258	-477 *	-207	-288	-373	-754 *	-4,861	-4,714	-4,461	-4,048	-3,794	-3,606	8,283	-44%
	40+	-136	-224 *	-216 *	-407 *	-514 *	-673 *	-3,802	-2,976	-2,780	-2,534	-2,554	-2,399	10,621	-23%
Finance and Insurance	40-44	437	690 *	795 *	343	502	2,606 *	-2,829	-2,045	-2,030	-2,453	-2,378	-3,389	20,642	-16%
	45-49	428	537 *	176	-7	71	1,242 *	-4,363	-3,115	-3,364	-4,192	-4,315	-5,595	19,458	-29%
	50-54	139	276	412	255	-68	1,877 *	-5,379	-4,369	-4,483	-3,841	-3,756	-3,303	20,239	-16%
	55-59	-153	-372	-573	-396	-597	673 *	-6,696	-6,046	-5,404	-5,641	-6,433	-8,479	19,073	-44%
	60+	271	529	-258	-447	-223	-297	-7,432	-6,128	-6,446	-7,028	-6,430	-7,587	12,968	-59%
	40+	66	80	-5	-202	-230	1,248 *	-5,101	-4,044	-4,049	-4,337	-4,335	-5,314	19,223	-28%
Business Services	40-44	-484 *	-501 *	-723 *	-862 *	-1,131 *	-417	-5,099	-3,959	-3,704	-3,759	-4,702	-5,608	16,963	-33%
	45-49	-680 *	-995 *	-1,081 *	-1,289 *	-1,822 *	-493	-7,165	-5,387	-5,014	-4,635	-5,187	-5,142	18,235	-28%
	50-54	-193	-271	10	-214	-12	1,199 *	-7,033	-5,646	-5,567	-5,439	-5,766	-4,848	20,747	-23%
	55-59	-569	-850 *	-734 *	-1,146 *	-1,132 *	-590	-9,695	-8,211	-8,252	-7,445	-7,411	-8,255	16,805	-49%
	60+	-394	-569	-968 *	-1,186 *	-923 *	-709	-9,138	-8,757	-8,250	-8,227	-7,617	-7,484	15,613	-48%
	40+	-621 *	-788 *	-863 *	-1,126 *	-1,254 *	-408 *	-7,590	-6,140	-5,756	-5,464	-5,858	-6,005	17,736	-34%
Education and Health Services	40-44	205 *	220 *	75	38	-75	-182 *	-1,297	-831	-762	-827	-656	-656	10,712	-6%
	45-49	127	2	-85	-129	-240 *	-340 *	-1,491	-834	-607	-794	-454	-728	12,017	-6%
	50-54	-147	-318 *	-335 *	-340 *	-494 *	-570 *	-2,982	-1,883	-1,904	-1,915	-1,817	-2,157	12,344	-17%
	55-59	-191 *	-239 *	-286 *	-455 *	-616 *	-746 *	-6,708	-5,889	-6,233	-6,477	-6,844	-6,632	13,359	-50%
	60+	-152	-264 *	-495 *	-740 *	-1,034 *	-1,859 *	-8,439	-8,312	-8,599	-8,745	-8,596	-9,762	10,503	-93%
	40+	-95 *	-182 *	-303 *	-391 *	-540 *	-769 *	-3,894	-3,036	-2,978	-2,979	-2,731	-2,716	11,847	-23%
Other Industries	40-44	-80	98	114	172	4	375 *	-2,325	-1,032	-916	-984	-1,035	-1,145	13,978	-8%
	45-49	-212 *	-99	-115	-75	-153	376 *	-2,372	-1,761	-1,658	-1,725	-1,487	-1,931	14,303	-14%
	50-54	-234 *	-319 *	-415 *	-433 *	-402 *	-153	-5,055	-4,079	-4,175	-4,033	-3,841	-3,188	13,948	-23%
	55-59	-176	-10	-180	-363 *	-204	-265 *	-6,795	-6,231	-5,718	-5,471	-4,802	-4,747	13,988	-34%
	60+	-74	-221	-111	-326 *	-229	-465 *	-6,252	-5,550	-5,681	-5,304	-4,096	-3,772	10,704	-35%
	40+	-290 *	-234 *	-318 *	-367 *	-381 *	-169 *	-4,388	-3,424	-3,157	-3,014	-2,689	-2,658	13,625	-20%

*All post-displacement variables are significant at the 1% level unless noted by * . * Indicates significance at the 5% level or better.*

THE EFFECT OF MASS LAYOFFS ON EARNINGS OF CONNECTICUT'S OLDER WORKERS

Table 5: Fixed Effects Results by Age, Industry, and Gender - Dependent Variable Total Quarterly Wages

Industry	Age Group	Male								Female							
		t+1	t+2	t+3	t+4	t+5	t+6	Average Earnings	% Loss at t+6	t+1	t+2	t+3	t+4	t+5	t+6	Average Earnings	% Loss at t+6
Manufacturing	40-49	-4,893	-3,366	-3,072	-3,332	-3,359	-3,138	15,188	-21%	-4,176	-3,084	-3,009	-3,336	-3,321	-2,975	11,112	-27%
Manufacturing	50-59	-7,184	-5,530	-5,272	-5,591	-6,426	-6,244	17,423	-36%	-5,170	-3,867	-3,563	-3,777	-4,206	-3,968	10,368	-38%
Manufacturing	60+	-10,261	-9,521	-9,527	-9,622	-10,428	-10,927	16,602	-66%	-5,342	-4,919	-4,943	-4,849	-4,842	-5,695	8,633	-66%
Manufacturing	40+	-6,587	-5,082	-4,804	-5,041	-5,439	-5,233	16,322	-32%	-4,795	-3,679	-3,476	-3,687	-3,819	-3,622	10,421	-35%
Trade	40-49	-3,129	-2,092	-1,931	-1,886	-2,397	-2,183	13,926	-16%	-2,100	-1,245	-1,125	-1,137	-762	-826	8,271	-10%
Trade	50-59	-5,712	-4,898	-4,864	-4,421	-4,380	-4,230	13,621	-31%	-2,997	-2,223	-2,066	-1,759	-1,865	-1,552	7,701	-20%
Trade	60+	-5,988	-5,911	-5,546	-5,078	-4,384	-3,830	9,591	-40%	-3,218	-2,896	-2,776	-2,576	-2,899	-3,263	6,227	-52%
Trade	40+	-4,717	-3,884	-3,704	-3,405	-3,582	-3,360	12,998	-26%	-2,582	-1,773	-1,594	-1,453	-1,223	-1,158	7,774	-15%
Finance and Insurance	40-49	-4,272	-3,041	-3,496	-4,034	-3,615	-4,810	27,313	-18%	-3,126	-2,260	-2,149	-2,805	-2,949	-3,925	15,946	-25%
Finance and Insurance	50-59	-7,681	-7,038	-6,266	-5,214	-6,541	-6,301	30,005	-21%	-5,029	-4,107	-4,189	-4,198	-4,034	-4,786	13,493	-35%
Finance and Insurance	60+	-12,071	-8,452	-9,294	-10,722	-10,064	-12,315	18,734	-66%	-4,753	-4,407	-4,706	-5,103	-5,181	-6,557	9,748	-67%
Finance and Insurance	40+	-6,802	-5,489	-5,440	-5,508	-5,471	-6,349	27,557	-23%	-4,220	-3,338	-3,354	-3,785	-3,801	-4,799	14,367	-33%
Business Services	40-49	-6,947	-5,204	-5,172	-4,718	-5,596	-7,079	20,361	-35%	-4,853	-3,668	-2,993	-3,139	-3,685	-3,261	14,032	-23%
Business Services	50-59	-11,147	-9,549	-9,695	-9,016	-9,187	-8,392	24,045	-35%	-5,516	-4,244	-3,764	-3,551	-3,731	-4,061	12,726	-32%
Business Services	60+	-11,945	-11,922	-10,874	-10,962	-10,354	-9,822	20,297	-48%	-5,643	-5,065	-5,190	-4,983	-4,739	-4,946	9,435	-52%
Business Services	40+	-9,457	-7,817	-7,580	-7,013	-7,490	-7,982	21,734	-37%	-5,359	-4,162	-3,574	-3,586	-3,917	-3,704	12,818	-29%
Education and Health Services	40-49	-2,674	-2,623	-2,631	-2,695	-1,940	-2,366	13,806	-17%	-824	-36 "	122 "	-55 "	20 "	-30 "	10,448	0%
Education and Health Services	50-59	-6,774	-5,979	-6,334	-6,673	-7,264	-6,238	15,684	-40%	-3,781	-2,620	-2,639	-2,636	-2,579	-3,015	11,473	-26%
Education and Health Services	60+	-9,907	-9,452	-9,734	-9,929	-9,807	-10,011	12,542	-80%	-7,580	-7,569	-7,888	-8,045	-8,005	-9,519	9,356	-102%
Education and Health Services	40+	-5,750	-5,230	-5,403	-5,510	-5,278	-4,844	14,346	-34%	-3,042	-2,056	-1,952	-1,949	-1,796	-1,934	10,681	-18%
Other Industries	40-49	-2,683	-1,255	-1,137	-1,226	-977	-1,011	16,466	-6%	-2,094	-1,694	-1,581	-1,612	-1,647	-2,062	11,385	-18%
Other Industries	50-59	-7,671	-6,903	-6,113	-5,754	-5,526	-3,271	16,665	-20%	-3,856	-3,093	-3,430	-3,434	-2,995	-3,806	10,834	-35%
Other Industries	60+	-8,273	-7,479	-7,585	-7,327	-5,788	-4,721	13,823	-34%	-4,016	-3,365	-3,303	-2,963	-2,213	-2,764	7,494	-37%
Other Industries	40+	-5,474	-4,223	-3,679	-3,479	-3,040	-2,287	16,220	-14%	-3,085	-2,469	-2,473	-2,427	-2,220	-2,793	10,620	-26%

All post-displacement variables are significant at the 1% level unless indicated by a " . " Indicates statistical insignificance.

Table 6: Earnings Losses as a Percentage of Pre-Displacement Income by Industry Changer

	t - 6	t - 5	t - 4	t - 3	t - 2	t - 1	t + 1	t + 2	t + 3	t + 4	t + 5	t + 6
Staying in same NAICS in Manufacturing	118	136 *	54	-433 *	-380 *	-58	-1,440	-752	-1,039	-1,469	-1,870	-1,211
Staying in same NAICS in Non-Manufacturing	20	33	-55	-156 *	-224 *	-127 *	-1,668	-1,062	-1,074	-972	-1,134	-1,655
Switching from Manufacturing to Non-Manufacturing	-167 *	-289 *	-468 *	-598 *	-811 *	-659 *	-7,615	-5,893	-5,519	-5,822	-5,866	-5,551
Switching from Non-Manufacturing to Manufacturing	-11	26	-37	-163 *	-130 *	249 *	-2,941	-2,390	-2,435	-2,404	-2,866	-3,651
Switching NAICS within Manufacturing	-29	-49	-161 *	-259 *	-533 *	-332 *	-4,894	-3,594	-3,576	-3,936	-3,976	-3,767
Switching NAICS within Non-Manufacturing	-214 *	-246 *	-285 *	-379 *	-509 *	-125 *	-5,426	-4,196	-3,821	-3,656	-3,520	-3,607

*All post-displacement variables are significant at the 1% level. * Indicates significance at the 5% level or better.*