
Where Are Import-Competing Displaced Workers Reemployed?

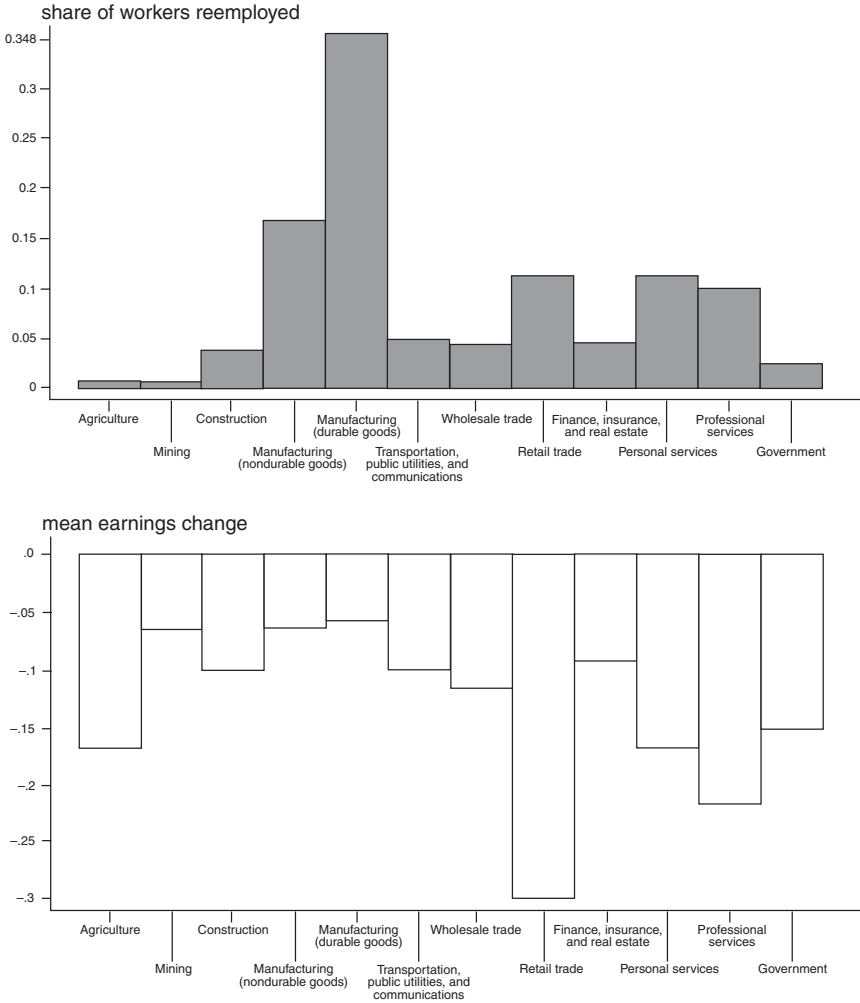
This chapter examines the pattern of reemployment by industrial sector. It extends earlier research reported in Kletzer (2000). The focus is on how earnings changes vary by reemployment sector, which will help explain the range of outcomes available to displaced workers.

This discussion is also applicable to a larger question in the literature on trade and wages: In what “directions” does foreign competition reallocate labor across industries? The linkages between changing trade patterns and changing employment patterns have been examined in a number of studies, including Borjas, Freeman, and Katz (1992, 1997), and Sachs and Shatz (1994, 1998). These studies confirm that the rise of net imports from developing countries is low-skill intensive relative to the rest of manufacturing and the economy. One implication of these studies is that job loss in manufacturing will release relatively unskilled workers into the labor market and that reemployment of these workers in the (low-wage) services sector provides one avenue for downward pressure on wages with increasing trade. This possible outcome associates economy-wide labor reallocation with economywide increasing earnings inequality. My focus here is narrower, and directed to implications for individual workers of reemployment in a sector different from the one where jobs were lost. This focus is most appropriate for explaining the individual costs of import-competing job displacement.

Reemployment Sector and Earnings Changes

Figure 6.1 presents a summary of where high import-competing workers are reemployed, by broad industrial sector, and the mean earnings change

Figure 6.1 Reemployment and mean earnings changes for high import-competing workers, by industrial sector



Notes: The top bar graph reports the share of workers reemployed in each sector; the height of the bar is the fraction or share reemployed. The bottom bar graph reports mean earnings changes; the height of the bar is the percentage change in weekly earnings. More precisely, the earnings change reported in the lower bar graph is the change in $\log(\text{earnings})$. To convert to a percentage change in earnings, we multiply the reported number by 100.

Source: Author's calculations from Displaced Worker Surveys, 1984-2000.

for workers reemployed in each sector. Figures 6.2 and 6.3 present the same data for medium and low import-competing workers. Table 6.1 reports the more detailed information from which the figures were drawn.¹

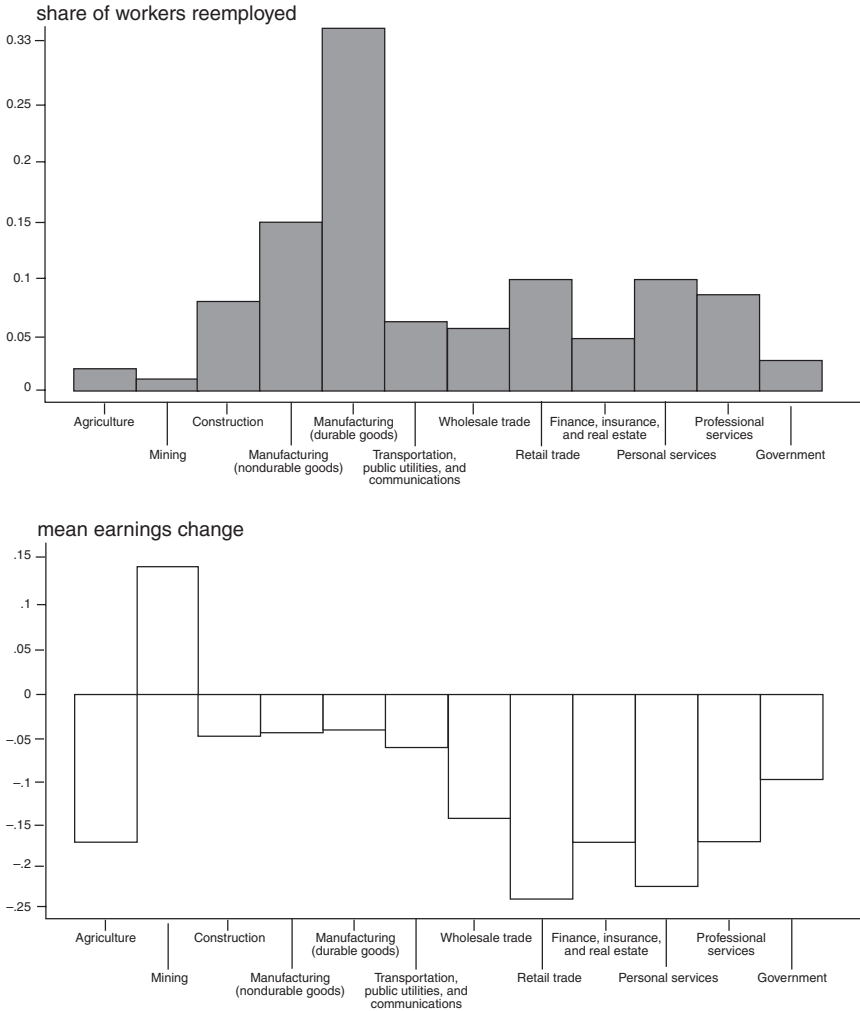
A few general observations stand out. First, contrary to common perceptions, not all displaced manufacturing workers are reemployed at McDonald's. Overall, just 10 percent of reemployed manufacturing workers are in retail trade (McDonald's, as an eating and drinking establishment, is in the retail trade sector). High import-competing displaced workers are no more likely than any other manufacturing worker to be reemployed in retail trade. In contrast, 21 percent of nonmanufacturing displaced workers are reemployed in retailing.

Second, there is considerable reemployment within manufacturing. High import-competing displaced workers—100 percent of whom were displaced from nondurable- and durable-goods manufacturing—are being reemployed in manufacturing, at a level of about half. Sixteen percent are reemployed in nondurable goods, and 35 percent in durable goods ($0.164 + 0.355 = 0.519$). That is, considering just those workers reemployed when surveyed (about two-thirds of those displaced), fully half of import-competing displaced workers are reemployed back in manufacturing. This high rate of return among the reemployed is likely contrary to casual expectations. At the same time, fully half of displaced manufacturing workers, upon reemployment, are leaving their old sector. The return rate is also lower when we note that it refers only to the two-thirds reemployed. Incorporating the 0.634 reemployment rate, we note that about a third (0.329) of all high import-competing displaced workers return to manufacturing after losing their job. Another third are reemployed in nonmanufacturing sectors, and the remaining third are not reemployed.

Workers who return to their old sector may retain the value of some specific skills, keep earning union rents, and maintain their position in internal job ladders. All these factors are expected to mitigate earnings losses, and they do, as displayed in the lower bar graph of figure 6.1. For manufacturing workers, regaining employment in manufacturing greatly reduces earnings losses. Mean earnings losses are smallest for workers reemployed in durable goods (at 4.5 percent), and next smallest in nondurable goods.

1. The table is a very basic "reemployment matrix," reporting the industrial sector from which workers were displaced (categorized by the level of import-competition of their old industry) and the industrial sector of reemployment. The table contains four main rows, labeled "high," "medium," and "low" (for the import-competing nature of the manufacturing industries) and "nonmanufacturing" for the remaining private nonmanufacturing sectors (utilities, wholesale and retail trade, services). This last row serves as a comparison group for manufacturing. Workers are displaced from one of these four big rows. They are reemployed in one of 12 columns that designate new industrial sectors. Within each cell, defined as a main row intersecting with a column, five measures are reported.

Figure 6.2 Reemployment and mean earnings changes for medium import-competing workers, by industrial sector

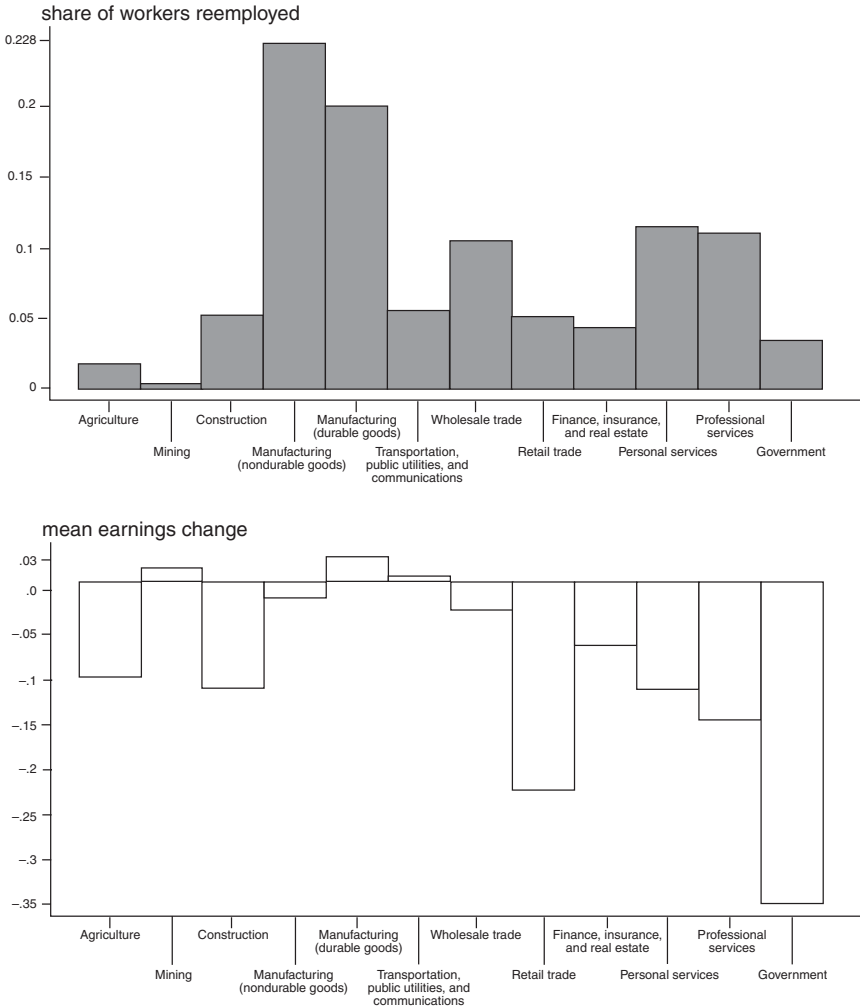


Source: Author's calculations from Displaced Worker Surveys, 1984-2000.

rable goods (5.8 percent). Median earnings losses are even smaller, at no loss for durable goods and 3.7 percent for nondurable goods.

Although earnings losses are small for the average high import-competing worker reemployed in manufacturing, there is still considerable variation in earnings changes. About a fifth of these workers suffer earnings

Figure 6.3 Reemployment and mean earnings changes for low import-competing workers, by industrial sector



Source: Author's calculations from Displaced Worker Surveys, 1984-2000.

losses in excess of 30 percent (see table 6.1). Even within manufacturing, skilled (but older) workers may find themselves unfamiliar with standards, processes, and procedures instituted by manufacturing firms since the mid-1980s (see Powers and Markusen 1999). That 20 percent of workers with very large earnings losses is, however, considerably smaller than the corresponding shares for workers reemployed in other sectors.

Table 6.1 Reemployment sector, earnings losses, and jobless durations, by industry level of import competition

Level of import competition	Manufacturing				Trade			Finance, insurance, real estate		Services		Total	
	Agri-culture	Mining	Con-struction	Non-durables	Durables	TCU	Whole-sale	Retail	Personal, business	Profes-sional	Govern-ment		
High													
Number of workers	19,379	23,672	190,065	853,687	1,887,237	259,336	221,516	556,987	214,245	524,750	462,936	93,906	5,307,716
Share	0.0036	0.0044	0.0358	0.1608	0.3555	0.0488	0.0417	0.1049	0.0403	0.0988	0.0883	0.0176	1
Median earnings change	-0.181	-0.078	-0.086	-0.037	0	-0.01	-0.07	-0.262	0	-0.113	-0.149	-0.128	-0.048
Mean earnings change	-0.294	-0.064	-0.13	-0.058	-0.045	-0.118	-0.133	-0.334	-0.058	-0.223	-0.255	-0.062	-0.125
Median weeks jobless	38	9	12	8	6	6	8	8	6	6	13	10	8
Medium													
Number of workers	67,091	27,302	394,009	949,850	2,089,635	302,265	257,804	538,684	217,211	551,787	470,198	131,914	5,997,750
Share	0.0112	0.0045	0.0656	0.1583	0.3484	0.0503	0.0429	0.0898	0.0362	0.0919	0.0783	0.0219	1
Median earnings change	-0.261	-0.041	-0.053	-0.023	-0.029	0	-0.131	-0.251	-0.136	-0.228	-0.197	-0.055	-0.063
Mean earnings change	-0.29	0.144	-0.062	-0.034	-0.041	-0.075	-0.149	-0.29	-0.218	-0.298	-0.225	-0.114	-0.118
Median weeks jobless	6	10	6	4	6	9	6	8	9	6	8	8	6
Low													
Number of workers	31,944	3,943	125,304	559,789	535,946	156,584	125,062	261,557	93,893	281,170	299,028	61,134	2,535,354
Share	0.0125	0.0015	0.0494	0.2207	0.2113	0.0617	0.0493	0.1032	0.037	0.1109	0.1179	0.0241	1
Median earnings change	-0.048	0.182	0	-0.006	0.018	0	-0.043	-0.19	0.018	-0.052	-0.163	-0.331	-0.028
Mean earnings change	-0.157	0.008	-0.155	-0.012	0.026	0.048	-0.052	-0.217	-0.074	-0.15	-0.166	-0.393	-0.077
Median weeks jobless	8	0	8	4	5	6	4	6	4	6	10	7	6
Nonmanufacturing													
Number of workers	164,442	62,076	896,199	951,046	1,491,502	2,172,656	1,324,330	4,488,224	2,276,067	3,368,766	4,659,912	579,645	22,400,000
Share	0.0073	0.0027	0.04	0.0424	0.0665	0.0969	0.0591	0.2003	0.1016	0.1504	0.208	0.0258	1
Median earnings change	-0.062	0.084	0	0.003	0.051	0	0	-0.028	0.001	0	0	0.039	0
Mean earnings change	-0.113	0.086	0.016	0.039	0.073	0.009	0.009	-0.037	-0.019	-0.034	0.007	0.101	-0.003
Median weeks jobless	3	4	4	5	4	3	4	4	4	4	3	6	4

TCU = Transportation, communications, and utilities.

Note: Changes in earnings are changes in ln (earnings).

Source: Author's calculations from the Displaced Worker Surveys, 1984-2000.

Displaced manufacturing workers who gain reemployment in manufacturing also experience the shortest median period of joblessness (6-8 weeks), as compared with workers reemployed elsewhere. This may be a result of searching first in familiar labor markets in manufacturing, and turning to less familiar markets and networks only after a period of unsuccessful searching. These spells of joblessness are well within the standard period of eligibility for unemployment compensation (26 weeks).

Wholesale and retail trade, finance, and services provide about 35 percent of import-competing displaced-worker reemployment. Mean earnings changes are highly variable, ranging from a 6 percent loss in finance, insurance, and real estate to a 34 percent loss in retail trade. A large share of such workers (25-40 percent) report earnings losses exceeding 30 percent. Retail trade and business and personal services together account for nearly 20 percent of import-competing displaced reemployment, and mean earnings losses are large (22-33 percent). Given the prevalence of part-time work in wholesale and retail trade and services, a switch from full- to part-time may help explain the large reemployment earnings losses. Half of workers reemployed in finance, insurance, and real estate experience no earnings loss or a gain, whereas the average change is a loss of 5.8 percent. Still, a sizable share of workers (about 30 percent) report losses greater than 30 percent. The median period of joblessness for these workers varies from 6 to 13 weeks, which again is consistent with the possibility that workers search first in manufacturing and, if unsuccessful, then turn to nonmanufacturing.

A small share of workers, about 5 percent, are reemployed in transportation and public utilities. This sector is highly unionized relative to the rest of the economy, with high average earnings. In comparison with other nonmanufacturing sectors, reemployment there also is associated with relatively small earnings losses (a median change of -1.0 percent and a mean change of -11.8 percent).

When we ask whether high import-competing displaced workers differ from other manufacturing workers in where they are reemployed, the answer is again clear: No. In the medium and low import-competing groups, 40 to 50 percent of workers return to manufacturing, with mean and median earnings losses smaller than 5 percent. These losses are markedly smaller than reemployment in nonmanufacturing industries. These similarities underscore the point that the proximate "cause" of job loss makes no difference in postdisplacement outcomes. What appears to matter is the kind of job lost and the kind of new job gained.

A few aspects of the low import-competing group stand out. This group contains both balanced and unbalanced exporters, along with some domestically oriented industries. About 43 percent of this group's reemployed return to manufacturing, with the median worker experiencing either no earnings loss or a small gain. Median jobless spells are just more than 1 month long, at 5 weeks.

For displaced manufacturing workers, construction provides a modest share of reemployment (4-6.5 percent). Median earnings losses are about 5 percent, and mean earnings losses are just under 10 percent, making the sector a possibly attractive option relative to other nonmanufacturing sectors.²

Not only manufacturing workers return to their old sector. The high return percentages are seen most clearly among workers displaced from the nonmanufacturing sector—those displaced from utilities, wholesale and retail trade, and services. In large shares, these workers are reemployed in these same sectors. For transportation, utilities, and communications, the return percentage is 40 percent; for retail trade, 46 percent; for finance, insurance, and real estate, 47 percent. This is not surprising given the employment size and growth of these sectors. Many of these workers experience earnings gains, and if the average change is a loss, it is a small one. The small average earnings losses are consistent with the lower average earnings in nonmanufacturing sectors, as compared with manufacturing. We also know from the discussion in chapter 3 that these workers are more educated and have shorter tenure than manufacturing workers, and that is consistent with smaller earnings losses.

Sectoral Reemployment in More Detail

The percentages of workers reemployed in manufacturing may strike some as inconsistent with the notion that manufacturing employment is stagnant, if not in decline. There is no inconsistency. Half of manufacturing displaced workers return, and the other half are reemployed elsewhere in the economy. That is certainly consistent with a decline in employment opportunities in manufacturing. What is striking about those workers reemployed in manufacturing is the degree to which they are concentrated in the same set of industries from which they were displaced. Table 6.2 reports, for manufacturing workers, the detailed, 3-digit industries accounting for the largest shares of reemployment, across degrees of import competition.

There are two notable contrasts: Due to large employment size, the list of reemploying industries overlaps a great deal with the list of displacement industries (see table 2.1 and appendix table D.1). This overlap suggests little reallocation, in the sense that the industries with the biggest share of reemployment are the very same ones with large shares and numbers of displaced workers. For import-competing displaced workers, the largest reemployers—electrical machinery, apparel, motor vehicles, nonelectrical machinery—were the largest source of job loss. As a group, these reemployment shares show that vast numbers of import-competing displaced

2. Of the displaced manufacturing workers reemployed in construction, 92 percent are male.

Table 6.2 Industries accounting for largest shares of reemployment, by displaced industry level of import competition

Reemployment industry	High-import displaced		Medium-import displaced		Low-import displaced	
	Share	Median In earnings change	Share	Median In earnings change	Share	Median In earnings change
High import-competing:						
Electrical machinery	0.069	0.006	0.018	-0.066		
Apparel and accessories	0.062	-0.047				
Motor vehicles	0.039	0.032	0.020	-0.117		
Electronic computing equipment ^a	0.026	-0.001				
Radio and television	0.025	0.105				
Medium import-competing:						
Machinery, except electrical ^a	0.026	-0.023	0.045	-0.023		
Furniture and fixtures			0.024	-0.023		
Aircraft ^b			0.017	-0.041		
Sawmills			0.020	-0.024		
Low import-competing:						
Newspaper publishing					0.016	-0.045
Printing, publishing ^a					0.084	0
Fabricated structural metals ^a					0.040	0.017
Nonmanufacturing:						
Construction	0.036	-0.086	0.065	0.053	0.049	0
Eating and drinking places	0.031	-0.301	0.028	-0.253	0.026	-0.466

a. Denotes "balanced" exporter.

b. Denotes "unbalanced" exporter.

Note: Shares and median earnings not reported for cells with fewer than 50 observations.

Source: Author's calculations from Displaced Worker Surveys, 1984-2000.

workers regain employment in the same industries where they lost their jobs. This suggests a high level of churning, where jobs are lost in some firms to import competition while the process of normal turnover in other firms continues to produce employment opportunities.

Yet, summed up, the actual share of workers reemployed in these large industries is quite small. This means that reemployment occurs in virtually every industry to some degree, suggesting considerable reallocation. In each of these industries, both reemployment shares and absolute numbers are small: 0.5 to 1 percent, or 30,000 to 60,000 workers.

The table also reports median earnings changes for the (weighted) set of workers reemployed in this limited set of industries. The main point from figures 6.1-6.3 also is in evidence here: Employment within the narrow set of old industries reduces earnings losses. Workers employed in electrical machinery and motor vehicles, at the median, earn as much

or more on their new jobs as they did before displacement. Although speculative in nature, we can presume that these workers were displaced from jobs in these industries, and thus reemployment in the same industry minimizes earnings losses. Even import-competing displaced workers reemployed in apparel, a low-wage industry, experience relatively small earnings losses (4.7 percent). Such workers retain some part of the specific components of their earnings: their specific skills, union rents, efficiency wages, or positions in internal labor markets. The same pattern of reduced earnings losses (under 5 percent), with reemployment in a handful of manufacturing industries, is true across the board for displaced manufacturing workers.

Conversely, half of import-competing displaced workers are reemployed outside manufacturing. These workers are reemployed, in relatively small numbers, throughout wholesale and retail trade and services. Eating and drinking places represent the largest single reemploying industry, by share, and these workers suffer earnings losses in the range of 25 to 46 percent. This group represents about 10 percent of reemployed manufacturing workers, regardless of the level of import competition. This concentrated group of workers represents the clearest view of the costs of labor reallocation following import-competing job loss.

Looking further at reallocation, export-oriented manufacturing industries are only modestly represented among the largest reemploying industries. Table 6.2 indicates whether industries are balanced or unbalanced exporters, and despite some of considerable size, not much reemployment occurs there for import-competing displaced workers. Computers and machinery are the only reemploying industries of significant size that are exporters (yet also importers). A number of factors could play a role here: import-oriented industries tend to be in different geographical regions than export-intensive industries; workers in export-intensive industries have different observable characteristics from import-competing displaced workers (more workers have college degrees); and unobservable differences, such as the nature of the manufacturing processes (as in “new” manufacturing) might limit the ability of import-competing displaced workers to become reemployed in exporting industries.

Earlier displacement research encourages one more step, the consideration of reemployment in the same industry.³ This research shows clearly that reemployment in the same industry is very important for reducing earnings losses. As shown in tables 6.1 and 6.2, same-industry reemployment is a minority outcome, but still a sizable minority. For manufacturing as a whole, about 19 percent of reemployed workers are back in the same 3-digit industry. Import-competing displaced workers are basically no

3. See Kletzer (1998b).

Table 6.3 Reemployment in the same detailed (3-digit) industry, by level of import competition

Level of import competition	Reemployed in same industry	
	No	Yes
High		
Number of workers	4,278,019	1,029,696
Share	0.806	0.194
Median earnings change	-0.0921	0
Mean earnings change	-0.1999	-0.019
Median weeks jobless	8.0	6.0
Medium		
Number of workers	4,948,143	1,049,606
Share	0.825	0.175
Median earnings change	-0.1059	-0.0214
Mean earnings change	-0.1863	-0.0066
Median weeks jobless	8.0	4.0
Low		
Number of workers	2,015,606	519,747
Share	0.795	0.205
Median earnings change	-0.0715	0
Mean earnings change	-0.1533	-0.079
Median weeks jobless	6.0	4.0
Nonmanufacturing		
Number of workers	16,598,400	5,801,600
Share	0.741	0.259
Median earnings change	-0.0155	0
Mean earnings change	-0.0709	-0.0372
Median weeks jobless	4.0	2.0

Note: Changes in earnings are changes in \ln (earnings).

Source: Author's calculations from the Displaced Worker Surveys, 1984-2000.

more or less likely to be reemployed in the same industry as other manufacturing workers.

Table 6.3 reports the number, shares, and earnings changes for workers reemployed in or changing detailed industry. For all workers, a change of industry is associated with much larger earnings losses. Regaining employment in the same industry is associated with small or no earnings losses, at the median and the mean. For the import-competing displaced group, half of workers who return to the same industry report no earnings losses or a gain. Mean earnings losses are about 2 percent, about \$8 a week for the average import-competing displaced worker using predisplacement earnings. At the same time, about 14 percent of high import-competing same-industry returnees report earnings losses greater than 30 percent. Reemployment in the same detailed industry does not guarantee that earnings will not be reduced, but it greatly reduces the average loss (from nearly 20 to 2 percent) and it greatly reduces the likelihood of very large earnings losses (from 34 to 15 percent).

The experience of workers who change 3-digit industry is very different. For the import-competing displaced group, half of all those who change industry have earnings losses greater than 10 percent, with the mean change a loss of 20 percent. If judged against old earnings, the loss is about \$81 a week, or \$4,200 a year. Thirty-four percent of these workers experience an earnings loss of more than 30 percent.

Larger earnings losses for those who change industry may not necessarily reflect solely the loss of specific skills. Other factors—such as efficiency wages, union wage premiums, incentive pay schemes, or internal labor markets—may also account for the earnings losses. It is somewhat difficult to separate the influence of a specific industry from the influence of remaining in manufacturing. For displaced manufacturing workers reemployed in manufacturing, average earnings losses are smaller for those who gain reemployment in the same 3-digit industry, relative to those who change industry. The mean earnings change for those who change manufacturing industry is -7.0 percent, and the mean earnings change for those who stay in a manufacturing industry is -2.5 percent.⁴

Who are the workers who return to the same industry? It is difficult to say much with confidence, because statistical models estimating the probability of returning to an industry have weak predictive power. There is some evidence that middle-aged workers with less formal schooling and longer job tenure are more likely to remain in their old industry. These are the very same worker characteristics that cause concern when we consider labor reallocation, because these are the workers who stand to lose specific components of earnings and for whom retraining may be difficult. Reemployment in the old sector looks to be the best outcome for expected earnings.

Implications for “Trade” and Labor Reallocation

These patterns of reemployment are both expected and perhaps unexpected. The patterns show both considerable reallocation and some maintenance of employment in old industries. They suggest a partial reallocation of labor, one that may be consistent with a short (1-3 year) horizon. It is not at all clear that a complete reallocation should be expected, given the presence of specific factors. The old sectors may be engaged in a form of long-term employment decline, but that process is not uniform across firms or industries. Production continues, normal

4. The one other study to do the same comparison reports different results. Jacobson, LaLonde, and Sullivan (1993) find for manufacturing workers that 6 years after separation, earnings losses are about the same (18-20 percent), with or without changes in 4-digit SIC industry, if reemployment is in the manufacturing sector.

turnover continues, and some employment opportunities remain open. For workers with specific skills, reestablishing a spot in manufacturing makes sense; it minimizes earnings losses. It also suggests avenues for reemployment efforts that do not involve formal (re)training. At the same time, the pattern of reemployment, particularly for manufacturing workers, shows that when workers are reallocated, it is at considerable cost.

These results also suggest that a uniform manufacturing-to-services view of labor reallocation is simplistic. Rather than thinking that entire industries are in decline, it is more realistic to think that some firms or activities in an industry decline while others start up or expand.⁵

This pattern is not a result of using a faulty definition of import-competing displacement. The working definition used here yields a set of industries that have faced consistently strong import competition. Import share is high and has risen, for the most part steadily, during the past 20 years. In addition, these industries overlap almost completely with the industries that account for most of the NAFTA-TAA certifications. These are not industries where the permanence of steady import competition is in question.

5. The variation within industries is best analyzed using firm- or establishment-level data. See Bernard and Jensen (1995) and the research summarized in Lewis and Richardson (2001).