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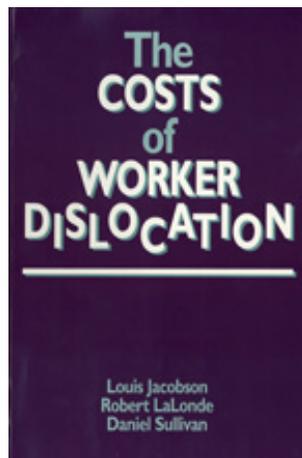
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## Introduction

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**The Costs of Worker Dislocation**

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# 1

## Introduction

The high U.S. unemployment rates brought on by the recent recession have refocused the attention of policymakers on the plight of displaced workers—workers whose job losses result from layoffs and plant closings associated with economic restructuring. The causes of such restructuring are varied and include shifts in product demand, changes in technology, or even poor management. Although the economy as a whole benefits when restructuring occurs, most would agree that some costs are imposed on the workers who lose their jobs. There is, however, a substantial range of opinion about the magnitude of those costs. Some view displacement as a temporary setback from which workers easily recover, while others believe it to be nearly catastrophic, causing large, permanent reductions in workers' earnings. In this monograph we add to the existing literature by more precisely estimating the magnitude and temporal pattern of the earnings losses of displaced workers.<sup>1</sup>

In addition to economic restructuring, changes in public policy may also lead to worker dislocation. Concern over that possibility has been prominent in the debate over the free-trade agreement with Canada and Mexico.<sup>2</sup> It is clear that consumers will benefit from such an agreement. But, some workers are likely to lose their jobs as a result of increased competition. Likewise, controversies over environmental protection often involve similar trade-offs. The benefits associated with protecting the spotted owls in Pacific Northwest forests,<sup>3</sup> the salmon in Washington State rivers,<sup>4</sup> and the snaildarter in Tennessee waterways<sup>5</sup> all come at the cost of lost jobs. As with economic restructuring, society as a whole may benefit from such public policies, but costs are imposed on the workers who lose their jobs.

There are two reasons why policymakers are interested in the magnitude of losses suffered by workers. First, whether they actually will want to intervene in the economy may depend on the magnitude of losses borne by displaced workers. Such considerations are especially likely to arise when policymakers undertake interventions to protect

the environment. In such instances, it is often not clear whether the benefits of their actions exceed the costs. A second reason for such interest in the losses of displaced workers is that even when, as in most cases of proposed trade liberalization, society derives net benefits from the intervention, policymakers may want to compensate those who are displaced. They may want to provide this compensation because they believe that “fairness” requires it or because they believe that compensating displaced workers is the only politically feasible way to bring about change.<sup>6</sup>

### 1.1 Policies to Aid Displaced Workers

Policymakers have, in fact, long recognized that dislocation may be costly and have attempted to ameliorate the losses of displaced workers through a series of federally funded programs that have provided these workers with both cash and retraining services. In the late 1950s and early 1960s, the concern was primarily with workers whose joblessness resulted from automation.<sup>7</sup> The Area Redevelopment Act of 1959 provided training and relocation assistance to such workers. That legislation was followed by the Manpower Development and Training Act of 1962 which provided expanded classroom and on-the-job training opportunities to displaced workers. In the 1970s, concern shifted from the effects of automation to those of foreign competition. As a result, in 1974 Congress relaxed eligibility requirements for Trade Adjustment Assistance under the Trade Act (Leigh 1990, pp. 92-94). Those changes allowed the Secretary of Labor to authorize compensation for large numbers of workers who had lost their jobs as a result of import competition rather than explicit trade liberalizations.

More recently, policymakers’ attention has been drawn to what are perceived to be the special problems experienced by workers displaced from the manufacturing sector—a sector that experienced a permanent employment loss of approximately 1.5 million net jobs during the 1980s (Economic Report of the President 1991: 334, table B-43). The high unemployment rates experienced by such job losses are largely due to substantially longer unemployment spells (Murphy and Topel 1987, pp. 24-26). Evidence indicating that prime-age males were hav-

ing difficulty adjusting to their job losses was an important consideration in Congress' decision to include a job training component in the TAA program and to expand services under the Job Training Partnership Act of 1982 with the Economic Dislocation and Worker Adjustment Assistance Act of 1988 (Leigh 1990: 93-94). As a result of that legislation, during fiscal year 1991, the federal government spent nearly \$1 billion specifically to aid displaced workers (U.S. Office of Management and Budget 1991).

As we discuss more fully in subsequent chapters, the most effective mix of cash subsidies, retraining opportunities, and job search assistance depends critically on such factors as the relative importance of unemployment in determining displaced worker losses and whether the displaced are likely to find work similar to their former jobs. The research presented in this monograph is intended to shed light on these questions and thus to aid in the formulation of cost effective assistance programs. We also investigate whether the special concern for displaced manufacturing workers is warranted by the uniqueness of their experiences.

## 1.2 Why Job Loss May Be Costly in the Long Run

Clearly, job loss adversely affects workers in the short term if they are forced into unemployment while searching for a new job. However, longer term losses can only result from displacement if workers' earnings with their former employers exceeded what they could have earned with other potential employers. There are several reasons why workers could have received such earnings premiums on their former jobs. First, firm and industry earnings premiums may result when jobs are covered by a collective bargaining agreement. A great deal of evidence indicates that unionization raises workers' wages (Lewis 1986, pp. 9, 125-28). Further, unionized firms may find it profitable to maintain relative wage differentials between various classes of workers and thus may respond to the unionization of one segment of their workforce by paying wage premiums to all their employees (Hirsch and Addison 1986). Similarly, these earnings premiums may become industrywide when the industry's nonunion firms, fearing unionization,

respond to collective bargaining settlements of rivals by raising their own workers' pay. Therefore, the earnings loss associated with worker separations depends partially on the magnitude of the union wage gap and on whether displaced workers are able to find new jobs in similarly unionized industries.

Earnings premiums may also arise in competitive (nonunion) labor markets if workers have skills that enhance their productivity with their current employer, but are less valued by other potential employers. For instance, both firms and workers may desire long-term employment relationships in order to recoup investments in skills that are specific to the firms. The most effective mechanism for assuring the continuance of such relationships is for the firm to pay workers more than they would receive elsewhere (Becker 1975). Moreover, paying earnings premiums may be profitable even when workers have not acquired their specialized skills on the job. Some employees' skills may simply be well matched to a particular employer. In this case, the resulting earnings premiums reflect the considerable costs incurred both by the firm when recruiting and evaluating new employees and by workers when seeking appropriate employment (Jovanovic 1979).

A third reason why earnings premiums may exist is that productivity of workers may depend directly on their pay. For instance, earnings premiums may induce employees to work harder and may discourage them from quitting. In this case, it is profitable for firms to offer premiums as long as their costs are offset by increased productivity. However, offering premiums cannot always be profitable. Otherwise, all firms would attempt to pay them and there would be no premiums. Circumstances that make paying premiums attractive include those involving teamwork and those where monitoring workers' performance is difficult. When workers who earn premiums lose their jobs as a result of restructuring, they are likely to either have to take a new job where earnings premia are not paid or wait in a long queue for a job similar to their old one. In either case they will suffer earnings declines.<sup>8</sup>

A final reason why job loss may result in substantial earnings reductions is the prevalence in certain sectors of the labor market of employment practices that preclude lateral entry. That is, in order to induce employees to work hard and make the necessary investments to enhance their productivity, certain kinds of firms may commit them-

selves to a promotion-from-within policy. Under such a system, new hires always start in entry-level positions, and those who perform well move into higher paying jobs. Should the successful workers be displaced by economic restructuring and subsequently accept employment with a similar firm, they will begin in jobs farther down the promotion ladder. This effective demotion is likely to be associated with earnings losses (Lazear 1981).

Each of the foregoing reasons for why workers may receive earnings premiums implies that workers displaced as a result of economic restructuring or public policy changes may experience earnings losses even after finding new employment. These theories do not, however, provide much guidance about the magnitude of the resulting losses. In addition, they differ in their implications for how long these losses might last. In some cases, such as when the earnings declines result from lost union premiums, they will be permanent. In other cases, such as when the declines result from terminating a good worker-firm match, they may diminish with time. These possibilities indicate that it is important to study how the magnitude of those losses vary with time following workers' separations.

### **1.3 This Study's Objectives and Findings**

In this monograph, we examine the magnitude and temporal pattern of earnings losses suffered by a group of experienced workers who separated from their firms in the early and mid-1980s. We estimate these losses by comparing workers' postdisplacement earnings to their expected earnings had they not been displaced. We also examine how earnings losses depend on various characteristics of the workers and their former employers.

This study is distinguished from others that have examined similar questions by its use of a newly available data set derived from the administrative records of the State of Pennsylvania. This data set contains the quarterly earnings histories of a large number of workers covering the period 1974 through 1986 merged with employment information about their firms. These data have several advantages over those used in previous studies. First, because our sample is larger than

others that have been used to examine the losses of displaced workers, we are able to obtain estimates for more narrowly defined groups of workers and thus are better able to determine the characteristics of workers most severely affected by job loss. Second, because the earnings histories stretch over a longer period of time than those used in previous studies, we are able to learn more about the long-term consequences of job loss. The longer panel also allows us to observe the earnings of displaced workers well before their separations and thus greatly improves our ability to forecast what their earnings would have been had they not been displaced. Third, because we have data on workers' firms, we can examine how the costs of displacement depend on their firm's economic health. And finally, because we also have a large sample of workers who were not displaced during the 1980s, we can construct comparison groups that improve our estimates of how the earnings of displaced workers would have grown in the absence of job loss.

There are, of course, also some disadvantages associated with our use of administrative data. First, we do not know for certain whether a particular separation was a layoff, a discharge for cause, or a quit. The latter two classes of worker separations do not reflect the effects of the economic restructuring that we wish to study, and it is unlikely that they have the same consequences for workers' subsequent earnings.<sup>9</sup> As indicated by the literature, however, quits and discharges for cause decline sharply as tenure with the firm increases (Mincer and Jovanovic 1981). Thus, because we limit our analysis to workers with six or more years of tenure, our sample of separations should consist largely of involuntary layoffs. Moreover, with our data it is possible to identify groups of workers leaving firms experiencing large employment declines. Such separations almost certainly are the result of economic restructuring.<sup>10</sup>

A second disadvantage of our use of administrative data is that we possess only limited demographic information on the workers we study. Our sample is selected so that we know workers' gender and year of birth. However, we do not have access to such standard human capital measures as years of education, nor do we know workers' occupations. Because we rely completely on estimation techniques that exploit our data's longitudinal nature, this lack of demographic information does not lead to any bias in our estimates of the average losses

suffered by displaced workers. However, lack of data does prevent us from analyzing how earnings losses depend on factors such as education and occupation. Similarly, our lack of a measure of hours worked prevents us from studying how displacement separately affects hours of work and wages.

Like other worker dislocation studies, our findings indicate that experienced workers incur substantial earnings losses immediately after they separate from their firms. Much of this initial loss results from increased unemployment. We also show, however, that these losses are generally shared by workers in all demographic groups and most industrial sectors, and more important, that they persist for several years after displacement. Even in the fifth year following separations, we estimate that annual losses of displaced workers average more than \$6,500, an amount equal to more than 25 percent of their predisplacement earnings. During the first six years following their job losses, we estimate that their discounted earnings losses totaled \$41,000. That estimate holds for both older and younger workers, varies only modestly for workers displaced from different industries, and is only slightly lower for women.

Moreover, we find that the earnings of displaced workers begin to diverge from their expected levels two to three years before they leave their firms. This divergence appears to result from reduced hours, cuts in real wages, and increased temporary layoffs in the period before permanent separations. Temporary layoffs, in particular, account for a significant fraction of predisplacement earnings declines. We argue below that these losses likely result from firms' responses to economic restructuring or to policy changes, and therefore they should be included as part of the costs of worker dislocation. When we include their preseparation losses as well as a reasonable estimate of their losses more than five years after separation, the present value of their losses rises to approximately \$80,000.

One implication of our findings is that existing government programs do not, and probably cannot, compensate for more than a small portion of displaced workers' losses. One reason for this is that most of the losses accumulate after they are reemployed, and unemployment insurance benefits, the main form of assistance for displaced workers, do not cover such losses. A second reason that the effectiveness of existing programs is limited is that earnings losses are large even when

displaced workers find new jobs in their old industries. As we argue below, this suggests that existing employment and training programs, including job search assistance, though they might be cost effective, cannot entirely eliminate experienced workers' losses. Another implication of our findings is that, instead of bolstering existing programs, it may be more efficient to assist displaced workers by introducing an income or earnings subsidy.

The remainder of this monograph proceeds as follows: In chapter 2, we review the previous literature on dislocation, with special emphasis on the empirical methods used in these studies and on the evidence of long-term effects of displacement. In chapter 3, we introduce our longitudinal data on Pennsylvania workers and identify several issues associated with estimating earnings losses. In chapter 4, we discuss the statistical methodologies underlying our formal estimates of earnings losses. In chapter 5, we present estimates of the earnings losses incurred by all experienced workers separating from their firms during the early and mid-1980s. In chapter 6, we restrict our focus to workers leaving firms experiencing closings and mass layoffs and show how earnings losses depend on the economic health of workers' former firms, on their former industry, on local labor market conditions, and on whether they found new jobs in their old industrial sectors. Chapter 7 summarizes our findings and discusses their implications for public policy.

## NOTES

1. As noted, there is some difference of opinion on this issue. On the one hand, Michael Boskin, Chairman of the President's Council of Economic Advisers under President Bush, has asserted that the overwhelming bulk of people laid off during the most recent recession would eventually find jobs that pay something close to their former wages (*Chicago Tribune*, September 29, 1991, p. 2). On the other hand, reflecting on debates over policies to aid the jobless, Rudy Kuzel, currently President of United Auto Workers Local 72 in Kenosha, Wisconsin, remarked that, "They cut people's throat in this country and then they argue about what size Band-Aid to apply" (*Chicago Tribune*, October 2, 1991, p. 15). We suspect that such fundamental disagreement over the seriousness of job loss underlies much debate over appropriate public policy.

2. See, for example, James Carville, "Help Those Whom NAFTA Will Hurt," *Washington Post*, July 25, 1993, Section C, p. 7; Elaine S. Povich, "Trade Pact Conditions," *Chicago Tribune*, April 30, 1991, Business Section, pp. 1-5; and D. Corn, "Harkin's Bid," *The Nation*, July 29-August 5, 1991, p. 158. A similar debate occurred when the free-trade agreement with Canada was ratified. See *New York Times*, June 27, 1988, Section D, p. 10; and *New York Times*, January 3, 1988, Section A, p. 12.

3. For instance, in the case of the spotted owls, the costs of preserving their habitat is borne disproportionately by workers in the lumber industry. See "Clinton Pledges 'Balanced' Solution to Forest Policy Crisis in 2 Months," *Washington Post*, May 13, 1993, Section 1, p. 2; and "U.S.: Saving Rare Owl Would Cost 40,000 Jobs," *Chicago Tribune*, April 30, 1991, Section 1, p. 14.

4. See *New York Times*, April 1, 1991, Section A, p. 1; and *Wall Street Journal*, May 16, 1991, Section A, p. 16.

5. See *Science*, February 23, 1979, p. 730; and *Time*, October 8, 1979, p. 105.

6. See Owen and Braeutigam (1978) for a discussion of the possibility that without some mechanism for compensating those who are hurt by regulatory change, all such change would be blocked; and see Cordes and Weisbrod (1979) for evidence that increasing levels of compensation to those who are adversely affected can increase the rate at which public highway building projects are undertaken.

7. See President's Advisory Committee on Labor Management Policy (1962).

8. For alternative versions of this basic model, see Stiglitz (1974); Akerlof (1982); and Shapiro and Stiglitz (1984).

9. See McLaughlin (1991).

10. Indeed, our data probably allow us to identify displaced workers *more* accurately than data sets such as the Bureau of Labor Statistics Displaced Workers Survey, which relies on worker self-reports and is, therefore, subject to recall biases and perhaps to misreporting due to the stigma associated with being discharged for cause. See Topel (1990).