
CHAPTER 7

Special Focus On Labor Transitions

Summary of Findings

The USITC model results in Chapter 2 showed that if all significant U.S. import restraints had been unilaterally removed in 1999, approximately 175,000 FTE workers would be displaced from their current industries and would need to seek employment in industries other than those being liberalized. Approximately 155,000 of these FTE workers would be in the textile and apparel sectors. Based on the experience of similar workers surveyed for the U.S. Department of Labor's (USDOL) Bureau of Labor Statistics, the estimated one-time increase in workers receiving unemployment compensation as a result of removing all significant import restraints is approximately 111,000, equal to about two days' worth of new claims. This estimate takes into account the fact that workers in the affected industries are significantly more likely to receive unemployment insurance. Overall, the measurable effect on aggregate U.S. unemployment of removing all significant U.S. import restraints on a phased-in basis, rather than simultaneously, likely would be too small to measure. About 17,000 net additional FTE workers would be drawn into the labor market nationwide as a result of removing all significant import restraints. Local and regional employment effects may differ, as discussed below.

Potential transition costs of concern to policymakers include lost income during spells of unemployment, unemployment insurance and other transitional assistance, and potential loss of the value of training and experience for workers who switch industries. On average, workers displaced as a result of unilateral U.S. liberalization of all significant import restraints likely would experience longer spells of unemployment than other displaced workers. They would likely receive modestly higher wages in their new jobs than in the jobs they were displaced from, though these increases likely would be less than for other displaced workers economywide. Approximately 10 percent of workers displaced due to unilateral liberalization of all U.S. import restraints likely would experience severe wage decreases, defined as wage cuts of more than 20 percent in their new jobs. The estimated percentage of such workers experiencing severe wage decreases would be lower than that for displaced workers economywide.

The workers who would be displaced in the event of unilateral trade liberalization likely would be concentrated in the Southeast, particularly in the

Carolinas, due largely to the high share of apparel and textile workers among such workers. Relative to other displaced workers economywide, they would more likely be female, belong to minority groups, be older, less educated, and less likely to move after displacement. They would be more likely to leave the labor force after displacement, in part because of the higher proportion of female workers in textiles and apparel and the lower degree of attachment of female workers to the labor force.

Introduction

Chapter 2 presents the results of a modeling exercise designed to estimate the effects of the removal of certain trade barriers in 1999. The estimates indicated that approximately 175,000 net FTE workers would leave employment in one sector and be re-employed in a different sector as a result of the trade liberalization. In addition, an estimated net 17,000 additional jobs would be created due to macroeconomic effects.¹

This chapter seeks to round out the picture provided by previous chapters by focusing on the experience of workers who undergo displacement. It begins by reviewing both the theoretical and empirical literature on the effects of trade liberalization on markets. Under certain assumptions, trade theory makes strong predictions about the relationship between trade and wages, some of which have entered popular discourse on public policy. Until recently, much of the empirical literature has focused on the extent to which international trade affects the average relative wages of skilled and unskilled workers. The availability of large datasets on workers and households affected by involuntary job losses has significantly increased available knowledge of the characteristics of such transitions.

This chapter examines the implications of the modeling results presented in Chapter 2 for the experience of displaced workers. The analysis includes the demographic and geographic characteristics of workers most likely to be displaced by simultaneous removal of all significant U.S. import restraints, the length of time it takes such workers displaced by trade liberalization to find new jobs, the kind and quality of jobs they find, and how the experience of workers affected by potential future liberalization might compare to that of other displaced workers.

Regardless of whether the movement of workers from one sector to another takes place instantaneously, or in a timeless “long run,” from the standpoint of the model it takes place without cost to workers or society. In reality, there are a variety of costs experienced by workers who are displaced from one sector to another:

¹ If the economy were to actually undergo a net contraction of employment of 175,000 FTE jobs in the sectors with significant U.S. import restraints, the gross movement of workers could potentially be larger. A similar observation holds for the net increase of 17,000 FTE jobs economywide.

- Workers experience drops in income during the time they are searching for a new job. These costs are only partially compensated by unemployment insurance or other government programs. The longer the job search, the greater are these costs, and unemployment insurance runs out eventually (usually after 26 weeks). Government expenditures that partially compensate some workers for their job search costs represent non-trivial redistributions within society, if not net social costs.
- Job displacement due to industrial restructuring is often concentrated in certain geographical areas and communities, creating special burdens of adjustment.
- Workers who are eventually re-employed may receive higher or lower compensation than in their previous jobs, thus either offsetting or adding to the burdens imposed during the transition period.
- As a result of being displaced, some workers may leave the labor force due to early retirement, return to homemaking or student status, or simply become discouraged. In the absence of job displacement, workers might not make these choices. Workers may choose to postpone or avoid such changes altogether.²

This chapter makes no attempt to directly estimate the total costs of potential worker displacement associated with a simultaneous removal of all significant U.S. import restraints, or to weigh the various costs and benefits of such liberalization. Instead, the examination of the transition experiences of displaced workers aims to shed some light on the nature of such costs. The potential limitations both of the scope of the analysis and of the analytical methods used are indicated throughout the chapter, as appropriate.

Review of Literature

The analysis in this chapter of the relationship between trade policy and employment or wages relies heavily on data describing the experiences of individual workers over short periods of time. The body of literature utilizing such data is relatively small, and provides a different perspective from the more common ways of discussing the relationship between trade and labor, from the standpoints of either economic theory or empirical generalization. This section first reviews the traditional theoretical and empirical analysis of trade and labor, and then turns to those studies of displacement of individual workers in trade-sensitive industries, which provide the closest parallels to the present study.

² By contrast, the model estimates only the net change in FTE employment economywide and sector-by-sector, and thus generates no estimates of the number of workers leaving the labor force as the result of a policy change. In addition, the model assumes that all workers in the U.S. economy receive the same increase or decrease in their real wages. This assumption likely would not be validated in the effect of an actual liberalization.

Trade Theory and Wages

The best-known statements from trade theory about wages come from the Heckscher-Ohlin (H-O) model, a widely-used workhorse of academic theory.³ This model, in its simplest form, describes a situation with two countries, two goods, and two factors or inputs into the production process. The two factors are usually described as labor and capital, and can also be usefully thought of as *skilled labor* and *unskilled labor*. One result of this model, the Factor-Price Equalization Theorem, states that if countries that share the same technology engage in international trade, and if trade equalizes prices, then the rewards to labor and capital (or skilled labor and unskilled labor) will be equalized in the trading countries. The intuition underlying this theorem is consistent with the popular notion that free trade would cause U.S. wages to fall to the much lower world average wage.

Conditions in the real world diverge sharply from the strict theoretical assumptions required for the Factor-Price Equalization Theorem to hold. The most important of these is that international differences in technology are in fact large, so that higher wages in general prevail in countries with superior production technology. It is now widely recognized that the ability of the H-O model to predict trade patterns is relatively weak, but improves markedly once international differences in technology and consumer preferences are recognized.⁴ The tendency of consumers to prefer goods produced in their home countries, observed clearly in the data but excluded in the simple version of the H-O model, generates another force holding wages high in advanced-technology countries.⁵ Even under free trade, such as the deep

³ For a basic discussion of the Heckscher-Ohlin model, see Paul R. Krugman and Maurice Obstfeld, *International Economics: Theory and Policy*, 5th edition (Reading, MA: Addison-Wesley, 2000), pp. 66-91, 729-731; Richard E. Caves, Jeffrey A. Frankel and Ronald W. Jones, *World Trade and Payments: An Introduction*, 9th edition (Boston: Addison-Wesley, 2002), pp. 107-128, S-23 to S-27; and James R. Markusen, James R. Melvin, William H. Kaempfer and Keith E. Maskus, *International Trade: Theory and Evidence*, International Edition (Boston: McGraw-Hill, 1995), pp. 98-126, 445-451. For more detailed explanations, see Jagdish Bhagwati, Arvind Panagariya and T.N. Srinivasan, *Lectures on International Trade*, 2nd edition (Cambridge, MA: MIT Press, 1998), pp. 53-90, 107-130; and Kar-Yiu Wong, *International Trade in Goods and Factor Mobility*, (Cambridge, MA: MIT Press, 1995), pp. 23-138. Wong intermingles the treatment of the Ricardian, Heckscher-Ohlin, and specific factors models.

⁴ Daniel Trefler, "The Case of the Missing Trade and Other Mysteries," *American Economic Review*, vol. 85, No. 5, (December 1995), pp. 1029-1046.

⁵ Other features of the real world that undermine the theoretical conditions required for factor price equalization to hold under free trade are the presence of transport costs, wide variations in the proportions of productive resources in different countries, the presence of scale economies, the possibility that the ranking of goods according to intensity of resource use may differ across countries, and the fact that there really are more than two goods and two productive inputs. See Bhagwati, Panagariya, and Srinivasan, (1998), pp. 86-87.

market integration of the European Union (EU), product prices of identical goods converge slowly or not at all, thus making it less likely that wages will be equalized across countries by free trade.⁶ Nonetheless, the tendency for trade liberalization to cause at least some price convergence across countries means that in principle, some associated wage convergence takes place as well, with the amount and speed of such convergence being a matter for empirical investigation.

Another result from the H-O model which has assumed importance in the debate on trade and wages is the Stolper-Samuelson theorem.⁷ This theorem explains what happens when a country faces altered relative prices for its exports and imports. These alterations can occur when a tariff is imposed or removed or when other fluctuations in world markets alter the terms of trade. When the relative price of one good increases, the economic returns will increase for the factor that is more intensely used in the production of that good. The economic returns to the other factor will decline. For example, if the relative prices of goods using mostly unskilled labor decline relative to the prices of goods using mostly skilled labor, then the wages of unskilled labor should fall relative to the wages of skilled labor, and vice versa. The implication of the Stolper-Samuelson theorem is that if changes in international trade or trade policy affect relative wages, this effect should be transmitted through changes in relative prices of goods moving in a particular direction.

The H-O model assumes that workers in all industries earn the same wage at any point in time, and similarly that capital in all industries earns the same rate of return. A corollary of this is the prediction that if a trade liberalization leads to lower relative prices for unskilled-labor-intensive goods, all affected workers will tend to oppose that liberalization, while all owners of capital (or skilled workers) would tend to support it. In reality, proposals to raise the price of imports tend to be supported actively by both workers and firms in the industry involved. Workers in other industries with similar skill sets and educational levels generally have little comment, positive or negative, about the policy changes.

⁶ Hassink and Schettkat find that the law of one price, which says that identical goods sold in different countries should sell for identical prices once transportation costs are taken into account, is violated for sales of IKEA furniture across the EU. Wolter H.J. Hassink and Ronald Schettkat, "On Price-Setting for Identical Products in Markets without Formal Trade Barriers," Utrecht University Discussion Paper No. 315, (June 2001). Goldberg and Verboven find that it takes between 5 and 8.3 years for European car markets to reduce by half the price differences for identical goods. Pinelopi Goldberg and Frank Verboven, "Market Integration and Convergence to the Law of One Price: Evidence from the European Car Market," CEPR Discussion Paper No. 2926 (August 2001).

⁷ Wolfgang Stolper and Paul Samuelson, "Protection and Real Wages," *Review of Economic Studies*, vol. 9, (1941), pp. 58-73.

This outcome occurs because workers in different industries are in fact different, as is capital equipment used in different industries. These facts are reflected in the specific-factors model, which focuses on differing experiences of workers across industries as trade is liberalized.⁸ The difference between this model and the H-O model is that some factors of production are assumed to be tied to a particular industry and cannot move at all. If trade liberalization leads to increased imports, and the price falls for domestic goods that compete with those imports, capital or labor resources in the import-competing industry that cannot move receive lower rates of return, while immobile resources in the expanded export industry receive higher rates of return. The specific factors model explains why the views of workers and firms about trade liberalization tend to be influenced relatively heavily by industry type, rather than by the particular skills or assets that those firms or workers possess.

The situation in actual labor markets represents an intermediate position between that represented by the H-O model, in which workers can move freely between industries without any change in wages, and the limited labor mobility of the specific factors model. The compensation of workers reflects in part specific job skills or “human capital” acquired in the industries and firms for whom they work. A significant portion of these skills are industry-specific, thus are not worth as much when the worker changes jobs or industries. Other skills are more universally useful. If market conditions generate new opportunities, workers may actually find that their skills are worth more in a different job or industry, and change jobs for that reason. Thus, workers will move from industry to industry depending on the market forces affecting those industries, but may experience significant costs, such as reduced wages. This means that labor markets create significant incentives for workers to remain in their current jobs. Workers generally move from one industry to another only when market conditions change. These changing conditions may be positive, as when better job opportunities arise, or negative, as when jobs are lost in a certain sector.

In summary, international trade theory predicts that for a country rich in physical and human capital such as the United States, which has traditionally placed import restrictions on goods made with less-skilled labor, trade liberalization may lower the returns to less-skilled labor. This prediction, though useful, is made under a simplified set of assumptions that abstract from the rich variety of phenomena occurring in actual labor markets.

Determinants of the Skilled Labor Premium

Since the 1970s, there has been a steady rise in the wages of more-skilled U.S. workers relative to the wages of less-skilled workers. This trend is

⁸ For expositions of the specific-factors model, see *op. cit.*, Krugman and Obstfeld, 2000, pp. 37-65 and pp. 723-728; Caves, Frankel and Jones, 2002, pp. 91-106, and pp. S-17 to S-22; Markusen, Melvin, Kaempfer and Maskus, 1995, pp. 127-141 and pp. 452-464; Bhagwati, Panagariya, and Srinivasan, 1998, pp. 91-106 ff.; and Wong, 1995.

apparent whether workers are compared by education, occupational category, or other proxies of skill. For example, wages of college graduates were approximately 38 percent higher than those of high school graduates in 1979, but were 63 percent higher in 1993.⁹ In 1985, median weekly earnings of males working full time in managerial and professional specialty occupations were 79 percent higher than for operators, fabricators and laborers; by 2000 they earned 104 percent more.¹⁰

Competing explanations for the increase in the skilled-wage premium attribute the growing wage gap either to technological change or to increasing international trade, particularly trade with low-wage countries. Increased imports of goods produced with less-skilled labor might have pushed down the relative wage of such labor, particularly if such imports pushed down the relative price of such goods. Alternately, technical change may have increased the demand for intellectual labor relative to manual labor, for example, for computer skills relative to mechanical skills. This could account for the change in relative wages even in the absence of influences from international trade.

A number of econometric studies have attempted to identify the relative influences of trade and technology in increasing the relative wages of skilled workers over the past two decades. These methods have used a variety of methodological assumptions about the linkage between trade and wages. Regardless of the methodology used, there is a broad consensus among most studies that trade accounts for a relatively small amount of the wage changes and income distribution in developed countries. A recent International Monetary Fund literature review reported that “the consensus of empirical research suggests that increased trade accounts for only about 10 or 20 percent of the changes in wages and income distribution in the advanced economies.”¹¹ Another literature review published by the Institute for International Economics states, “There is a concentration in the distribution of estimates [of the fraction of the increase in the skilled/unskilled wage ratio attributable to trade, immigration, and/or globalization] somewhere in the range of 10 to 15 percent of causation.”¹² However, there are significant outliers on both sides of this estimate. A few studies conclude that virtually all of the rise in the skilled-unskilled wage premium is attributable to international trade, and a

⁹ Gary Burtless, “Widening U.S. Income Inequality and the Growth in World Trade,” Brookings Institution, unpublished manuscript, photocopy, September 1995, as cited in William R. Cline, *Trade and Income Distribution* (Washington, DC: Institute for International Economics, 1997) p. 19.

¹⁰ USITC calculations using Bureau of Labor Statistics data.

¹¹ Matthew J. Slaughter and Philip Swagel, “The Effect of Globalization on Wages in the Advanced Economies,” IMF Working Paper WP/97/43, April 1997, p. 3.

¹² William R. Cline, *Trade and Income Distribution* (1997), p. 139.

few conclude there is no influence of trade on wages.¹³ Usually, most of the rest of the recent increase in earnings inequality is attributed to biased technological progress, i.e., an increase in the demand for skilled labor relative to less-skilled labor. The following observations will serve to indicate the general nature of some of the issues involved in this literature.

Arguing from the Stolper-Samuelson theorem, if imports of unskilled-labor-intensive goods depress U.S. wages of unskilled labor, the relative prices of such goods should be falling. Recent studies suggest that relative prices of unskilled-labor-intensive goods in the United States have not fallen.¹⁴ In light of the Stolper-Samuelson theorem, this finding can then be interpreted as meaning that increased imports have had minimal effect on the wages of unskilled labor. The results of such studies can be sensitive to the sectors considered, particularly to the treatment of industries such as computers for which appropriate price measures are problematic.¹⁵ Studies of this type usually conclude that most of the increase in the skilled-wage premium is due to technological change.

Several criticisms have been made of studies that use product prices to infer the effect of trade on wages. First, the real world deviates from the assumptions of the H-O model, and this can affect the validity of the Stolper-Samuelson theorem. Second, unskilled and skilled labor may not be well-measured by proxies such as production and nonproduction workers. Third, other features of the world changed at the same time as product prices. In particular, the supply of college graduates relative to less-educated workers has increased in recent decades.¹⁶

Other studies attempt to explain changes in relative wages by changes in imports rather than changes in product prices. In this approach, traded goods are considered to embody the labor they obtain in them, with imports representing an addition to the supply of U.S. labor (thus depressing wages) and exports representing a reduction in the supply of U.S. labor (thus increasing wages). The effect of imports is thus analogous to the effect of

¹³ Space does not permit more than a general discussion of the relationship between the methodologies chosen and the results obtained in this body of literature. For additional information, see Cline, 1997; Swagel, 1997; Gary Burtless, "International Trade and the Rise in Earnings Inequality," *Journal of Economic Literature* vol. 33, No. 2, June 1995, pp. 800-878; Robert C. Feenstra, ed., *The Impact of International Trade on Wages* (Chicago: University of Chicago Press, 2000); and J. David Richardson, "Income Inequality and Trade: How to Think? What to Conclude?" *Journal of Economic Perspectives*, vol. 9, No. 3, Summer 1995, pp. 33-55.

¹⁴ Robert Z. Lawrence and Matthew J. Slaughter, "Trade and U.S. Wages: Great Sucking Sound or Small Hiccup?" *Brookings Papers on Economic Activity*, vol. 2, 1993, pp. 161-226.

¹⁵ Jeffrey D. Sachs and Howard J. Shatz, "Trade and Jobs in U.S. Manufactures," *Brookings Papers on Economic Activity*, vol. 1, 1994, pp. 1-84.

¹⁶ William R. Cline, *Trade and Income Distribution*, 1997, pp. 90-92.

immigration. Some studies attempting to infer changes in relative wages from changes in import and/or immigration volumes have estimated relatively high wage effects,¹⁷ while others estimated much smaller impacts.¹⁸ Some of the highest and most controversial estimates assume that imports from developing countries in effect embody the much larger quantity of labor that is actually used to make the goods in developing countries.¹⁹ Such methods attribute nearly all of the relative decline in U.S. wages of unskilled labor to international trade.

The broad thrust of this literature is that changes in technology and educational patterns probably drive most of the recent changes in the U.S. income distribution, with changes in international trade playing a secondary but non-trivial role.

Evidence on the Transition Experiences of Displaced Workers

New insights into the experiences of displaced workers and their relationship to international trade have been obtained from the analysis of large microeconomic datasets on individuals and households. The most comprehensive and publicly accessible of these data sets are the Displaced Workers Surveys, which are supplements to the Current Population Survey conducted by the Bureau of the Census for the Bureau of Labor Statistics (BLS).²⁰ The Displaced Workers Surveys are taken every 2 years and cover adults 20 years of age and older who have been involuntarily separated from their jobs other than for cause. The survey also contains information about the demographic characteristics of workers, the industries they leave, and whether or not they are re-employed at the end of the survey period.

¹⁷ George J. Borjas, Richard B. Freeman, and Lawrence F. Katz, "How Much Do Immigration and Trade Affect Labor Market Outcomes?" *Brookings Papers on Economic Activity*, vol. 1, 1997, pp. 1-67.

¹⁸ Lawrence F. Katz and Kevin M. Murphy, "Changes in Relative Wages 1963-1987: Supply and Demand Factors," *Quarterly Journal of Economics*, vol. 107, No. 428, February 1992, pp. 35-78; George J. Borjas and Valerie A. Ramey, "Foreign Competition, Market Power, and Wage Inequality: Theory and Evidence," National Bureau of Economic Research Working Paper No. 4556, December 1993.

¹⁹ This approach is associated with Adrian Wood, e.g. in *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World* (New York: Oxford University Press, 1994).

²⁰ See U.S. Department of Commerce, Bureau of Labor Statistics, found at Internet site <http://www.bls.census.gov/cps/dispwkr/dispwkr.htm>, retrieved on June 10, 2002. A related series, the Mass Layoff Statistics, tracks employers, identified on the basis of unemployment claims, that have laid off 50 or more workers for a period of 31 or more days. Found at Internet address <http://www.bls.gov/mls/home.htm>, retrieved on June 10, 2002.

In a recent analysis of the Displaced Workers Surveys, Lori Kletzer identifies the differences between the displacement experiences of workers in a group of import-competing industries and workers in general.²¹ Import-competing industries are defined as those with a large or increasing U.S. market share of imports during 1979-94. According to Kletzer, during 1979-1999, an estimated 6.4 million workers were displaced from such import-competing industries, and were concentrated in electrical machinery, apparel, motor vehicles, nonelectrical machinery, and blast furnaces. It should be noted that only about 25 percent of these workers are in industries facing significant import restraints as examined in this study and enumerated in Chapter 2. Kletzer's definition of import-competing industries includes textiles, apparel, footwear, leather products, watches and clocks, and pottery and related industries, each of which faces significant import restraints for some or all items. It also includes a significant number of workers in electrical and non-electrical machinery, computers, motor vehicles, and other industries for which import restraints are small or negligible.

In Kletzer's analysis, import-competing displaced workers share many characteristics with other displaced workers. Compared with other displaced manufacturing workers, these workers are approximately equal in educational attainment and job tenure, slightly older, and significantly more likely to be female.²² Import-competing displaced workers are slightly less likely to be re-employed than other displaced manufacturing workers as of their survey date, in part due to the lower re-employment rates of displaced females.²³ Earnings experiences of import-competing displaced workers vary widely, with about 36 percent of such workers reporting earning the same or more on their new jobs and 25 percent of such workers reporting earnings losses of 30 percent or more.²⁴ These experiences are similar to those for other displaced manufacturing workers. Kletzer's estimates imply a loss in wages of 12.4 percent for manufacturing workers in industries with high import competition to a loss in wages of 8.2 percent for manufacturing workers in industries with low import competition.²⁵ High earnings losses on re-employment are more prevalent among older, less-educated, lower-skilled production workers with longer job tenure, particularly if these workers change industries when

²¹ Lori G. Kletzer, *Job Loss from Imports: Measuring the Costs* (Washington, DC: Institute for International Economics, 2001).

²² While 37 percent of all displaced manufacturing workers are female, the female share of displaced workers reaches 80 percent in apparel, 76 percent in knitting mills and 66 percent in footwear. This is largely explained by the high female share of employment in those industries.

²³ Survey-date re-employment rates are 63.4 percent for import-competing displaced manufacturing workers, 65.8 percent for all displaced manufacturing workers, and 56.2 percent for females.

²⁴ Lori G. Kletzer, *Job Loss from Imports: Measuring the Costs*, (2001) Table 3.3, pp. 36.

²⁵ Kletzer (2001) and USITC calculations.

they find new jobs. Contrary to popular belief, approximately 50 percent of import-competing workers are re-employed in manufacturing. Only about 10 percent go to retail trade, and the rest go to other sectors of the economy.

As shown in previous chapters, the largest category of workers facing potential job displacement as a result of unilateral U.S. import liberalization are in the textile and apparel sectors. Alfred Field and Edward Graham analyze the displacement experiences of these workers in North Carolina, which accounts for one-third of U.S. textile employment and 8 percent to 10 percent of U.S. apparel employment.²⁶ Their data were obtained from the Employment Security Commission of North Carolina as part of the Project on Mass Lay-offs and Plant Closings of the USDOL. The data used in the Field and Graham study covered the experiences of approximately 35,000 workers, including 7,500 textile and apparel workers, who lost their jobs as a result of mass lay-offs or plant closings between the third quarter of 1986 and the fourth quarter of 1991 and, if re-employed, found new jobs by the first quarter of 1992. These workers were identified as a result of filing for unemployment compensation in North Carolina.

The average duration of unemployment for apparel workers was 2.3 quarters; for textile workers, 2.1 quarters; for workers in other manufacturing, 1.9 quarters; and for non-manufacturing workers, 2.5 quarters. Apparel workers who were re-employed experienced an estimated average 5 percent wage increase if re-employed by the same industry and 34 percent wage increase if employed by other industries. This increase in wages contrasts with the findings of Kletzer, who reports earnings losses for workers in apparel and knitting mills on re-employment.²⁷ The differences in results have a variety of potential explanations, including geographic and time coverage of the sample, the effects of sample truncation at the end of the period, and the way wage data were collected. The Field and Graham study relies on industry average wages as proxies for re-employment wages, while the Displaced Workers Survey relies on workers' self-reporting of wages in the old and new jobs. For textile and apparel workers in particular, the number of actual observations available to Field and Graham was much larger than that available through the Displaced Workers Survey.

²⁶ Alfred J. Field and Edward M. Graham, "Is there a Special Case for Import Protection for the Textile and Apparel Sectors Based on Labour Adjustment?" *The World Economy*, vol. 20, No. 2 (Mar. 1997), pp. 137-157.

²⁷ Kletzer (2001) pp. 38-39. The estimated median (mean) declines in weekly earnings after reemployment were approximately 4 percent (8 percent) in apparel and approximately 2 percent (11 percent) in knitting mills, for a sample covering 1979 through 1999.

Some studies of worker displacement associated with trade make use of data generated in the Trade Adjustment Assistance and NAFTA Trade Adjustment Assistance (TAA and NAFTA-TAA) programs.²⁸ During fiscal years 1995 through 1999, the estimated number of workers covered by certifications under TAA and NAFTA-TAA averaged about 167,000 annually, about 40 percent of which had been employed in textiles and apparel.²⁹ The eligibility criteria for these programs have changed over time and relate primarily to increases in imports. In the case of NAFTA-TAA, eligibility criteria also changed for the relocation of production facilities from the United States to Canadian or Mexican locations. Program eligibility requirements dictate that only a subset of those workers experiencing displacement due to increases in imports is likely to be identified in program data, and; these workers may have different characteristics from all import-displaced workers.

None of these above studies of import-competing displaced workers is designed to identify workers who were displaced specifically as a result of a specific trade policy action. The section that follows addresses the issues involved in linking specific trade policy changes to effects on job displacement.

Estimated Effects of Simultaneous Liberalization of Import Restraints on Displaced Workers

The modeling results from Chapter 2 showed that simultaneous liberalization of all significant U.S. import restraints in 1999 would result in the displacement of 174,784 net FTE workers who would eventually relocate to other sectors. Nearly 90 percent of these workers would be displaced from textile and apparel jobs. This chapter uses data from a variety of sources to estimate the consequences to workers of displacement resulting from import restraint liberalization,³⁰ as well as the consequences for U.S. labor markets in general. In particular:

²⁸ Recent analyses of these programs are contained in a series of GAO reports to the Chairman and Ranking Minority Member, Committee on Finance, U.S. Senate: “Trade Adjustment Assistance: Trends, Outcomes, and Management Issues in Dislocated Worker Programs,” GAO-01-59 (October 2000); “Trade Adjustment Assistance: Impact of Federal Assistance to Firms is Unclear,” GAO-01-12 (December 2000); and “Trade Adjustment Assistance: Experiences of Six Trade-Impacted Communities,” GAO-01-838 (August 2001).

²⁹ GAO, “Trade Adjustment Assistance: Trends, Outcomes, and Management Issues in Dislocated Worker Programs” (October 2000), p. 9.

³⁰ Technical details underlying the data and calculations in this section may be found in appendix G.

- Estimates of the geographic distribution of IR displaced workers are generated by matching the estimated number of IR displaced workers by industry with geographic data from the State and Area Employment, Hours and Earnings series of the Current Employment Survey, published by the U.S. Department of Labor, Bureau of Labor Statistics (BLS), and from the 1997 Economic Census of the USDOC, Bureau of Census.
- Estimates of the post-displacement experiences of IR displaced workers, including length of time before re-employment, probability of re-employment, and difference between wages in old and new jobs, are generated by using the estimated number of IR displaced workers by industry in conjunction with data from the Displaced Workers Surveys for 1998 and 2000, which cover workers displaced during 1995-99. The post-displacement experiences of these workers are estimated using survey data on workers actually displaced from the same industries during 1995-99, and are compared with the experiences of all displaced workers in the U.S. economy during the same time period.
- Estimates of other demographic and job-related characteristics of IR displaced workers are generated in the same manner as the estimates of the post-displacement experiences. Demographic characteristics of workers include such variables as age, sex, race, educational status, marital status, and whether or not the worker is identified as Hispanic. Job-related characteristics include length of tenure on the lost job, reason for displacement, whether the worker moved after displacement, whether the worker received unemployment compensation after displacement, or belonged to a union or similar employee organization before displacement.

Estimated Geographic Distribution of IR Displaced Workers

Most industries, including those of concern in the present study, are not scattered evenly across the United States, but show some degree of geographic localization. This localization is particularly strong for some branches of the textile and apparel trades, including weaving and finishing mills; floor covering mills; yarn and thread mills; and hats, caps, and millinery.³¹ Thus, it is reasonable to expect that in the event of the simultaneous unilateral liberalization of all significant U.S. import restraints, the workers displaced would be concentrated disproportionately in certain areas.

³¹ Paul Krugman, *Geography and Trade* (Leuven and Cambridge, MA: Leuven University Press and The MIT Press, 1991), appendix D.

One simple way to estimate the geographic distribution of IR displaced workers is to apportion the estimated number of displaced workers for each industry among the U.S. states according to 1997 state-by-state employment in those industries, as reported in the most recent Economic Census. While this is a good first approximation, it is likely that increased import competition would cause more job displacement among those firms with relatively less efficient or competitive operations. Data from the State and Area Employment, Hours and Earnings series on actual historical job losses can be used to shed light on the relative strength of textile and apparel employment in various states. According to these data, between 1997 and 2001, nationwide employment in textile mill products declined by 19.0 percent, from 618,100 workers to 500,700 workers, and employment in apparel and other textile products declined by 29.6 percent, from 823,600 workers to 586,600 workers.³² The actual rates of job loss by state were not proportionate to the initial number of jobs, and were generally higher in states where employment was heavily concentrated.

Accordingly, two alternate estimates of the geographic concentration of IR displaced workers are presented. Method I assigns workers in textiles and apparel to states in proportion to actual job losses between 1997 and 2001. The assumption made is that if the liberalization had taken place in 1999, the location of workers and firms most affected would be similar to those who experienced actual job losses during that period.³³ Workers in other sectors were assigned to states in proportion to 1997 baseline employment. Method II assigns workers in all sectors to states in proportion to 1997 baseline employment.

Because the data sources used for this calculation do not assign every worker in the United States in every industry to a state or other location, the estimated assignment of displaced workers to states is incomplete.³⁴ In Method I, the locations of all estimated displaced textile and apparel workers in

³² For the industries containing smaller numbers of IR displaced workers (food processing, maritime transportation, tariff-peak industries) nationwide employment variously rose or fell between 1997 and 2001, or cannot be measured with the available data.

³³ For all calculations with respect to the geographic distribution of displaced workers, “textiles and apparel” refers to the industries in SIC 22 and 23, and thus excludes man-made fibers, leather products and leather gloves. These industries are classified as ATC sectors in Chapter 2. Estimated state-by-state job losses for each of the subsectors of textiles and apparel are assumed to be proportional to the percentage job loss in the appropriate aggregate category “textiles” or “apparel” for the nation as a whole.

³⁴ For each industry for which table 2-3 estimates job losses, workers have been assigned to states according to data in the 1997 Economic Census, Bureau of the Census, USDOC. State-by-state employment data for 1999 are from the BLS, Current Employment Statistics, “State and Area Employment, Hours and Earnings” series, and state-by-state job losses in textiles and apparel are from the same series. National total employment for water transportation is from “Current Employment Statistics,” table B1NSA, Employment Situation.

table 2-3 are assigned to states or other jurisdictions, while in Method II approximately 85.4 percent of all displaced textile and apparel workers have been so assigned. For both methods, the coverage ratio is 50.4 percent in sectors other than textiles and apparel. The data do not include geographic distributions for workers in cotton, miscellaneous food preparations, or tobacco stemming and redrying. In aggregate, Method I assigns locations to about 85.9 percent of all displaced workers with estimated job losses, as detailed in table 2-3. Method II assigns locations to approximately 74.3 percent of such workers. Thus, the total of geographically allocated displaced workers listed in table 7-1 is less than the total of estimated job losses for all sectors with declining employment, which is detailed in table 2-3. However, the estimate of total job losses is higher for Method I than for Method II.

Both methods provide a similar percentage of displaced workers by state, but Method I yields a greater geographic concentration of IR displaced workers. Figure 7-1 provides a visual depiction of the results according to Method I. Under Method I, the jurisdictions with the highest estimated ratios of IR displaced workers to all workers are primarily in the Southeast. In descending order, these are North Carolina, South Carolina, Mississippi, Rhode Island, Georgia, Tennessee, Puerto Rico, Virginia, New York, and Kentucky. These 10 jurisdictions would account for approximately 69 percent of all displaced workers that can be geographically assigned according to Method I, and 57 percent according to Method II. Eight of these 10 locations also appear in the top 10 using Method II, which places Alabama in seventh place and California in ninth place. While Alabama and California have a significant amount of apparel and textile employment, actual historical job losses have been relatively mild. The data on actual historical job losses during 1997-2001 concentrates the estimates of IR job losses more heavily in North Carolina, Mississippi, Tennessee, and South Carolina.

When estimated IR job displacement in textiles and apparel are assumed to be proportionate to historical 1997-2001 job losses, the estimated IR job displacement is less than 0.5 percent of total employment in all states except for the Carolinas, where it is 1.14 percent of total employment in North Carolina and 0.73 percent in South Carolina. These estimates drop to 0.72 percent for North Carolina and 0.62 percent for South Carolina when such displacement is assumed to be proportional to baseline employment in each industry.

Estimated Post-Displacement Experiences of IR Displaced Workers³⁵

The Displaced Workers Survey provides information that can be used to assess the relative severity of the displacement experience for different types of workers. It assists in analyzing whether the experiences of workers displaced

³⁵ For details on the construction of the hypothesis tests used in this section, see appendix F.

Table 7-1
Estimated IR displaced workers by state

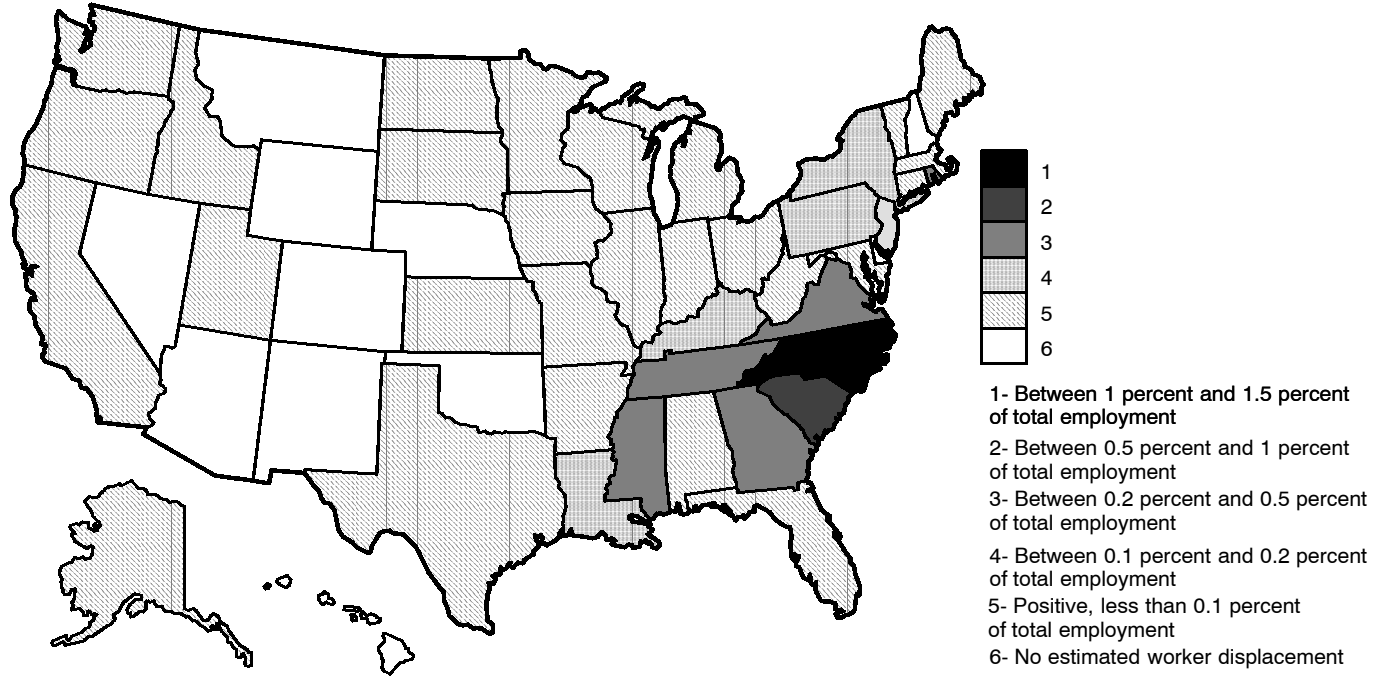
State	State-level total employment in 1999	Estimated IR displaced workers			
		Method I - Textile and apparel based on 1997-2001 job losses	Method II - All industries proportional to 1997 baseline employment	Method I	Method II
	<i>1,000 workers</i>	<i>Number of workers</i>	<i>Number of workers</i>	<i>Percent of total state employment</i>	
North Carolina	3,870.4	43,946	27,775	1.14	0.72
South Carolina	1,830.6	13,339	11,440	0.73	0.62
Mississippi	1,153.2	3,791	2,170	0.33	0.19
Rhode Island	450.0	1,276	995	0.27	0.21
Georgia	3,883.1	10,059	10,421	0.26	0.27
Tennessee	2,685.4	6,594	3,625	0.26	0.27
Puerto Rico	1,009.0	2,330	1,752	0.23	0.17
Virginia	3,231.8	7,005	4,438	0.21	0.13
New York	8,067.1	16,836	11,885	0.20	0.14
Kentucky	1,795.5	2,642	2,027	0.15	0.11
New Jersey	3,901.1	5,604	4,084	0.14	0.10
Pennsylvania	5,586.1	7,104	5,801	0.13	0.10
Louisiana	1,896.2	2,401	2,240	0.13	0.12
Alabama	1,919.5	1,812	2,714	0.09	0.14
Maine	586.3	544	652	0.09	0.11
Florida	6,827.0	5,826	4,188	0.09	0.06
Texas	9,159.2	7,339	6,394	0.08	0.07
California	13,992.0	11,171	19,185	0.08	0.14
Arkansas	1,104.0	715	548	0.06	0.05
Virgin Islands	41.1	17	17	0.04	0.04
Massachusetts	3,236.8	1,247	2,185	0.04	0.07
Iowa	1,468.6	449	495	0.03	0.03
Washington	2,648.7	709	863	0.03	0.03
Vermont	291.3	74	62	0.03	0.02
Connecticut	1,669.1	390	388	0.02	0.02
Alaska	277.8	64	64	0.02	0.02
West Virginia	726.0	157	119	0.02	0.02
Ohio	5,563.5	1,199	1,797	0.02	0.03
Wisconsin	2,783.9	446	804	0.02	0.03
Oregon	1,575.0	183	352	0.01	0.02
Illinois	5,958.3	684	1,591	0.01	0.03
Utah	1,048.6	42	66	0	0.01
Kansas	1,327.0	38	327	0	0.02
Indiana	2,969.9	65	900	0	0.03
Missouri	2,726.6	35	164	0	0.01

Table 7-1—Continued
Estimated IR displaced workers by state

State	Estimated IR displaced workers				
	State-level total employment in 1999	Method I -	Method II -	Method I	Method II
		Textile and apparel based on 1997-2001 job losses	All industries proportional to 1997 baseline employment		
	<i>1,000 workers</i>	<i>Number of workers</i>		<i>Percent of total state employment</i>	
Minnesota	2,613.0	32	100	0	0
Idaho	538.9	6	13	0	0
Maryland	2,386.5	22	31	0	0
South Dakota	373.2	3	13	0	0
Michigan	4,582.0	28	2,092	0	0.05
North Dakota	323.9	1	1	0	0
New Mexico	729.6	0	0	0	0
Hawaii	616.0	0	0	0	0
New Hampshire	605.8	0	204	0	0.03
Delaware	412.9	0	0	0	0
Nebraska	892.7	0	6	0	0.01
Oklahoma	1,461.9	0	0	0	0
Colorado	2,131.8	0	50	0	0
Montana	380.4	0	17	0	0
Arizona	2,163.1	0	41	0	0
District of Columbia	627.4	0	0	0	0
Nevada	982.9	0	0	0	0
Wyoming	233.0	0	0	0	0
Totals	129,855.3	156,225	135,096	0.12	0.10

Source: USITC calculations.

Figure 7-1
Estimated distribution of import-restraints displaced workers



Source: Commission calculations.

by import restraint liberalization is more or less severe than the experiences of those workers displaced throughout the U.S. economy as a whole. This information includes the length (in weeks) of unemployment for workers who were rehired after displacement, the probability of re-employment by the time of the sample date, the difference in wages between a worker's previous and current job, whether the worker received written notice prior to termination, the reason for displacement, whether the worker received unemployment compensation, and whether the worker moved after displacement.

The following analysis compares workers in those industries most likely to experience a contraction of employment after simultaneous liberalization of all U.S. import restraints to all displaced U.S. workers. It uses workers actually displaced from their jobs in those industries during 1995-99 as proxies for IR displaced workers.³⁶ These differences are summarized in table 7-2.

In interpreting the results of this analysis, it should be noted that although the surveys provide over 11,000 observations of workers who have been displaced during the sample period, only about 440 of these observations pertain to IR displaced workers. Not every worker provided information for every question on the survey, and for particular sub-industries, the count of IR displaced workers is five or fewer in some cases.³⁷ The comparisons of IR displaced workers to all displaced workers are thus sensitive to the estimated shares of displacement by industry as presented in Chapter 2, as well as to the weighting scheme used for individual observations.³⁸

³⁶ Since the Displaced Workers Survey is a stratified sample (workers are sampled with unequal probabilities in order to obtain more information on subcategories of workers of particular interest), the observations in both the sample of all workers and the subsample of IR displaced workers are weighted by the sample weights for each observation provided by the Bureau of Labor Statistics. The subsample of IR displaced workers is then reweighted by the reduction in the number of jobs estimated for each industry in Chapter 2 as a result of simultaneous unilateral liberalization of all significant U.S. import restraints.

³⁷ For example, sugar; carpets and rugs; and plastics, synthetics, and resins, the latter of which corresponds to manmade fibers.

³⁸ As described in appendix F, an alternate weighting scheme was employed that does not utilize the information provided by the Bureau of Labor Statistics on stratified sampling but simply gives each observation in each IR industry the same weight. While most results are robust to changing the weighting scheme, some change significantly. For example, using the alternate weighting scheme, the estimated mean completed spell of unemployment for IR displaced workers increases from 14.02 weeks to 15.56 weeks, the estimated share of black IR displaced workers declines from 19.4 percent to 15.3 percent, and the estimated female share increases from 60.2 percent to 61.8 percent. These results also give an approximate indication of the robustness of the comparisons to changes in the estimated share of worker displacement by industry. The preferred results, reported in the main text, take advantage of the weights on observations in the Displaced Workers Survey reported by the USDOL, BLS as part of their stratified sampling design.

Table 7-2
Difference between post-displacement experiences of IR workers and all workers, 1995-99

	IR displaced workers	All displaced workers
	<i>Percent</i>	
Mean completed spell of unemployment (<i>weeks</i>) . . .	¹ 14.02	10.48
Percent finding new job by survey date	² 64.05	80.41
Ratio of mean wage at current job to mean wage at lost job	² 4.48	8.82
Percent earning wages at current job which are less than 80 of lost job	10.45	12.96
Percent receiving written notice that they would lose their job, plant would close, etc.	¹ 35.44	35.34
Reason for displacement:		
Plant or company closed down or moved	158.22	24.79
Insufficient work	¹ 29.69	21.44
Position or shift abolished	³ 12.10	14.18
Seasonal job completed	10	4.07
Self-operated business failed	10	1.47
Some other reason	10	33.05
Percent moving to different city or county after displacement	¹ 10.54	14.42
Percent receiving unemployment insurance benefits after old job ended	¹ 63.76	38.33

¹ Difference between samples is statistically significant with 99 percent confidence.

² Difference between samples is statistically significant with 95 percent confidence.

³ Difference between samples is statistically significant with 90 percent confidence.

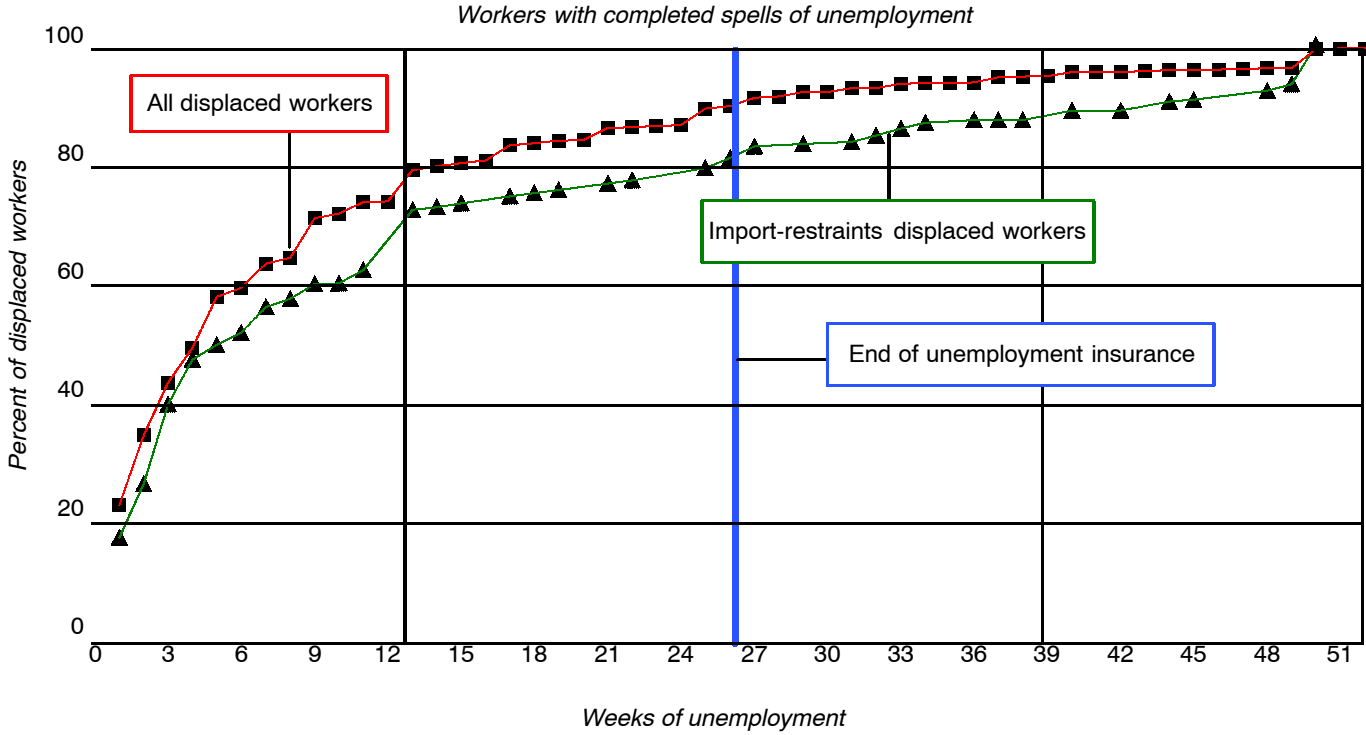
Source: Displaced Workers Survey, BLS, USDOL, found at www.bls.census.gov/cps/dispwkr/dispwkr.htm, retrieved Dec. 31, 2001 and USITC calculations.

The estimated periods of unemployment are somewhat longer than average for IR displaced workers, averaging 14.02 weeks, compared with 10.48 weeks for all displaced workers. Figure 7-2 illustrates the distribution of periods of unemployment for all displaced and IR displaced workers.

Approximately 10.5 percent of all displaced workers and an estimated 19.7 percent of IR displaced workers have periods of unemployment exceeding the 26 weeks at which unemployment insurance is usually exhausted. The estimated share of IR workers who found jobs at the time of the survey is 64.1 percent, compared with 80.4 percent for all displaced workers.

These statistics appear to suggest that IR displaced workers have a harder time finding re-employment than other workers. In interpreting these comparisons, several cautions are in order. The data on periods of unemployment are probably more useful than those on the percentage of workers who have been rehired. The probability of rehire measure the number of workers as of the survey date (February 1998 or February 2000) as a share of all those workers displaced during the period when workers were surveyed

Figure 7-2
Cumulative weeks of unemployment



Source: Displaced Workers Survey, BLS, USDOL, found at www.bls.census.gov/cps/dispwkr/dispwkr.htm, retrieved Dec. 31, 2001, and USITC calculations.

(1995-97 or 1997-99). Thus, workers laid off just before the survey date will not have been rehired but may experience only short periods of unemployment. This possibility cannot be checked directly because the survey does not reveal the date of displacement with precision, and because about one-third of displaced workers report being displaced and rehired more than once.³⁹

Moreover, a displaced worker who has not found a job by the survey date may not be unemployed at all. This worker may have left the labor force for a variety of reasons. Such persons include retirees, homemakers, students, and discouraged workers who leave the labor force.

Table 7-3 shows the labor force status of displaced workers at the time the survey is taken. The percentage of IR workers not in the labor force is significantly higher than for all displaced workers. At least part of the difference between labor force attachment rates, and thus employment probabilities at the time of the survey date, relates to differing characteristics of workers in different industries. As will be seen below, a higher number of IR displaced workers are female. The percentage of female workers in the apparel industry is particularly high. As the table shows, when workers with more similar characteristics are compared (e.g. comparing only female workers, or only married female workers with the spouse present) the difference in labor force exit rates between IR displaced workers and all displaced workers decreases.

Table 7-3
Labor force status of IR displaced workers and all displaced workers, 1995-99

	IR displaced workers	All displaced workers
	<i>Percent</i>	
Percent employed at time of survey	159.2	72.3
Percent unemployed at time of survey	19.9	10.4
Percent not in labor force at time of survey	126.7	14.8
If female	130.1	20.8
If female, married, spouse present	26.9	25.5

¹ Difference between samples is statistically significant with 99 percent confidence.

² Difference between samples is statistically significant with 90 percent confidence.

Source: Displaced Workers Survey, BLS, USDOL, found at www.bls.census.gov/cps/dispwkr/dispwkr.htm, downloaded Dec. 31, 2001 and USITC calculations.

³⁹ The length of unemployment period refers to the first period of unemployment, for which the data are most extensive.

On average, both IR displaced workers and all displaced workers are earning more in their current jobs than in the job they left: 8.8 percent more for all displaced workers and 4.5 percent more for IR displaced workers.⁴⁰ Again, because some workers have multiple periods of unemployment, this calculation may not be a direct comparison of the difference between the old job and the first new job. The proportion of workers experiencing severe wage decreases (exceeding 20 percent) is estimated to be lower for IR displaced workers (10.4 percent) than for all displaced workers (13.0 percent), but this difference is not statistically significant.

The likelihood that a worker receives written notice before displacement is significantly higher for IR displaced workers than for all displaced workers. IR displaced workers are much more likely to have lost their jobs for reasons associated with permanently reduced demand for their U.S. industries' output, such as the plant or company closing or moving, insufficient work, or their position or shift being abolished. These reasons account for an estimated 100 percent of displacements among IR workers, compared with 70.4 percent of all displacements. IR workers also are significantly more likely to receive unemployment insurance than other workers after their old job ends (63.8 percent for IR workers versus 38.3 percent for all workers), perhaps in part because their reasons for displacement are more likely to coincide with the eligibility criteria for unemployment insurance.⁴¹ IR displaced workers are estimated to be significantly less likely to move geographically after losing their jobs than displaced workers as a whole (10.5 percent of IR workers versus 14.4 percent of all workers).

Estimated Demographic and Job-Related Characteristics of IR Displaced Workers

As Kletzer notes, the reasons for post-displacement outcomes may have less to do with the industry from which the worker was displaced than with characteristics of the workers themselves. She found that both the probability of re-employment and the current wage were higher for displaced workers younger than age 45 and for more-educated displaced workers. Post-

⁴⁰ Neither figure is adjusted for inflation.

⁴¹ The eligibility requirements for unemployment insurance are determined by State law. They include the requirement that the worker have been employed steadily during a base period (in most States, four out of the last five completed calendar quarters prior to the filing of a claim), that the worker be unemployed through no fault of their own (as determined by State law) and other requirements. See the USDOL website at <http://workforcesecurity.doleta.gov/unemploy/uifactsheet.asp>, retrieved on June 7, 2002. Workers on seasonal jobs, self-employed workers, and those displaced for miscellaneous reasons may have a harder time qualifying under such requirements than workers whose plant or firm closes, offers them insufficient work, or abolishes their position or shift.

displacement outcomes also are better for workers with short rather than long tenure on their previous jobs; this effect is clearer and stronger for post-employment wages than for the probability of re-employment. Females and minority workers⁴² were less likely to be re-employed by the survey date, particularly married females displaced from manufacturing. Married females earned lower wages at the time of the survey relative to their previous jobs than other displaced workers.⁴³ Thus, some of the differences in outcomes for IR displaced workers may be associated with their personal characteristics.

Table 7-4 illustrates the estimated differences between personal and employment characteristics of IR displaced workers and all displaced workers from 1995 to 1999. IR displaced workers are estimated to be significantly more likely to be female, significantly more likely to belong to minority groups (particularly Hispanic, black, and Asian/Pacific Islander), significantly less educated than other displaced workers, and more likely to be older (an average of 42.1 years for IR workers versus 38.3 years for all workers). They are equally likely to have belonged to a union or similar employee organization on their previous jobs. A similar majority of all displaced workers (54.3 percent) and estimated IR displaced workers (54.7 percent) are married, with spouse present. The estimated percentage of IR displaced workers who never-married is lower, which is associated with the higher average age of such workers, while the estimated percentages of divorced or separated workers is higher than for all displaced workers. IR displaced workers are estimated to have longer tenure on their previous jobs at 7.1 years than all displaced workers at 4.9 years, which may also be associated with age.

Both Kletzer's analysis and table 7-3 associate particular worker characteristics with lower probabilities of re-employment and lower post-re-employment wages for the population as a whole. On balance, IR displaced workers are more likely than other displaced workers to possess these characteristics, which may explain much of the difference in estimated post-displacement experiences of IR displaced and all displaced workers. This makes it less likely that simply being in an import-sensitive industry causes the displacement experience to be more severe.⁴⁴

⁴² Kletzer (2001) defines minority workers as both nonwhite workers and Hispanic workers. In the Current Population Survey, the identification as "Hispanic" is a nonracial category that may coincide with any race (see footnote 48).

⁴³ For comparison, note that Kletzer (2001) used all Displaced Workers Surveys from 1984-2000, covering workers displaced from 1979-99. While the present study used only the surveys from 1998 and 2000, covering workers displaced from 1995-99, in order to better match the year of the model experiment. Kletzer found that the probability of reemployment in general was significantly higher for workers displaced during 1993-99 than during 1979-92.

⁴⁴ No regression analysis has been performed to see whether any part of the difference in outcomes is attributable to being an IR displaced worker per se.

Table 7-4
Difference between personal and job characteristics of IR displaced workers and all displaced workers, 1995-99

	IR displaced workers	All displaced workers
Age (years)	¹ 42.1	38.8
Sex (percent female)	¹ 60.2	46.8
Hispanic (percent)	¹ 27.8	13.0
Length of tenure on old job (years)	17.1	4.9
Member of union or other similar employee organization on old job (percent)	³ 11.8	9.4
	-----	-----
	<i>Percent</i>	
Education:		
Less than high-school diploma	¹ 33.8	14.0
High-school diploma	¹ 34.8	32.8
Some college	¹ 23.9	31.1
Bachelor's degree	16.3	15.7
Some graduate education	11.8	6.3
Marital status:		
Married-spouse present	54.7	54.3
Married-spouse absent	1.7	1.6
Widowed	2.5	2.1
Divorced	² 16.8	13.1
Separated	16.8	3.5
Never married	117.6	25.3
Race:		
White	174.0	82.3
Black	119.4	13.2
American Indian, Aleut, Eskimo	23.1	1.2
Asian or Pacific Islander	3.5	3.3

¹ Difference between samples is statistically significant with 99 percent confidence.

² Difference between samples is statistically significant with 95 percent confidence.

³ Difference between samples is statistically significant with 90 percent confidence.

Source: Displaced Workers Survey, BLS, USDOL, found at www.bls.census.gov/cps/dispwkr/dispwkr.htm, downloaded Dec. 31, 2001 and USITC calculations.

Other Possible Consequences of Potential Worker Displacement Due to Trade Liberalization

Aggregate Unemployment

The estimated 175,000 workers who would be displaced if all significant U.S. import restraints were unilaterally liberalized is relatively small compared to the size of the economy. It is important to recognize that trade policies under agreements the United States has implemented, such as NAFTA and the Uruguay Round Agreements, are often phased in over periods of 5 to 15 years.

The following calculations with respect to the unemployment rate model the amount of displacement as occurring simultaneously. Although these represent an unrealistic scenario, given the phase-in period normally followed, they can be viewed as an extreme upper bound for evaluating the displacement effects of the liberalization analyzed in this report.

In a typical week, between 300,000 and 400,000 U.S. workers apply for unemployment compensation. Given that an estimated 63.8 percent of IR displaced workers likely would receive unemployment compensation (see table 7-2), the estimated one-time increase in workers receiving unemployment compensation as a result of removing all significant import restraints is approximately 111,000,⁴⁵ equal to about two days' worth of new claims. This estimate takes into account the fact that workers in the affected industries are significantly more likely to receive unemployment insurance, as reflected in the data from the Displaced Workers Survey.

Also, as shown above in the data on periods of unemployment, many workers find jobs within several weeks or months of displacement.⁴⁶ If all 175,000 workers had been laid off simultaneously during 1999, aggregate unemployment would have increased from the average 4.22 percent observed in calendar 1999 to 4.34 percent, with the measured difference being negligible (less than 0.05 percent) within several months after the initial displacement, as many of the displaced workers found work or left the labor force. Local or regional effects, as discussed below, might differ.

As previously stated, such effects mark an extreme upper bound. Not only would an actual liberalization be phased in over a period of time, but both workers and firms likely would anticipate the policy action, also causing the labor market effects to appear gradually. For example, by 1995 it was known that U.S. quantitative restrictions in textiles and apparel were scheduled for elimination in 2005. Worker and firm decisions based on this knowledge may have contributed to the steady declines in employment in those industries in the intervening years.

⁴⁵ This number is derived as follows: (174,784 displaced FTE jobs)* (0.6376) = approximately 111,442. USITC calculation.

⁴⁶ The average duration of unemployment is most likely higher during recessions and lower during expansions. While no direct comparisons of unemployment duration across time were readily available, it is known that displacement rates of long-tenured workers are higher during recession years (Ryan T. Helwig, "Worker Displacement in a Strong Labor Market," *Monthly Labor Review*, June 2001, pp. 13-28; see Table 1) and that the probability of re-employment for workers with similar personal characteristics is higher during periods of prolonged expansion than during recession (Kletzer, 2001, Tables 4.1 and 4.2).

Regional Employment Effects

The estimated differences between the displacement experiences of workers in industries significantly affected by import restraints and other displaced workers may appear relatively mild, considering that the workers in question likely would be concentrated in just those states that have experienced significant contractions in textile and apparel employment in recent years. According to the analysis earlier in this chapter, actual displaced workers in these and other industries affected by import restraints experienced a period of unemployment not much greater than those of other displaced workers and were less likely than other workers to experience severe wage losses exceeding 20 percent. Part of the explanation may lie in the fact that the recent contraction in textile and apparel employment has taken place in parts of the country for which aggregate employment has increased strongly. Thus, displaced workers in textiles and apparel have found alternate opportunities in other industries.

Table 7-5 shows the aggregate change in employment between 1997 and 2001 for those states estimated as having the 10 highest shares of IR displaced workers, as detailed in table 7-1. In all states, aggregate employment grew while employment in textiles and apparel declined. In North Carolina, for example, nearly four jobs were created statewide for every textile and apparel job lost; in South Carolina, nearly three; and in Georgia, Virginia, and New York, more than 10. Thus, many former textile and apparel workers have been looking for, and finding, jobs in relatively strong regional labor markets.

Table 7-5
Aggregate change in employment between 1997 and 2001, selected states

Sector	All nonfarm, except textile and apparel	Textile and apparel
	<i>Thousands</i>	
North Carolina	319.5	-82.0
South Carolina	146.1	-31.0
Mississippi	40.7	-13.7
Rhode Island	41.0	¹ -12.1
Georgia	367.9	-28.7
Tennessee	241.6	-24.1
Puerto Rico	27.1	-8.8
Virginia	317.0	-20.4
New York	557.1	-31.6
Kentucky	117.5	-11.8

¹ Using textile data from 1997-2001 and apparel data from 1997-1999.

Source: USDOL, BLS, "Current Employment Survey," and USITC calculations.

At the local level, labor dislocations in textile, apparel, and other industries may be heavily concentrated in certain counties and metropolitan areas, and may thus induce further labor dislocation in service and other industries serving the general population. The estimates of labor displacement in Chapter 2 and the inferences drawn from those estimates in this chapter do not take such effects into account.

Comparing Transitions in the Model and Survey Data

A variety of potential concerns may be raised about the type of jobs that are taken by workers displaced from sectors that may contract in future trade liberalization. In particular, the actual behavior of displaced workers who switch sectors might differ from the way in which the CGE model reallocates labor as the result of a policy change. For example, it might be the case that the CGE model allocates labor in a way that implies workers are taking jobs for which they might be insufficiently qualified, while in reality workers who are displaced might be compelled to take lower-paying jobs due to an inability to exploit their skills in the old sector. Ideally, this question would be examined by looking at changes in occupation, which is not feasible with the CGE model used in this study. However, it is feasible, and potentially useful, to look at changes in sectors for workers who actually change jobs in the Displaced Workers Survey and compare them to the sectors in which jobs are created in the CGE modeling exercise.

The results of this comparison are presented in table 7-6. Of the IR displaced workers in the “Displaced Workers Survey” who were working at the time of the survey, an estimated 20.3 percent were re-employed in the same industry, 16.4 percent in other IR industries, and 63.3 percent in non-IR industries.⁴⁷ Under the conditions of an actual removal of all significant U.S. import restraints, a net movement of labor would occur into sectors that did not contract. Thus, the comparison takes into account only workers who are re-employed in a non-IR sector.

Table 7-6 shows that actual displaced workers in textiles, apparel, and other industries with significant U.S. import restraints are re-employed in sectors quite similar to those in which the model allocates them. This similarity in result is surprising considering that the estimates are generated in two very different ways—one with survey data based on actual workers and one with a simulation exercise using a CGE model. The primary difference is that actual workers displaced from IR sectors are more likely to be re-employed in services than the model estimates, with the model placing a greater percentage in durable manufacturing. This comparison provides an interesting form of model validation, and suggests that at least on a sectoral basis, the worker transitions in the market as simulated in this study are not too different from those experienced by comparable actual workers.

⁴⁷ This calculation uses the same sample weights as are employed elsewhere in the analysis in this chapter.

Table 7-6
Sectors absorbing workers displaced from IR sectors,¹ percent

Sector	According to Displaced Workers Survey	According to Table 2-3
Agriculture, forestry, fisheries . . .	2.75	1.15
Mining, extractive industries	0	0.89
Construction	2.71	3.61
Non-durable manufacturing	6.16	5.79
Durable manufacturing	8.88	24.19
Transportation, communications, utilities	5.14	5.65
Wholesale and retail trade	31.54	16.59
Finance, insurance, real estate . .	4.02	6.22
Other services	38.48	35.92

¹ Estimates from the Displaced Workers' survey apply to workers displaced from an IR sector and currently working in a non-IR sector. Estimates from Table 2-3 include focus sectors with job gains with their appropriate aggregate sector.

Source: USDOL, Displaced Workers Survey, and USITC calculations.

An important caveat to the analysis of the Displaced Workers Survey is that the results presented utilize all observations from IR displaced workers, rather than only those who take up employment in a non-IR sector. In the event of an actual liberalization, there would be a net transfer of labor into non-IR sectors. This transfer could affect the labor market outcomes of the workers displaced either positively or negatively. As the comparison between the Kletzer and the Field/Graham studies suggests, it is not yet clear whether workers who leave textiles, apparel, and other sectors with import restraints for other sectors experience longer or shorter durations of unemployment, or receive better or worse wages, than workers re-employed in their old sectors. Further research on such transition experiences may yield new insights.