

For release on delivery  
10:30 a.m. EST  
March 30, 2004

Trade and Jobs

Remarks by

Ben S. Bernanke

Member

Board of Governors of the Federal Reserve System

at the

Distinguished Speakers Series

Fuqua School of Business

Duke University

Durham, North Carolina

March 30, 2004

Economists are often accused of not being able to agree on anything. Although we are indeed a contentious bunch, one proposition commands almost unanimous assent within the economics community. That proposition is that free trade among nations promotes economic prosperity.

The economist's argument for free trade is disarmingly simple.<sup>1</sup> Trade is beneficial because it facilitates the division of labor, allowing each person to specialize in the type of production at which he or she is relatively most efficient. At the most basic level, a world in which each person produced everything that he or she consumed would be primitive indeed, as no single person or family in isolation could produce more than a few rudimentary goods and services. In contrast, if each person concentrates on just a few activities, economies of scale and the development of specialized skills allow production to become much more efficient. Thus, if each of us focuses our efforts on just a few types of production and then trades our output with others, we can enjoy a far more varied and abundant supply of goods and services than we could if each person remained an isolated economic unit.<sup>2</sup> Moreover, specialization tends to encourage innovation and hence promotes dynamism and growth as well as efficiency.

What applies to individuals would seem to apply to nations as well. Two centuries ago the economist David Ricardo famously observed that, if England specializes in making cloth while Portugal specializes in producing wine, international trade allows both countries to enjoy more of both goods than would be possible if each country produced only for domestic consumption and did not trade. A telling confirmation of Ricardo's insight is that, when nations go to war, the first order of

business is often for each combatant to try to block the other's access to trade. The Union won the Civil War in large part because its blockade of Southern ports prevented the Confederacy from exporting its cotton, and the outcomes of both World War I and World War II turned on the fact that Great Britain and its allies were able to disrupt German trade more successfully than Germany's submarines could impede the flow of goods into and out of Great Britain.

Despite what seems to economists to be a compelling case for trade, non-economists are far more skeptical. A perennial public concern, from the emergence of the "Rust Belt" in the 1980s, to the days of Ross Perot's "giant sucking sound," to the more recent debate about the effects of international outsourcing, is that the expansion of trade will cause production to move abroad, at the expense of domestic employment. Such worries become particularly acute at times like the present, when the labor market is weak and net job creation is depressed.

From an economist's perspective, focusing on the impact of trade on jobs alone is unduly narrow, as many of the benefits of trade accrue to consumers, in the form of greater access to goods and services, rather than to producers. Nevertheless, employment is certainly an important issue, particularly given recent experience. In my remarks today I will explore the much-debated connection between trade and jobs. I will begin by asking whether trade in general destroys jobs, then consider the specific case of trade in business services, often referred to as outsourcing abroad or "offshoring." Broadly, I will argue that, although trade in general, and outsourcing abroad in particular, may bring with them structural change in the economy, they are not the principal reason for the

current underperformance of the labor market. Rather, the sources of slow job creation are primarily domestic. I will conclude by discussing the role of government policies in addressing both the current weakness of the U.S. labor market and the plight of displaced workers. I should note before beginning that the views I express today are not necessarily those of my colleagues at the Federal Reserve.<sup>3</sup>

### **Does Trade Destroy Jobs?**

Does trade destroy jobs? Increases in trade or changes in trading patterns can indeed destroy some specific jobs. People here in North Carolina are all too aware that increased foreign competition has been a factor in the loss of jobs recently experienced in textiles, furniture, and other industries. These job losses can loom large in specific industries and geographic areas, creating hardships for affected workers, their families, and their communities. The appropriate social and political response to these undeniable job losses is a critical issue, one to which I will return.

For now, however, I will point out that although trade does lead to the loss of jobs in some industries and locations, trade also creates jobs, both directly and indirectly. Directly, trade creates jobs in the United States by expanding the potential market for U.S. goods and services. To take one leading example, in 2003 the United States exported \$47 billion in civilian aircraft, parts, and engines, while importing only \$24 billion, for a trade surplus of \$23 billion in that category. More relevant to North Carolina, U.S. agriculture sends much of its product abroad. For example, in the 2002-03 crop year, the United States exported 53 percent of its total wheat production, 69 percent of its output of cotton, 50 percent of its sorghum, 59 percent of rice production, 38

percent of the soybean crop, and 11 percent of its output of meat and poultry. Clearly, farmers benefit greatly from having access to international markets. Reflecting American creativity in the arts and in technology, in 2003 the United States ran a surplus of \$28 billion in royalty payments and licensing fees.

Trade also creates jobs indirectly, in a variety of ways. First, trade allows firms to obtain inputs to production that are cheaper, of higher quality, or both, than would be possible if all inputs were produced domestically. For example, imports of high-tech equipment have helped many U.S. firms, including large numbers of small businesses, to reduce costs and improve productivity, thereby enhancing their competitiveness in world markets. Obviously, firms that cannot compete in the world marketplace will not be able to provide jobs at home.

Second, although imports may compete with domestic production, they also improve the lot of consumers by giving them better variety in and better prices for the goods and services they buy. Moreover, the savings that consumers enjoy because of the availability of lower-cost imports effectively increase household purchasing power, extra income that can be spent on other goods and services, including those produced domestically.

Finally, openness to trade also means openness to international flows of capital. Foreign investments in the United States may be in a physical form (for example, BMW's factory in South Carolina) or in a financial form (for example, foreign purchases of the stock and bond offerings of U.S. companies). Either type of foreign investment supports business expansion and employment domestically.

If trade both destroys jobs and creates jobs, what is the overall effect of an open trading system on domestic employment? Both economic theory and the available evidence strongly suggest that trade has little net effect on the economy's capacity to employ its workforce. In the long run, the workings of a competitive labor market, assisted perhaps by appropriate economic policies, ensure that jobs will be created that are commensurate with the size of the labor force and the available mix of worker skills. Thus, in the long run, factors such as population growth, education and training, labor force participation rates, and labor market institutions determine the level and composition of aggregate employment.

In contrast, trade appears to have essentially no role in determining a country's long-run employment potential. To illustrate, between 1960 and 2003, the U.S. trade balance went from a small surplus (that is, an excess of exports over imports) to a large deficit, equal to about 4-1/2 percent of gross domestic product (GDP). At the same time, the United States became a much more open economy; in dollar terms, imports (measured on a balance of payments basis) rose from just over 4 percent of GDP in 1960 to nearly 14 percent of GDP today. Yet the current unemployment rate of 5.6 percent is little changed from its level of 5.5 percent in 1960--a year in which, much like today, the economy was in the recovery phase from a recession. And of course, aggregate employment in the United States has grown greatly since 1960, by more than 60 million jobs. This increase in employment is significantly faster, by the way, than the growth of the population over the same period, in large part because of increased labor force participation by women. Evidently, increased exposure to trade notwithstanding, over

the years the American economy has been able to generate the jobs needed to accommodate millions of new entrants to the labor force.

Evidence from international comparisons also runs strongly counter to the view that trade depresses aggregate employment. Notably, despite its large trade deficit, the United States has experienced a significantly greater expansion in employment over the past decade than either Germany or Japan, both of which have enjoyed perennial trade surpluses.

Although the labor force and labor-market institutions determine employment in the long run, short-run cyclical influences, such as transitory changes in spending or productivity, may cause employment to deviate from its long-run sustainable level. Even in the short run, however, there is no discernable link between aggregate employment and changes in trade volumes or the trade balance. For example, over the past two decades, even as U.S. trade has expanded rapidly, the quarter-to-quarter volatility of both output and employment has decreased noticeably, and recessions have become less frequent and milder than in earlier decades (Bernanke, 2004). In recent years, the sharpest deterioration in the U.S. trade balance occurred between 1997 and 2000, a time during which domestic employment was growing at a rapid pace.

My focus thus far on the net effect of trade on jobs ignores the fact that those who lose jobs for trade-related reasons are not necessarily the same people who get the new jobs created by trade. Trade, like other factors resulting in structural change, can have noticeable effects on the mix of jobs across industries, skill levels, and locations. Those who lose jobs, whatever the cause of the dislocation, have real reason to be unhappy,

because job loss often entails economic hardship--a point that I will shortly discuss in more detail. However, in our dynamic economy, jobs are created and destroyed in great numbers all the time. How important are trade-related factors in this ongoing process of job creation and destruction?

To address the key area of public concern, I will focus here on the job-loss side of the equation. Estimates of the gross number of job losses associated with increased import penetration vary widely, but one representative calculation, by Lori Kletzer (2001), put the gross job loss due to imports at nearly 310,000 per year for the period from 1979 to 1999. I stress that Kletzer's estimate of gross job loss ignores any jobs *created* by trade, either directly or indirectly.

The amount of "churn" in the U.S. labor market is enormous, a reflection of the continuous stream of entry, exit, and resizing of firms in our ever-changing economy. In order to get some perspective on Kletzer's estimate of trade-induced job loss, then, we should compare it to the number of workers who are displaced each year in the United States for all reasons, including firm or plant closings, corporate restructuring, automation, or the ending of fixed-term employment. According to the Bureau of Labor Statistics (BLS), over the past ten years, gross job losses in the United States have averaged about 7.7 million jobs per quarter.<sup>4</sup> Multiplying 7.7 million by four suggests that about 31 million U.S. jobs are eliminated each year. Research suggests, however, that because this number includes temporary layoffs, seasonal closings, and other job losses that are reversed within the year, it overstates longer-term job losses by about

double (Davis, Haltiwanger, and Schuh, 1996). Hence, a reasonably conservative estimate is that, excluding seasonal and other short-term layoffs, about 15 million jobs are lost each year in the United States, equal to nearly 14 percent of the current level of nonfarm private employment. Of course, because net private-sector job creation in the United States over the past ten years has averaged more than 1.8 million per year, these losses were more than offset by the creation of about 17 million jobs per year during the same period. Truly, the U.S. labor market exhibits a phenomenal capacity for creative destruction.

Comparing the 310,000 or so gross job losses per year that Kletzer (2001) attributes to increased imports to the 15 million total job losses, we find that only slightly more than 2 percent of gross job losses are the result of import competition. In other words, for the typical job loser during the past ten years, the chances are 98 percent that some factor other than competition from imports was the principal reason for displacement.

Kletzer's calculations apply to the longer period since 1979. What about the current situation? Although U.S. employment stagnated for an extended period after the recovery got under way and has recently risen only slowly, there is little basis for blaming the recent poor employment performance on import competition. Indeed, as a share of GDP, imports to the United States have actually fallen since 2000, from 14.7 percent of GDP in 2000 to 13.7 percent in 2003. The worsening of the U.S. trade deficit as a share of GDP in recent years is entirely due to a fall in exports, from 10.9 percent of GDP in 2000 to 9.3 percent of GDP in 2003. Thus, to the extent that trade patterns are

contributing at all to the current weakness in employment, the more relevant concern is that foreign economies are not growing as fast as our own and hence are not generating as much demand for our exports as we would like.

Even if the overall level of employment is largely unaffected by trade, some have argued that trade adversely affects the composition of jobs, for example, by replacing relatively high-paid manufacturing jobs with lower-paid service-sector jobs. I will return shortly to the issue of why manufacturing employment has declined in the United States. I only note here that little evidence supports the view that trade has an adverse effect on wages or the mix of jobs in the economy as a whole. In particular, the often-expressed view that the ongoing shift of jobs from manufacturing to services has depressed earnings does not seem generally to be true. For example, during the 1990s, average earnings in manufacturing industries that showed net declines in employment (weighted by the number of job losses) were \$10.63 per hour. During the same period, wages in expanding service-providing industries (weighted by the number of job gains) were \$11.26 per hour, about 6 percent higher.

### **What about Outsourcing Abroad?**

The debate about the effects of trade on employment has been intensified recently by an upsurge in trade in business services, popularly referred to as outsourcing abroad, or “offshoring.”<sup>5</sup> New interest by U.S. corporations in outsourcing white-collar activities has been driven by several factors, including improvements in international communications; the computerization and digitization of some business services; and the existence of educated, often English-speaking, workers abroad who will perform similar

services for less pay. When feasible, offshoring has obvious attractions for business. Comparative wage data suggest why. Estimated average wages for software developers are \$6 per hour in India, compared with \$60 per hour in the United States (McKinsey Global Institute, 2003). Similarly, average wages for telephone operators are estimated to be less than \$1 per hour in India and about \$12.50 per hour in the United States (Bardhan and Kroll, 2003). (A portion, but certainly not all, of these wage differentials reflects differences in skills; for example, programmers in India generally perform simpler and more routine tasks than do those in the United States.)

The increase in outsourcing abroad--particularly of activities previously considered immune to foreign competition--has led to dire predictions about a wholesale "export" of U.S. jobs in coming years. Although globalization will continue to be a force for economic change, the pace of change is likely to be slower than implied by such predictions. Outsourcing abroad has proved profitable primarily for jobs that can be routinized and sharply defined. For the foreseeable future, most high-value work will require creative interaction among employees, interaction that is facilitated by physical proximity, personal contact, and shared cultural experiences. Moreover, in many fields, closeness to customers and knowledge of local conditions are also of great importance. These observations suggest that, for some considerable time, outsourcing abroad will be uneconomical for many types of jobs, particularly high-value jobs.<sup>6</sup>

Fundamentally, the outsourcing of business services abroad is not a new phenomenon. In an increasingly interdependent world economy, trade in services, like trade in goods, is being harnessed to the goals of cutting costs and expanding production. That outsourcing abroad benefits the receivers as well as the providers of outsourced services has been shown by empirical studies. For example, Catherine Mann (2004) has estimated that outsourcing abroad has reduced prices of IT hardware 10 to 30 percent, boosting the diffusion of information technology throughout the U.S. economy and raising both productivity and growth by a very significant amount--0.3 percentage point per year.<sup>7</sup> The McKinsey Global Institute (2003) finds that for every dollar of activity outsourced to India, the United States receives between \$1.12 and \$1.14 in economic benefits.<sup>8</sup>

As with trade in general, it is useful to ask how much outsourcing abroad contributes to gross job loss in the United States. Unfortunately, as with trade in general, measures of gross job loss associated with outsourcing abroad are scarce. An analysis by Goldman-Sachs (2003) estimated that U.S producers shifted between 300,000 and 500,000 jobs abroad during the past three years, an average of between 100,000 and

167,000 jobs per year since 2000. This estimate includes jobs both inside and outside manufacturing (that is, it includes both goods and services) and reflects increased imports from foreign affiliates of U.S. corporations. Based on this analysis, Goldman-Sachs argues that, over the next several years, offshoring of business services may rise to several hundred thousand jobs per year. Again, to gain perspective, we should compare these estimates with the overall rate of job displacement in the United States. Two hundred thousand jobs per year amount to a bit more than 1 percent of the 15 million or so jobs that are lost each year in the U.S. economy for all reasons. Quantitatively, outsourcing abroad simply cannot account for much of the recent weakness in the U.S. labor market and does not appear likely to be an important restraint to further recovery in employment.

Moreover, a balanced discussion of outsourcing abroad should reflect the fact that, just as U.S. firms use the services of foreigners, foreign firms make considerable use of the services of U.S. residents. An underappreciated fact is that, in contrast to its trade deficit in goods, the United States runs a significant trade surplus in services. The official trade data do not have direct measures of outsourcing of services abroad, but much of what we would consider offshoring is likely included under the heading "Business, Professional, and Technical Services," a category of trade in services.<sup>9</sup> In 2002, the latest year for which complete data are available, the United States exported nearly \$29 billion in business services. Against these exports, U.S. imports of business services in 2002 totaled less than \$11 billion (about 0.1 of 1 percent of U.S. GDP), for an overall surplus in business services trade of \$18 billion. Moreover, U.S. exports of

business services have increased \$3.5 billion since 2000, a period during which imports of business services increased only \$2 billion.<sup>10</sup> An important reason for the U.S. trade surplus in business services is that this country provides many high-value services to users abroad, including financial, legal, engineering, architectural, and software development services, while many of the services imported by U.S. companies are less sophisticated and hence of lower cost.

As discussions of the outsourcing of business services tend to ignore the large amount of “insourcing” of services to the United States from other countries, so do discussions of American firms moving jobs abroad ignore the fact that foreign firms also move jobs to the United States. Between 1997 and 2001 (the most recent data available), employment of U.S. residents by affiliates of foreign companies operating within the United States increased by about 1.2 million jobs. In 2001, U.S. affiliates of foreign companies accounted for nearly \$500 billion in gross output (about half in manufacturing) and about \$164 billion in exports. Globalization and outsourcing work both ways.

### **So Why Is the Recovery Jobless?**

We have little evidence to show that trade in general, or outsourcing abroad in particular, is a major source of net job loss. Yet, two-and-a-half years into the economic recovery, the pace of job creation in the United States has been distressingly slow. Job losses in manufacturing have been particularly deep, with employment in that sector apparently only now beginning to stabilize after falling by almost 3 million jobs since 2000. Why has the recovery been largely jobless thus far?

In a speech presented last November (Bernanke, 2003), I discussed a number of factors underlying the reluctance of U.S. firms to increase their workforces. I concluded then, and continue to believe, that the single most important factor explaining lagging job creation is the astonishing gains in labor productivity that have been achieved in the U.S. economy in the past few years. According to the Bureau of Labor Statistics, labor productivity in the nonfarm business sector increased 4.3 percent in 2002 and 5.4 percent in 2003. For comparison, productivity advanced at an average rate of 2.5 percent per year from 1996 to 2000, a period that was viewed at the time to be one of exceptionally strong productivity growth. Most economists would agree that new information and communication technologies, together with organizational changes facilitated by those technologies, have been an important source of these impressive productivity gains. Note that, because the productivity figures are based on measures of domestically produced output and domestic employment, to a first approximation cost savings reflected by outsourcing abroad are not reflected in, and thus cannot explain, the recent surge in productivity.<sup>11</sup>

The gains in domestic labor productivity are great news for Americans in the long run, as they will promote higher wages, profits, and living standards in this country. In the short term, however, increased productivity has permitted the U.S. business sector to meet strong final demand for its output without having to hire significant numbers of new workers. The effect of productivity gains has been particularly marked in the U.S. manufacturing sector. Productivity gains of 3.8 percent in 2001, 6.4 percent in 2002, and 5.8 percent in 2003 (as reported by the BLS) have permitted U.S. manufacturers to reach

levels of production only about two percent below the cyclical peak in mid-2000, despite the sharp decline in employment.<sup>12</sup> The general trend toward higher productivity and decreased employment in manufacturing has been observed for decades in the United States, although the process has recently intensified. Other countries have had similar experiences. For example, while U.S. manufacturing employment has declined 18 percent since 1990, the comparable figure for Japan is nearly 22 percent and for the United Kingdom it is more than 27 percent. Developing countries have experienced a similar pattern. Even China, supposedly the destination of U.S. manufacturing jobs, has seen manufacturing employment shrink by more than 15 percent since its peak in 1995.<sup>13</sup>

The long-run trend in manufacturing in the United States and other industrialized countries is similar to what occurred earlier in agriculture. At one time a majority of the U.S. population lived on farms. However, agricultural productivity has improved so

much over the years that, although farm workers make up only about 2-1/2 percent of the workforce, they are able both to feed the nation and (as noted earlier) export substantial quantities of food as well.

When will the U.S. economy begin to create jobs in significant numbers? The recent rates of productivity growth are unprecedented, and hence likely unsustainable. Thus, if output growth continues at its current robust pace, job creation will surely follow. However, because we do not know exactly how either productivity or aggregate spending will evolve, predicting the timing of a jobs resurgence is difficult. Although, like many economists, I have been surprised by the unusually slow recovery of the labor market, I continue to believe that steady improvement in the labor market over the remainder of this year is the most likely outcome.

### **What Can Policy Do?**

I have argued today that, in general, increased trade does not reduce employment and, more specifically, that trade bears little responsibility for the recent slow pace of job creation in the United States. Moreover, the economy taken as a whole clearly benefits from trade.

Still, as I have noted, to say that the U.S. economy benefits from trade is not to say that every individual American worker or family benefits, or that the structural changes induced by trade are not disruptive. Clearly, some workers who have been displaced or have had a difficult time finding work during the past three years can accurately claim to have been made worse off by international competition. Job loss in particular causes significant hardships for affected workers. For example, an analysis by

Henry Farber (2003), using BLS data on workers displaced for any reason, suggests that only about two-thirds of displaced workers found re-employment within three years, with some settling for part-time work. Even when successful in finding full-time work, displaced workers experience on average a decline in earnings on the new job of about 8 percent. Focusing on workers displaced by trade in particular, Kletzer (2001) found that job losers in industries facing high levels of import competition were slightly less likely to be re-employed and experienced greater earnings losses, at about 13 percent on average, than workers displaced from industries facing less import competition.

What can be done to help workers who lose their jobs because of competition from imports? Attempts to restrict trade through the imposition of tariffs, quotas, or other trade barriers are not a good solution. Such actions may temporarily slow job loss in affected industries. But they do so by imposing on the overall economy costs that typically are many times greater than the benefits. In the short run, the costs of trade barriers include higher prices for consumers and higher costs (and thus reduced competitiveness) for U.S. firms. Trade barriers typically provoke retaliation from trading partners as well, with potentially large costs for exporters. And history shows that in the longer run, economic isolationism and retreat from international competition lead to bloated, inefficient industries, lower productivity, and lower living standards.

The better policy approach is two-pronged. First, at the macro level, policy should be directed at helping to ensure that jobs become available for those who have been displaced. In particular, over time, appropriate monetary policies can help the economy achieve maximum employment with low inflation, irrespective of the trade

situation. The nation's trade policies, rather than attempting to restrict trade, should be used to push for even more trade. By opening markets abroad, trade policy provides greater opportunities for U.S. firms and workers.

The second piece of a constructive policy toward trade is to help displaced workers train for and find new work. Some steps in this direction have been taken. Currently, the government's principal program for helping workers displaced by trade is the Trade Adjustment Assistance program, or TAA. The Congress has recently extended the TAA through 2007, while adding a special TAA program for older workers and a separate TAA program for farmers. The TAA program offers up to two and a half years of job training, allowances for job search and relocation, and income support for eligible workers, the latter for up to 104 weeks after the initial 26 weeks of conventional unemployment insurance benefits have been exhausted. The recently passed legislation also provides for health insurance assistance for some eligible workers. The U.S. Department of Labor certified about 208,000 workers for trade adjustment assistance during fiscal year 2003, spending \$551 million on the program. Finally, although current TAA legislation is generally interpreted to apply only to jobs displaced in manufacturing, bills to extend TAA to service-sector workers were introduced this month in both the House and Senate.

TAA is certainly not a perfect program. A recent report by the General Accounting Office (2001) described the challenges of effectively retraining older, less-educated workers. It noted also that TAA does not address all the problems of communities that have suffered from plant closings and the like. More general criticisms

can be raised about the program: First, in a complex and interdependent economy, identifying workers affected by trade is not always a straightforward matter. Second, one may well wonder why workers displaced by trade should be assisted but not workers displaced by other factors, such as restructuring or automation.

Lately, a number of proposals have been advanced to help displaced workers more generally, including changes in law that increase the portability of pension and health benefits. Other proposals include a program of “wage insurance,” which would help to cushion the wage loss that often occurs when job losers take new jobs (Kletzer and Litan, 2001) and tax credits for firms that invest in worker training (Mann, 2003, 2004). Time does not permit me to evaluate these and other alternative proposals today. Instead I will conclude by noting that helping displaced workers is good policy for at least three reasons. First, reducing the burdens borne by displaced workers is the right and fair thing to do. Second, helping workers who have lost jobs find new productive work is good for the economy as well as for the affected workers and their families. Finally, if workers are less fearful of change, less pressure will be exerted on politicians to erect trade barriers or to take other actions that would reduce the flexibility and dynamism of the U.S. economy.<sup>14</sup> In the long run, avoiding economic isolationism and maintaining economic dynamism will pay big dividends for everybody.

### References

- Bardhan, Ashok, and Cynthia Kroll (2003). "The New Wave of Outsourcing," Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, Paper no. 1103.
- Bernanke, Ben (2003). "The Jobless Recovery," at the Global Economic and Investment Outlook Conference, Carnegie Mellon University, Pittsburgh, Pennsylvania, November 6.
- Bernanke, Ben (2004). "The Great Moderation," at the Meetings of the Eastern Economic Association, Washington D.C., February 20.
- Cox, W. Michael, and Richard Alm (2002). "The Fruits of Free Trade," in Federal Reserve Bank of Dallas, *2002 Annual Report*, pp. 3-24.
- Davis, Steven, John Haltiwanger, and Scott Schuh (1996). *Job Creation and Destruction*. Cambridge, Mass.: MIT Press.
- Farber, Henry (2003). "Job Loss in the United States," Industrial Relations Section working paper no. 471, Princeton University.
- General Accounting Office (2001). *Trade Adjustment Assistance: Experiences of Six Trade-Impacted Communities*. GAO-01-838.
- Goldman-Sachs and Company (2003). "Offshoring: Where Have All the Jobs Gone?" *U.S. Economics Analyst*, September 19.
- Irwin, Douglas (2002). *Free Trade under Fire*. Princeton, N.J.: Princeton University Press.
- Kletzer, Lori (2001). *Job Loss from Imports: Measuring the Costs*. Institute for International Economics.
- Kletzer, Lori, and Robert Litan (2001). "A Prescription to Relieve Worker Anxiety," Institute for International Economics, International Economics Policy Briefs, no. PB01-2 (March).
- Kull, Steven, Clay Ramsay, Stefan Subias, and Evan Lewis (2004). "Americans on Globalization, Trade, and Farm Subsidies," The American Public on International Issues. The PIPA/Knowledge Networks Poll.
- Mann, Catherine (2003). "Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth," Institute for International Economics, International Economics Policy Briefs, no. PB03-11 (December).

Mann, Catherine (2004). "Global Sourcing and High-Tech Jobs: Productivity Gains and Policy Challenges," presentation at the Institute for International Economics, March 11.

McKinsey Global Institute (2003). *Offshoring: Is It a Win-Win Game?* McKinsey & Company (August).

Poole, William (2004). "A Perspective on U.S. International Trade," Federal Reserve Bank of St. Louis, *Review*, 86 (March/April), pp. 1-8.

<sup>1</sup> See Cox and Alm (2002) and Poole (2004) for brief and readable statements of the economist's case for free trade. Irwin (2002) provides a more extensive analysis.

<sup>2</sup> Indeed, even if an individual is more efficient in every activity than other people, it will still be to his or her benefit to specialize in production and then to trade for other goods and services.

<sup>3</sup> Although they are not responsible for my conclusions, I am grateful to Board staff members for superb assistance in the preparation of this talk.

<sup>4</sup> Data are for the period 1992:Q3 to 2003:Q2 and are drawn from the BLS's Business Establishment Dynamics survey.

<sup>5</sup> The term "outsourcing" alone refers to the shift of activities outside the corporation, including the use of domestic as well as foreign suppliers. I will use the phrases "outsourcing abroad" or "offshoring" to denote outsourcing to foreign suppliers.

<sup>6</sup> The economic importance of physical proximity is the underlying reason that individuals and businesses are willing to pay high rents and other costs to live in or near major cities, where they can be near large numbers of other people and businesses that have related expertise and interests.

<sup>7</sup> Comparing data for 1999 and 2003 to eliminate the largest effects of the high-tech boom- and-bust cycle, Mann also shows that U.S. employment in several white-collar occupations related to IT or deemed vulnerable to IT-enabled outsourcing has in fact been stable or expanded modestly.

<sup>8</sup> Although my focus today is on the United States, we should not ignore the benefits of outsourcing to countries that provide these services. Software developers and telephone operators who provide offshore services from a country such as India are afforded a precious opportunity for economic advancement, and their country as a whole becomes richer, more competitive, and more integrated into the world trading system. Moreover, outsourced service jobs do not typically bring along collateral issues of potential environmental damage and poor working conditions that have concerned some critics of expanded trade.

<sup>9</sup> Some components of this category probably contain little outsourcing, for example, construction services, whereas some categories outside "Business, Professional, and Technical Services," for example, telecommunications, may contain significant amounts of outsourced services. None of the conclusions drawn in the text is changed by considering the subcategories in greater detail.

<sup>10</sup> In the broader category of "Other Private Services," of which "Business, Technical, and Professional Services" is a subset, in 2003 the United States had a trade surplus of \$53.6 billion, up from \$41.7 billion in 1997.

<sup>11</sup> The qualification "to a first approximation" is included because outsourcing will affect measured domestic labor productivity if it leads to a significant change in the skills and wage composition of domestic jobs. However, outsourcing abroad almost certainly explains little of the recent increase in labor productivity; indeed, if outsourcing results in the loss of high-skill, high-wage jobs in the United States, as many fear, its effect would be to lower rather than to raise domestic labor productivity.

<sup>12</sup> Production is measured here by the manufacturing component of the industrial production index.

<sup>13</sup> Data are from country sources and may not be precisely comparable. Latest data for

China are for 2002. There are questions about the reliability of Chinese data, and part of the decline in Chinese manufacturing employment reflects the closure of state-owned enterprises.

<sup>14</sup> According to opinion polls, the public is far more willing to accept free trade policies if they are accompanied by assistance for workers and firms that may be damaged by trade (Kull, Ramsay, Subias, and Lewis, 2004).