Trade, Wages, and Employment

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My remarks today will focus on trade, wages, and jobs.[1] Workers' anxieties about their jobs are making headlines and affecting debate within and between both major political parties. With jobs in February 2004 reported by the payroll employment survey at a level more than 2.3 million below their level less than three years earlier, the fact that jobs are a major issue is far from surprising. I am sure that many of you are following these developments because you are either involved in the labor market or actively preparing for entry into the labor market.

Any discussion of jobs in the current environment must necessarily address the issues of international trade as well as wages. Indeed, some believe that trade has a lot to do with weak job creation in the United States. Federal and state legislators are discussing proposals to counteract globalization.

My plan is to outline the nature of the debate, to discuss the powerful economic forces expanding trade, and state the case for the gains from trade. I'm going to concentrate on the effects of trade on the workforce, rather than on the advantages of trade for consumers. I'll emphasize a perspective that is, I believe, sorely lacking in the current debate. The perspective is that much of what is happening today is an unavoidable consequence of new technology. Rather than complaining about the consequences of new technology, or trying to roll back its effects, we need to adapt and use technology in innovative and constructive ways.

Before proceeding, I want to emphasize that the views I express here are mine and do not necessarily reflect official positions of the Federal Reserve System. I thank my colleagues at the Federal Reserve Bank of St. Louis for their comments; Cletus Coughlin, vice president in the Research Division, was especially helpful. However, I retain full responsibility for errors.

THE DEBATE

Much of what I hear and read about international trade these days makes me apprehensive. Critics of free trade abound. I am convinced that outsourcing and globalization yield important long-run benefits for the United States as a whole. The case for free trade should not be offered defensively and apologetically, but clearly and forcefully.

Unfortunately, as is true of many developments that increase the nation's well-being, the gains from trade are not achieved without cost. It is true that some workers lose their jobs and a number of these are unemployed, in some cases for periods too long to be labeled "temporary."

Trade and technology interact. One example is jet aircraft, which not only replaced many passenger trains domestically but also dramatically reduced freight transportation costs internationally. Jet freighters now carry a large fraction of

[1] This speech is something of a companion piece to two earlier speeches on international economic issues. See "A Perspective on U.S. International Capital Flows" (address before the Tucson Chapter of the Association for Investment Management Research (AIMR), Tucson, Arizona, November 14, 2003) and "A Perspective on U.S. International Trade" (address before Louisville Society of Financial Analysts, Louisville, Kentucky, November 19, 2003).

high-value goods in international trade. Technological change has expanded markets domestically and internationally, permitting substitution of lower cost production locations for higher cost ones.

The transitional costs stemming from unemployment created by economic change have generated much discussion concerning the appropriate policy response. Some argue that public policy should attempt to counteract the market forces driving outsourcing and other forms of increased international trade, while others argue that public policy should act in conjunction with the market forces.

My concern is that fears associated with economic progress will lead to misguided policies that will generate large costs and minimal benefits even for those intended to benefit. My preference is for policies that allow markets to work better, while providing transitional assistance to those adversely affected.

INCENTIVES TO TRADE

The basic incentive to trade arises from the fact that it is often possible to obtain goods more cheaply through trade. The place to begin the analysis is with an important and obviously correct proposition in economics—the tendency of a given good to sell for the same price in all markets.

It is worth spending a moment to think about price equalization to understand just how powerful a force it is. If the price of the same good differs in two locations, then consumers have an incentive to purchase the good from the seller with the lower price. Every time you pass by a gas station with a high price so that you can buy at a cheaper price you contribute to price equalization. As it is often put, buyers try to buy in cheap markets and sellers try to sell in dear markets.

I grew up in Delaware, a state without a sales tax. Citizens of neighboring states come to Delaware to shop, often by the busload. In principle, they are supposed to pay the appropriate use tax in lieu of sales tax to their state governments when they bring goods from Delaware into their own states, but very few do. Most people do not even realize that they are supposed to pay the equivalent taxes to their own states, and when informed of the requirement they regard this legal provision as unfair and unreasonable. A legal provision like this one is simply unenforceable when most citizens regard it as unjust and believe, correctly, that enforcement is very unlikely.

Would anyone seriously argue that neighboring states to Delaware should attempt to enforce the sales tax by installing roadblocks and inspecting every car for goods purchased in Delaware? Such a policy would be extremely costly, and perhaps unconstitutional. I can guarantee that the governor of a neighboring state would be quickly voted out of office if he were to instruct his state police to stop every car at the Delaware border and search for goods purchased in Delaware. For the neighboring states of Pennsylvania, Maryland, and New Jersey, the absence of a sales tax in Delaware is a fact of life and everyone had better just get used to it.

If there were more states like Delaware scattered across the country, the sales tax would all but disappear because it would become unenforceable. Competition is a powerful force, and the tendency for price equalization across markets is so pervasive that governments cannot pass effective laws against it. You may or may not like this result, but it is a fact of life.

The tendency toward price equalization applies to wages paid to workers as well as to the prices paid for goods. Wages for labor of a given skill level tend toward equality in different markets. The economic forces are the same as those applying to goods. People tend to move to where wages are higher, and firms tend to locate where wages are lower. As with prices, wage equalization is often incomplete. Some locations have productivity advantages over other locations, and some areas have a higher cost of living, which reduces the incentive of people to move. Nevertheless, when wage differences are large enough to overwhelm such considerations, people tend to move, or try to move, to take advantage of higher wages.

The United States has seen vast internal migrations, especially from rural to urban areas, as people have sought higher incomes. Similarly, people have sought to migrate internationally, braving extreme risks to come to North America. Starting with the first English colony established in America, people have knowingly taken difficult ocean voyages to settle in an often hostile environment. They came because of the economic opportunity and to live in a free nation. Of course, many were also brought here against their will, and only slowly have their descendants been able to enjoy the freedom and economic opportunity that attracted so many to come voluntarily.

Today, many brave similar hazards to cross U.S. borders, especially in the desert southwest. We should not underestimate people's ingenuity and steadfastness of purpose to come to this country. Whatever your views on U.S. immigration policy, you cannot ignore the strength of the effort so many are willing to make to come to this country and to remain here. That is a fact, however inconvenient it may seem.

Recent controversy over international trade focuses on international outsourcing of activities such as computer programming and call centers. Many other jobs, such as tax preparation and transcription of medical records are affected.[2] In what follows, I'll use "call centers" as a shorthand for all these sorts of jobs.

What we are observing is an apparently new form of international trade—trade in services that were previously not subject to trade. Writing standard types of computer code and taking telephone orders are good jobs, but some of these jobs can now be performed abroad. So, some of these service jobs are going abroad just as did many manufacturing jobs over the last 25 years.

What makes service outsourcing possible now is a dramatic decline in the costs of communications. An article earlier this month in the *Wall Street Journal* reports that "a telephone and data line under the Pacific Ocean capable of handling up to 128 voice calls at a time can cost just $11,000 a month—one-fourth its cost just two years ago."[3]

The sharp decline in communications costs is a consequence of advancing technology and the glut of fiber optic cable installed in the late 1990s. Cutting these cables or trying to control voice and data transmission over them is no more realistic than state governments trying to prevent their citizens from shopping in Delaware. This new type of international trade is a fact of life, and we had better get used to it.

THE GAINS FROM TRADE

International trade arises fundamentally from economic forces every bit as powerful as the ones that drive desperately poor people to risk their lives to come to the United States, and the ones that lead you and me to find the best price of gas when we fill up the car. These economic forces of seeking the best price and the best place to live improve our lives.

In our specialized economy, a typical household buys goods and services produced not only in its home state but also throughout the United States and the rest of the world. By specializing in certain activities, regions as well as individuals are able to maximize the value of work effort. By producing most goods and services for sale to others, we trade our output for the goods and services that we are not especially adept at producing.

Nearly 200 years ago, the economist David Ricardo demonstrated the gains from trade. To explain the principle of comparative advantage, he used the example of England and Portugal trading cloth and port wine. The trade made both countries better off. If Portugal can produce both port wine and cloth with fewer hours of labor input per unit of output than can England, it will still pay Portugal to produce wine and trade with England for cloth, assuming that England is rela-

[2] Kris Maher, "Next on the Outsourcing List," the *Wall Street Journal*, March 23, 2004, p. B1.

[3] Jesse Drucker, "Global Talk Gets Cheaper," the *Wall Street Journal*, March 11, 2004, p. B1.

tively more efficient in producing cloth than wine. The proposition generalizes to many goods and many countries. As long as resources move into those activities in which the country is most advantaged or least disadvantaged, then all trading partners can be better off by trading some of the output that they produce at relatively low cost for some of the output that they produce at relatively high cost.

In the absence of trade restrictions, the gains from trade are limited by transportation costs. For example, it would not make sense for you to drive many miles to a cheaper gas station if those extra miles used up $5 worth of gas to save $3 when filling the tank. Thus, price differences in different markets can survive indefinitely if transportation costs prevent price equalization.

Over time, technological improvement has dramatically reduced transportation costs, and that is a prime reason for the expansion of international trade in recent decades. We can now buy, for example, fresh fruits and vegetables in the winter because they can be shipped by air from the southern hemisphere, which enjoys summer during our winter.

Changes in technology clearly produce benefits, but they also force adjustment. If you work in a factory producing typewriters, you may not be pleased to see people buying computers. If you work in a call center in the United States, you may not be pleased to see companies contracting with call centers abroad.

Free trade contributes greatly to economic growth, but it does create costs for workers in industries displaced by international competition. Efforts to protect workers from the forces of international competition, however, are costly to the nations that pursue such policies. It is worth spending a few minutes to discuss just how costly protectionism can be.

THE COSTS OF PROTECTIONISM

A consistent finding in the economics literature is that trade restrictions impose net costs on society. Despite the fact that trade restrictions produce benefits for some, the benefits are more than swamped by the costs borne by others.

Consider a few examples to illustrate how costly protection can be.[4] These examples are from the early 1990s because careful estimates of the current costs of protection on an industry basis are not available. Gary Clyde Hufbauer and Kimberly Ann Elliott generated estimates of the potential net national losses by industry, as well as the consumer losses and producer gains, associated with existing U.S. trade barriers.[5]

Hufbauer and Elliott provide estimates for many individual industries, but consider just a couple of examples. Because of the higher prices for apparel that consumers were forced to pay as a consequence of trade restrictions, the consumer loss per job saved in the apparel industry was $139,000 and the net national loss per job saved was $51,000. Thus, consumers were effectively paying an average of $139,000 for each job protected in 1990 in the apparel industry, an industry in which the average wage of a production worker was less than $15,000.

The apparel industry was not the only industry benefiting from trade restrictions. In the sugar industry, the consumer loss per job saved was $600,000 and in the benzenoid chemicals industry, the consumer loss per job saved exceeded $1 million!

TRADE, TECHNOLOGY, AND WAGES

The United States has experienced rising wage inequality since the late 1970s. Wages of college graduates relative to high school graduates

[4] Cletus C. Coughlin, "The Controversy Over Free Trade: The Gap Between Economists and the General Public," Federal Reserve Bank of St. Louis *Review*, January/February 2002.

[5] Gary Clyde Hufbauer and Kimberly Ann Elliott, *Measuring the Costs of Protection in the United States*, Institute for International Economics, 1994.

have risen, and the less educated appear to be suffering declining real wages. Growing international trade has likely played a role in the declining real wage paid to the least skilled members of U.S. society.

The logic of the argument that trade has impacted wages of less skilled workers is easy to understand. If migration into the United States were completely open, workers of any given skill level would tend to earn the same wages wherever they lived, as migration would tend to equalize wages. The United States and other high-income countries have an abundance of high-skilled workers relative to poorer nations. If migration were completely open, wages of such workers in other countries would tend to rise to U.S. levels. However, high-income countries have far fewer low-skilled workers than do low-income countries. For these workers, free migration would tend to lower wages in the United States toward the world average for such workers.

Migration is not in fact open, which means that the migration mechanism tending to equalize wages for various skill levels operates quite weakly. However, trade in goods also tends to produce the same result. This fact has been known since publication of an important paper 63 years ago, in 1941, by Wolfgang F. Stolper and Paul A. Samuelson.[6] Clearly, economists have been interested in the issue of the effects of trade on wages and returns to capital for a very long time.

In general, equalization of wages through trade is limited by the transportation costs to ship the good. Declines in transportation costs through technological change will open up trade opportunities that did not exist before. The expanding trade will make nations as a whole better off, but create losses for certain firms and individuals now subject to international competition that previously was impossible because of transportation costs. The dramatic decline in communications costs in recent years is now creating exactly this effect for certain service industries such as call centers.

The logic of how trade can substitute for migration is not difficult to understand. Suppose the cost of producing a particular good were 90 percent labor, and only 10 percent from materials and capital. Then, clearly, free trade in the good will tend to equalize the wages of the labor skill required to produce that good. Trade in call-center services may make it almost irrelevant whether the worker on the end of the phone line resides in the United States or abroad. I say "may make" because there are still issues of training, supervision, and proximity to face-to-face communication that create significant differences in productivity between workers located in the United States and those located abroad. The services most easily relocated abroad will be those that are routine and relatively simple.

OUTSOURCING AND PRODUCTIVITY

The pace of change in the IT industry has been enormous, and much of it is quite recent. In the late 1990s, telecom companies installed a huge amount of fiber optic cable, under both land and ocean. Rarely, if ever, has the cost of shipping something declined so rapidly and so greatly. In this case, it is information that is being shipped. Telephonic and data transmission have become vastly cheaper, opening up new opportunities for trade.

The outsourcing of information technology services, which entails some shifting of jobs from the United States to other countries, such as India, has generated much controversy. It is now possible to locate call centers, which are obviously labor intensive, almost anywhere in the world. Fiber optic cables carry messages and data in both directions, which means that this technology is as important for U.S. exports as for U.S. imports. Given this fact, there is about as much chance of stopping this new type of international trade as there is of stopping shoppers from coming to Delaware to avoid sales tax.

[6] "Protection and Real Wages," *Review of Economic Studies*, Vol. 9, November 1941, pp. 58-73.

Nor should we want to stop international voice and data transmission. Recent research by Catherine Mann concludes that the globalization of information technology services will propel a new wave of productivity growth.[7] Mann envisions this process unfolding in the following manner:

In response to market incentives, the globalization of software and information technology services requires that some work will be done overseas. Note that I said that some, not all, work will be done abroad. Coinciding with the spread of these new information technologies throughout the United States, high-skill U.S. jobs to design information technology implementations for specific uses will increase. Moreover, jobs requiring skills to use the new technology will spread throughout the economy. Mann's reasoning is consistent with estimates from the Bureau of Labor Statistics that occupations requiring information technology skills will increase at three times the rate of job growth in the overall economy.

Looking forward, Mann stresses that the globalization of software and services, enhanced use of information technology, productivity growth, and job creation are intertwined. Public policies that inhibit this process will necessarily have adverse effects on growth and job prospects in the United States.

In a highly competitive market, firms cannot afford to forego the cost savings associated with outsourcing or buying required inputs from the least-price source. It is true that buying the services from abroad might mean that the firm will have fewer employees in the United States. However, jobs in the United States remain because the firm survives. Foregoing the cost reductions would mean that all the firm's jobs in the United States would be placed at a much higher risk. Legislation that bars companies from government contracts if they plan to carry out some or all of the work abroad is fundamentally at odds with the efficiency and productivity gains that a free market will yield.

JOBS AND SAFETY NETS

Despite the inevitability, and desirability, of enlarged trade in IT services, the question remains of how to limit adverse impacts on affected workers. The loss of a job often imposes substantial costs on workers and their families. These costs occur during the period of unemployment as well as later if workers have to adjust to a lower level of pay. Older workers are especially prone to suffer wage cuts as they tend to be less flexible in adapting to new production techniques. They may lack the educational background to transfer to well-paid service-sector jobs.

Trade liberalization is often the focal point for anxiety about jobs. The focus on trade occurs despite the fact that job losses result from many non-trade factors, such as changes in technology, shifts in consumer demand, environmental regulations, and the general state of the overall economy. Most of these changes have little direct connection to the growth of international trade as a consequence of technological change or reduction of trade barriers such as tariffs.

Firms have an obligation to do whatever they reasonably can to cushion the effects of job losses. The Federal Reserve Bank of St. Louis is no stranger to these issues. As a consequence of declining check volume and federal law that requires the Federal Reserve to cover its costs in the check processing business, the St. Louis Fed is closing its check processing operations in its Louisville and Little Rock Branches. What we have done is to provide ample notice to our employees whose jobs will be disappearing, substantial severance payments, and relocation assistance to other Federal Reserve facilities for employees who can find jobs at those locations and who are willing and able to move.

But there is only so much that individual firms can do. Costs incurred by U.S. workers stemming from job insecurity are therefore a public policy issue. Policy experts have long been interested in how government can more effectively assist displaced workers.

[7] Catherine Mann, *Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth*, Institute for International Economics, International Economics Policy Briefs, Number PB03-11, December 2003.

It is noteworthy that, relative to other countries, in the United States many fewer individuals are unemployed for long periods. Using data from the Organisation for Economic Co-operation and Development (OECD) for 2002, the distribution of unemployment by duration showed that in the United States 35 percent were unemployed for three months or longer. For all OECD members, the comparable figure is 62 percent.[8] Meanwhile, roughly 9 percent were unemployed for more than one year in the United States versus 30 percent for all OECD countries. Despite the extensive welfare state policies pursued in many European countries, the United States actually does a much better job in minimizing the trauma of long-term unemployment.

A basic public policy issue is how to compensate the unemployed while simultaneously providing incentives for them to seek to become re-employed. Since 1974, in certain cases where job losses can be tied to international trade, U.S. unemployment insurance has been supplemented by a program known as trade adjustment assistance. Qualified individuals may receive 52 additional weeks of unemployment insurance if they are enrolled in an approved training program. A similar program was set up for those who lost their jobs as part of the North American Free Trade Agreement.

Without question, many people have legitimate fears about the short-run consequences of free trade and globalization. Jagdish Bhagwati, a professor at Columbia University and a leading defender of globalization, has tied these fears to the lack of institutional support for those at risk of becoming unemployed or underemployed.[9] Bhagwati argues that the safety net for those at risk is much less in the United States than in other countries.

How might the safety net be expanded? A proposal by Lori Kletzer and Robert Litan suggests adding wage insurance upon re-employment and subsidies for medical insurance to the current unemployment insurance for full-time workers who have been dislocated, regardless of the reason, from jobs they have held for two or more years.[10] The wage insurance provision would pay the worker for a period of time some percentage of the difference between the worker's old wage and new wage. The medical insurance subsidy would increase the likelihood that an unemployed worker could afford to buy medical insurance while unemployed. I have no position concerning the specifics of their proposal. However, in terms of making markets work rather than attempting to inhibit markets from allocating resources to their most productive ends, the proposal has merit.[11]

JOBS, HIGHER EDUCATION, AND THE FUTURE

One of the key points of the preceding discussion is that a worker's skills are crucial in today's global labor market. Technological change, which is the driving force for economic growth and higher standards of living, is constantly changing the value of those skills. It is easy to identify many cases in which technological changes have altered employment opportunities and the value of job-specific skills. As employment has declined in many manufacturing industries in the United States, workers have experienced these consequences first-hand. These employment changes highlight the importance of life-long learning.

The United States provides large subsidies to higher education, and a high fraction of its population completes college and university degrees. College can teach some job-specific skills, but no one should believe that those specific skills will

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8 These data are published by the OECD in *Labor Force Statistics*.

9 Jagdish Bhagwati, *In Defense of Globalization*, Oxford University Press, 2004.

10 Lori G. Kletzer and Robert E. Litan, *A Prescription to Relieve Worker Anxiety*, Policy Brief 01-2, Institute for International Economics, February 2001.

11 Mann (2003) notes that a modified version of this proposal was included in recent trade promotion authority legislation.

last a lifetime. The fact is that many jobs do not last a lifetime and, even for those that do, technological changes will alter how those jobs are done. The most important education college can offer is to provide the foundation that will allow students to learn and acquire new skills over time. College should instill in students a passion for life-long learning.

No skills are more important and more transferable to different jobs than logical thinking and good communication. Generating sound decisions involves a number of steps, such as acquiring data, assessing the usefulness of the information, understanding the role of risk and thinking through the immediate and long-terms consequences of specific decisions. Communicating effectively entails speaking, listening, and writing in both formal and informal settings. Regardless of the setting, the communication has to be well-organized and suited to the audience.

In my own experience as a university professor I was frequently frustrated by the minimal attention many of my students paid to good writing. Quite frankly, I was struck by the difference, on average, in the attention paid to writing by my American students and my international students. Too many of my American students seemed not to care about good writing, whereas most of my international students were eager to learn to use the English language effectively.

IN A NUTSHELL

In a nutshell, my argument is this. Technology will continue to change rapidly. Trade and production patterns within the United States and in the world economy are also changing rapidly. Trade in goods will tend to equalize wages for given skill levels just as surely as would open migration of people from low-wage countries to high-wage countries.

Today's workforce must adapt to the dynamic environment in which we live. The forces of change are too powerful for any government to control, without making its people much poorer than they need to be. No example of this process is clearer than the outsourcing of call-center jobs. A repressive government might try to cut off communication with the rest of the world by severing fiber optic cables, but that will not happen in a free society. Voice and data flow in both directions in these cables, and only a tiny part of the traffic is related to job loss in the United States.

Only pessimists believe that U.S. entrepreneurs will be unable to compete successfully in world markets using new technology. I myself am a productivity optimist because there is no society more entrepreneurial, more open, more resourceful than the United States.