

EPI ISSUE GUIDE

Offshoring

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An introduction to offshoring

Recent reports of the widespread *offshoring* (substituting foreign for domestic labor) of white-collar jobs that were previously insulated from foreign competition have attracted the attention of politicians, journalists, and workers. Although workers in manufacturing industries have long been exposed to foreign competition, trends such as falling communication costs, the Internet, and other technological advances now have made a much wider spectrum of jobs vulnerable to relocation across national borders.

This issue guide aims to provide some insight into the economics of white-collar offshoring: its causes, consequences, impact on the U.S. economy, and implications for the future.

Policy implications of offshoring

Offshoring of white-collar work remains relatively modest when measured in aggregate employment flows. In some key industries, however, like software, this employment impact is likely quite significant. Furthermore, the overall *economic* impact of offshoring is already potentially large. Employer announcements of plans to move more white-collar jobs abroad can have an immediate effect on the willingness of the current workforce to accept lower pay increases and to work harder. If a greater share of jobs in the United States becomes exposed to foreign competition, this could place steady downward pressure on wages of U.S. workers.

For years, policy makers and trade advocates recommended training and the acquisition of technical skills as the remedy for the depressing wage effects of trade on blue-collar workers' wages. This prescription was always insufficient, and the recent trend toward offshoring white-collar work just serves to emphasize this.

The challenge to policy makers in the United States is to make sure the potential benefits to be gained from trade in services are widely shared. Capital-owners and corporations seemed poised to reap large benefits from service trade; U.S. workers should be compensated for the extra risk they now bear through competition with workers in other countries. This compensation should take the form of large social insurance programs (publicly guaranteed health and pension benefits) as well as more-directed programs like making sure that service-sector workers displaced by trade are eligible for trade-adjustment assistance (TAA).

Because such forms of compensation seem unlikely to appear soon, the asymmetric benefits of offshoring make a good case for throwing sand in the wheels of this sort of trade by allowing governments to use procurement policies to provide domestic employment, especially during times of employment crises. Furthermore, the publicly owned firms that engage in offshoring ought to at least be transparent in their business dealings, offering layoff notices and providing clear accounting of the employment in their various units, both domestic and abroad.

Less controversially, there seems to be no reason why the U.S. tax code should privilege offshoring over domestic employment, and proposals to fix any such asymmetry should be welcomed. In addition, there should be a strong consensus to fix the official data on imports of services (which has been shown to be woefully inadequate). The Bureau of Economic Analysis should be provided the resources necessary to understand why its surveys are not picking up the extent of offshoring and to collect the data necessary correct the problem.

Frequently Asked Questions about offshoring

For more information on offshoring, read this Issue Guide's [Frequently Asked Questions](#) section.

Key figures on offshoring

Figure 1: [Unemployment rates by selected occupations](#)

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Figure 14: [Jobs related to foreign ownership of companies in the United States](#)

Other offshoring resources

Key EPI Publications:

Price, Lee, and Josh Bivens. 2004, forthcoming. “Perspectives on white-collar offshoring.” Economic Policy Institute Briefing Paper. Washington , D.C.: EPI.

Bivens, Josh. 2004. “Globalization of IT hardware did not add \$230 billion to U.S. GDP in 2002.” Economic Policy Institute Policy Memo. Washington , D.C.: EPI.

Offshoring resources on the Web:

<http://www.techsunite.org/news/techind/offshoring1.cfm>

TechsUnite is an association devoted to connecting IT workers to data critical to their careers. TechsUnite is a project of the [Communications Workers of America](#) collaborating with the a range of other partners, supporters, and stakeholders. This page is their statement on offshoring.

<http://www.cwa-union.org/misc/outsourcing.asp>

Sign up for the CWA outsourcing Web log, which tracks company announcements, news reports, and

other breaking stories about outsourcing and offshoring jobs.

<http://www.aflcio.org/aboutaflcio/ecouncil/ec03112004i.cfm>

Statement by the AFL-CIO executive council regarding offshoring.

<http://www.ieeeusa.org/forum/POSITIONS/offshoring.html>

Statement by the Institute of Electrical and Electronics Engineers, the world's largest technical professional society.

<http://www.itaa.org/itserv/docs/execsumm.pdf> 

Executive summary of a study commissioned by the Information Technology Association of America (ITAA) from the consulting firm Global Insight. The actual content of the study must be purchased. ITAA describes itself as the only trade association representing the broad spectrum of the world-leading U.S. IT industry.

General resources:

Bardhan, Ashok, and Cynthia Kroll. 2004. "The new wave of outsourcing." Fisher Center for Real Estate & Urban Economics, Research Report. University of California, Berkeley.

Cline, William. 1997. *Trade and income distribution*. Washington, D.C.: Institute for International Economics.

Gordon, Robert J. 2003. "Exploding productivity growth: Context, causes and implications." Brookings Papers on Economic Activity, Volume 2. Washington, D.C.: The Brookings Institution.

Krugman, Paul, and Maurice Obstfeld. 1991. *International Economics: Theory and Policy*. HarperCollins.

Mann, Catherine. 2003. "Globalization of IT services and white-collar jobs: The next wave of productivity growth." Institute of International Economics, Policy Brief. Washington, D.C.: IIE.

Oliner, Stephan, and Daniel Sichel. 2002. "Information technology and productivity: Where are we now and where are we going?" Federal Reserve Bank of New York, Working Paper.

Wood, Adrian. 1995. How trade hurt unskilled workers. *Journal of Economic Perspectives*. Summer.

OFFSHORING

Frequently Asked Questions

Posted June 2004

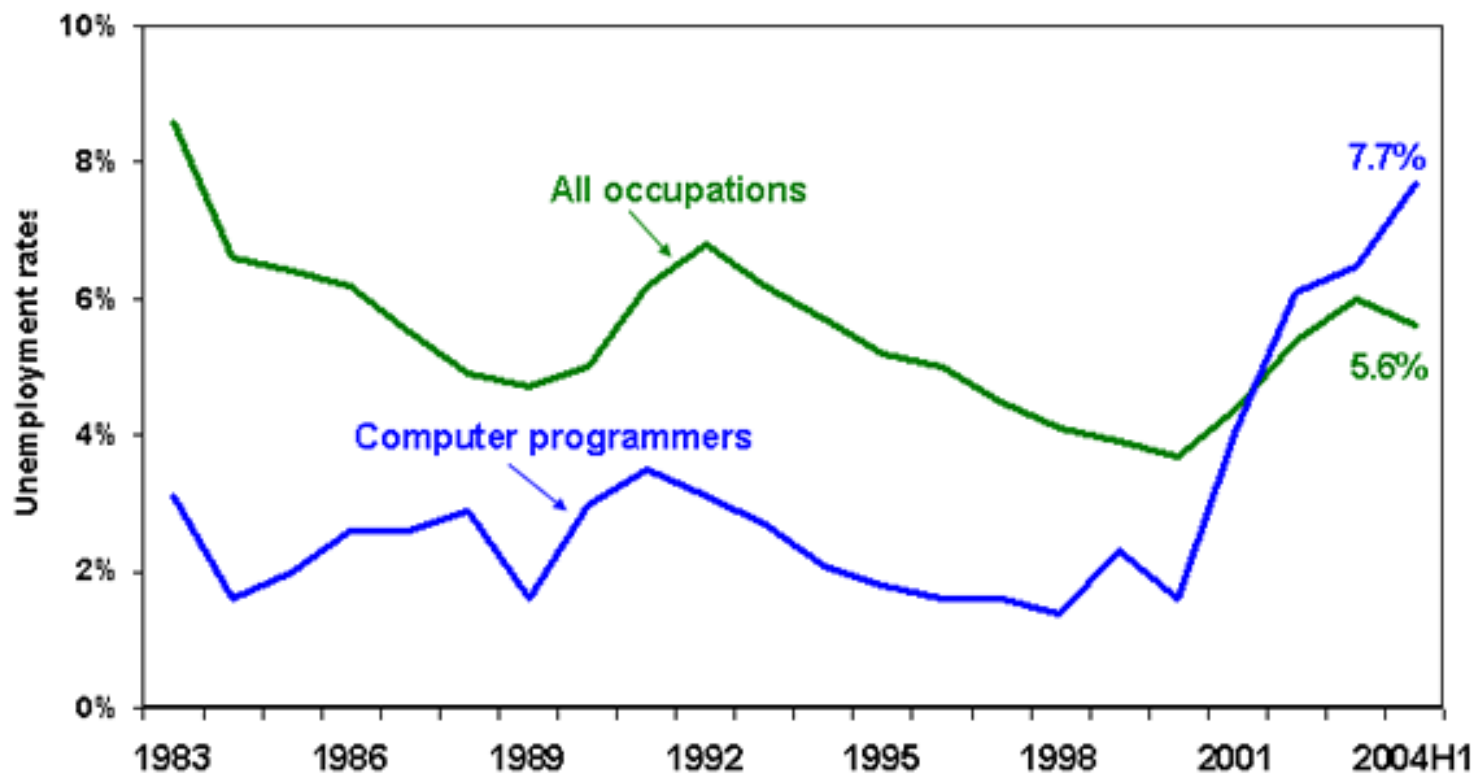
Frequently asked questions (FAQ) about offshoring

Why are people worried about white-collar offshoring?

There is little disagreement about *why* white-collar offshoring has become a hot political topic. The U.S. economy experienced an acute job creation crisis: between March 2001 and March 2004 private-sector jobs were down by 2.6 million, including 560,000 jobs lost even *after* the official recession ended in November 2001.

Additionally, workers in many sectors of the economy that have been relatively insulated from past labor market weakness felt an economic pinch this time around. Workers producing computer software, in particular, saw their rates of unemployment surge toward the national average after years of being well below it. Unemployment among programmers has soared much higher than the national average (see **Figure 1**).

Figure 1: Unemployment rates in selected occupations



Source: Bureau of Labor Statistics

While the manufacturing sector lost 15% of its jobs from March 2001 to March 2004, the software-producing industries have lost an even-higher 16% share of their jobs.

Moreover, jobs in software *occupations within the manufacturing* sector shrank even faster than *overall* manufacturing jobs. Between 2000 and 2002 (the last available year of data), *total* manufacturing jobs fell by 12%, while *software* jobs within manufacturing dropped by 19%, affecting workers who were told for the past 20 years that they had precisely the skills needed to thrive in the global economy.

These labor market developments, combined with an avalanche of media reports of U.S. firms sending technical work overseas, have undermined the job security traditionally expected by white-collar workers with advanced technical skills.

How does offshoring fit in with larger trends in white-collar work?

First, a point of clarification: white-collar offshoring alone cannot explain the current jobless recovery. In fact, it probably cannot account for more than 10% of the job gap of more than five million that has developed since the last recession began in March 2001.

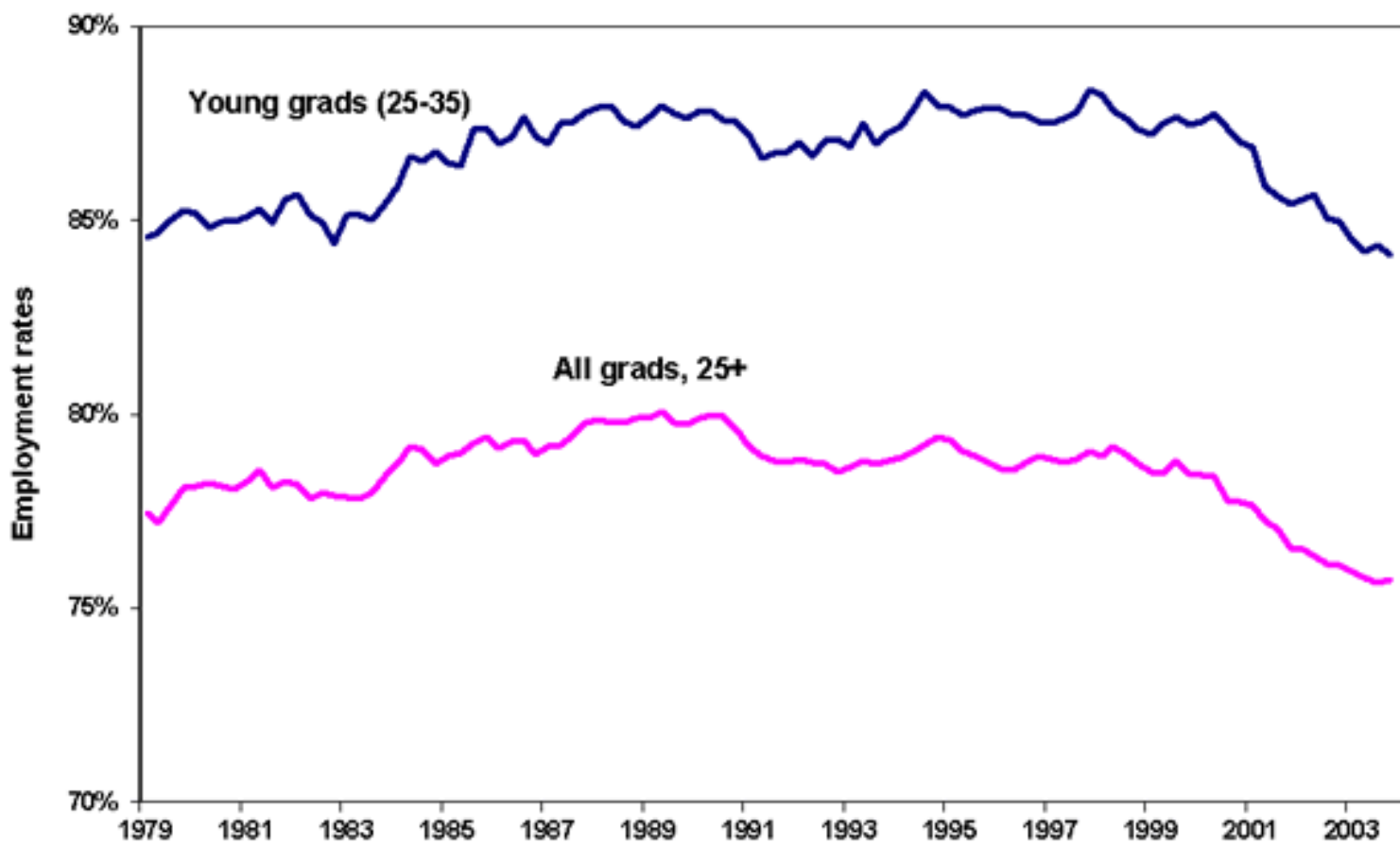
The poor job performance in the current recovery reflects a combination of relatively slow output growth since the recession ended in 2001 and relatively strong growth in measured productivity. The widespread

diffusion of information technology accounts for much of the measured gain in productivity, but increased offshoring could contribute to other factors that might be boosting the productivity measures: increased intensity of work, longer salaried work hours that have escaped measurement, and overstatement of gains in net U.S. output due to understatement of the value of imports.

The anxieties felt by American workers over offshoring are rational. This has been a particularly tough recession and recovery for college-educated workers, especially for those in occupations and industries newly considered vulnerable to offshoring. Furthermore, corporate threats of offshoring have probably played a role in the rapid deceleration of wage growth and the quick acceleration in measured productivity over the course of this recession and recovery.

A good proxy for labor market demand for a particular group of workers is the share of that population employed. **Figure 2** shows the trend in employment rates of all college graduates over 25 and young college graduates age 25-35. In both cases, employment rates have fallen more steeply over the past few years than in any other period dating back to 1979. By this measure, demand for highly educated workers faltered in the recession of 2001 and has yet to recover.

Figure 2: Employment rates, college graduates, 1979-2003



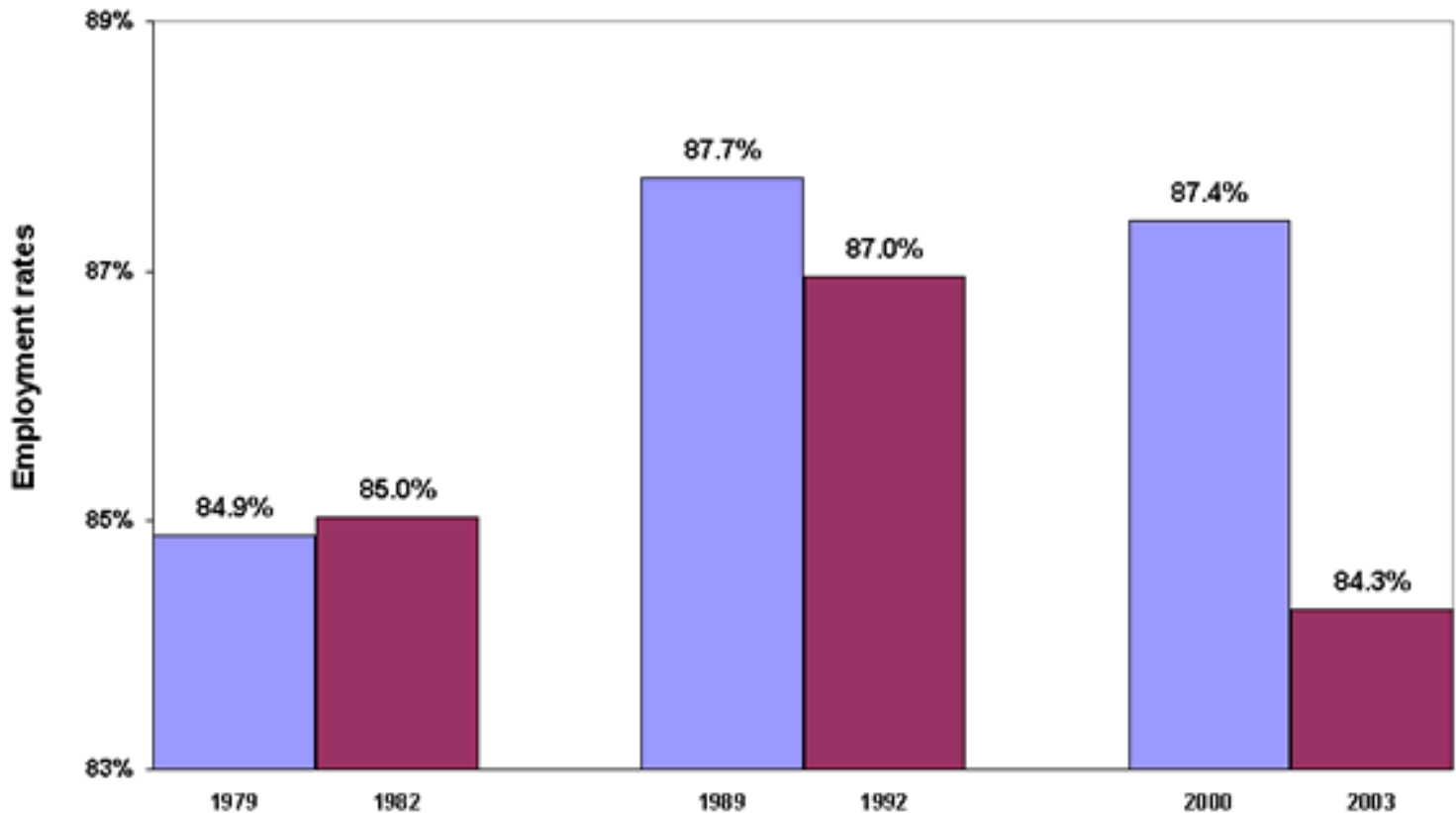
Source: EPI analysis of Bureau of Labor Statistics data.

This is even the case for young college graduates, who presumably have the most up-to-date skill set. In fact, as the figure shows, college graduates age 25-35 have employment rates that exceed those of overall

college grads by about eight percentage points. As the top line in the figure reveals, their employment rates have tumbled even further than those of all college grads.

Figure 3 uses these same data to construct a comparison over three roughly similar periods in the business cycle, examining an economic peak and a period three years later. The figure reveals an important difference in the current period, as employment rates of young college grads are considerably further below their recent peak in this recovery than in the prior two. Clearly, this most recent period has been one of uniquely weak labor demand for workers with newly minted skills.

Figure 3: Employment rates of young college graduates in three downturns

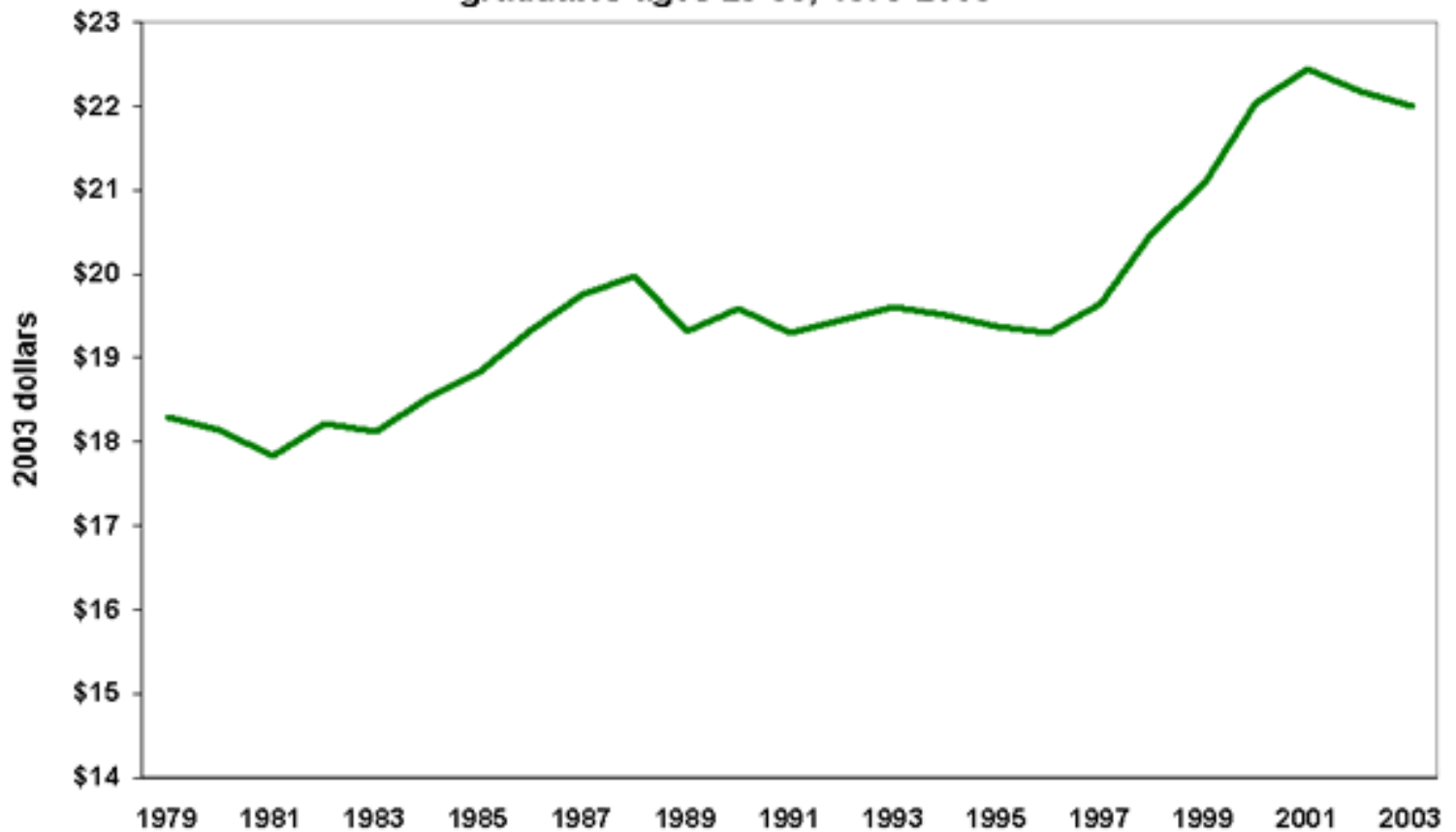


Source: EPI analysis of Bureau of Labor Statistics data.

Source: Author's analysis of Current Population Survey data.

Figure 4 shows the real hourly wages of young college graduates age 25-35. Note that, after rising about 10% through the mid-1980s, young college grads' wages were flat for the next 10 years, before rising sharply in the tight labor market of the latter 1990s. However, the persistently weak labor market since 2001 took the momentum out of this trend, reversing course in 2002 and 2003.

Figure 4: Real hourly wages of young college graduates ages 25-35, 1979-2003

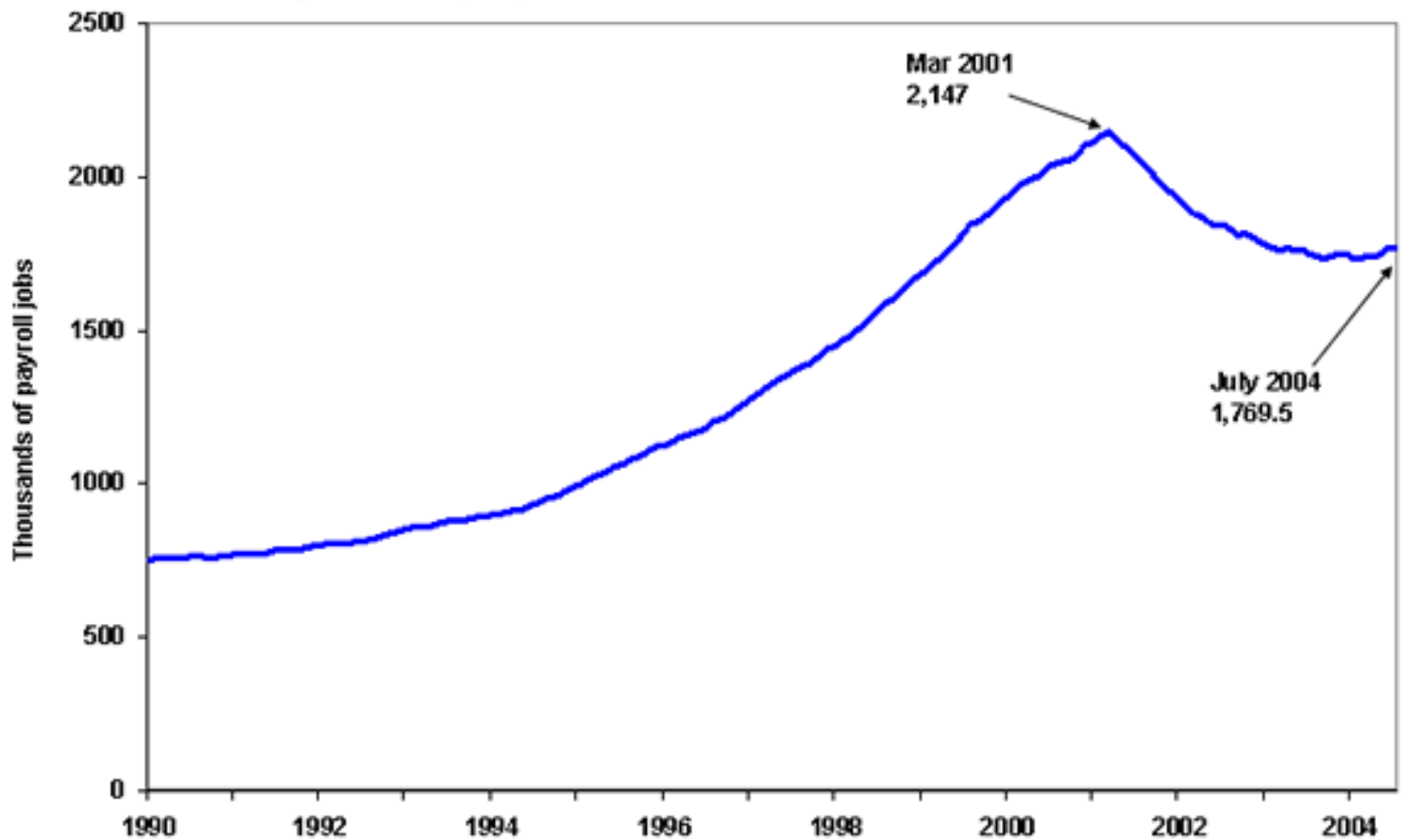


Source: EPI analysis of Bureau of Labor Statistics data.

Source: Author's analysis of Current Population Survey data.

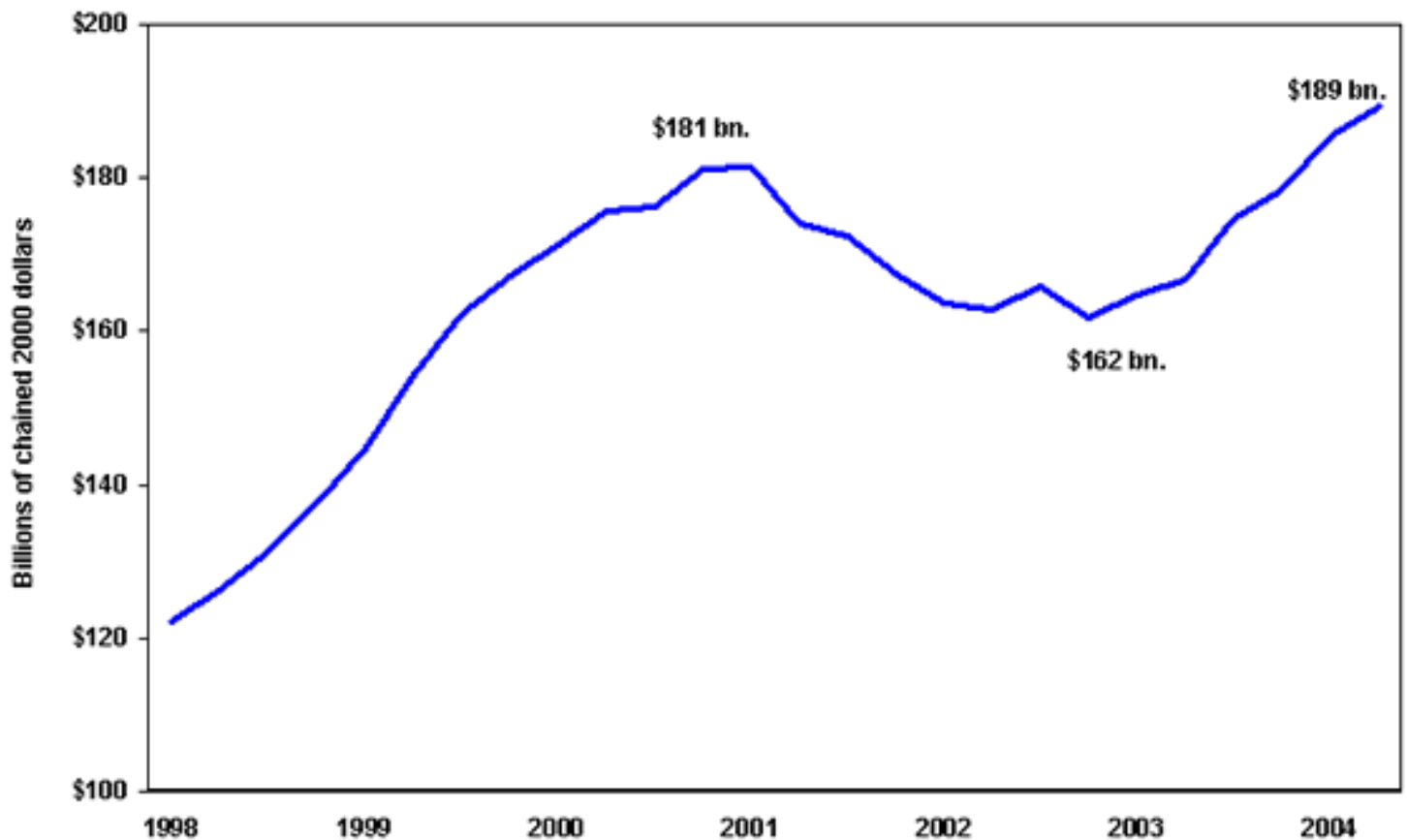
The lack of demand for these workers grows directly out of the lack of job creation in fields that disproportionately employ them. A salient example is the information technology sector, where many young college graduates found employment over the last decade. This sector is now relevant to the offshoring debate (as shown in **Figure 5**), with net job losses being particularly steep since 2001, and with employment still stagnant even as software investment has recovered.

Figure 5: Employment in software and related industries



Source: Bureau of Labor Statistics

Figure 6: Real software investment demand

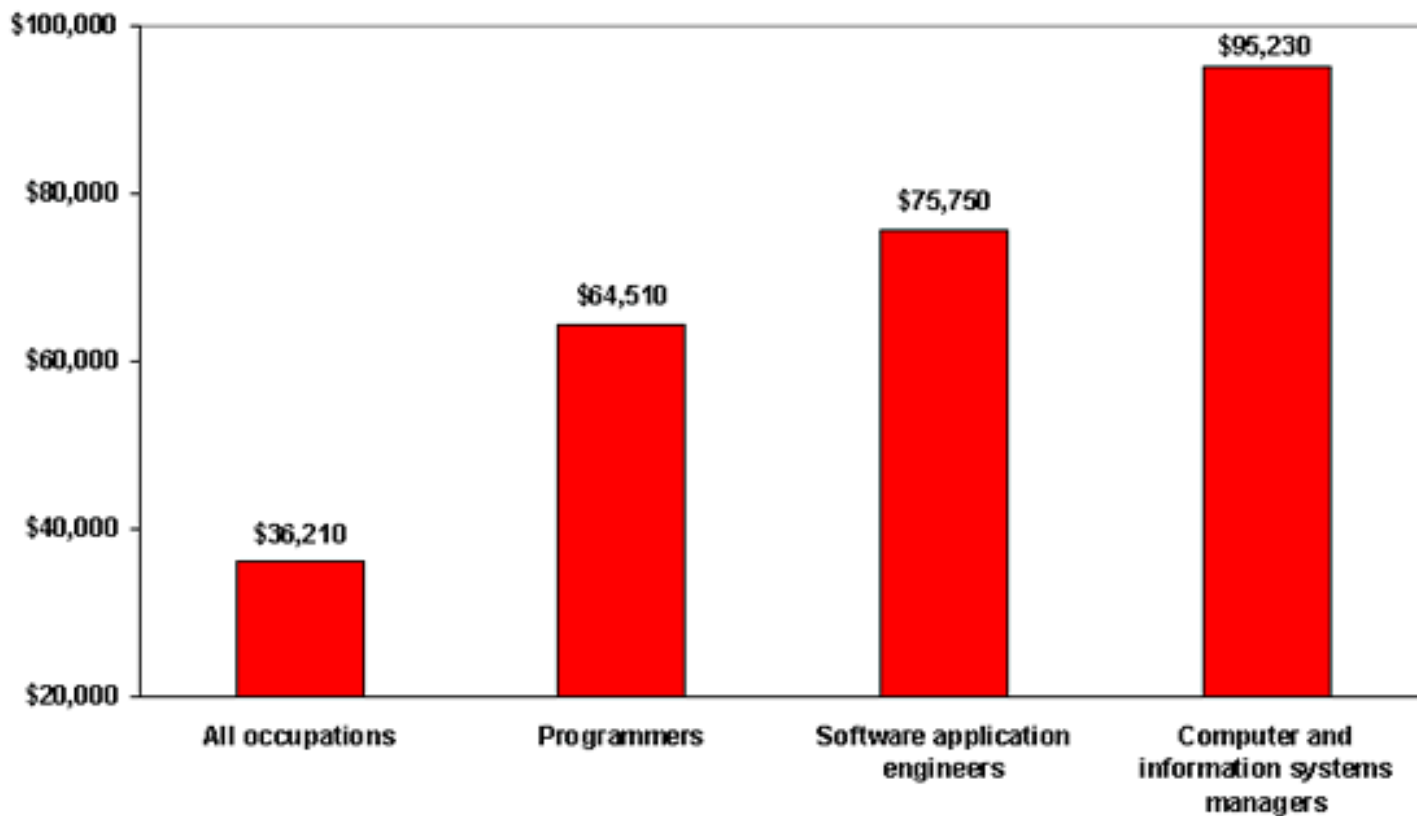


Source: Bureau of Economic Analysis

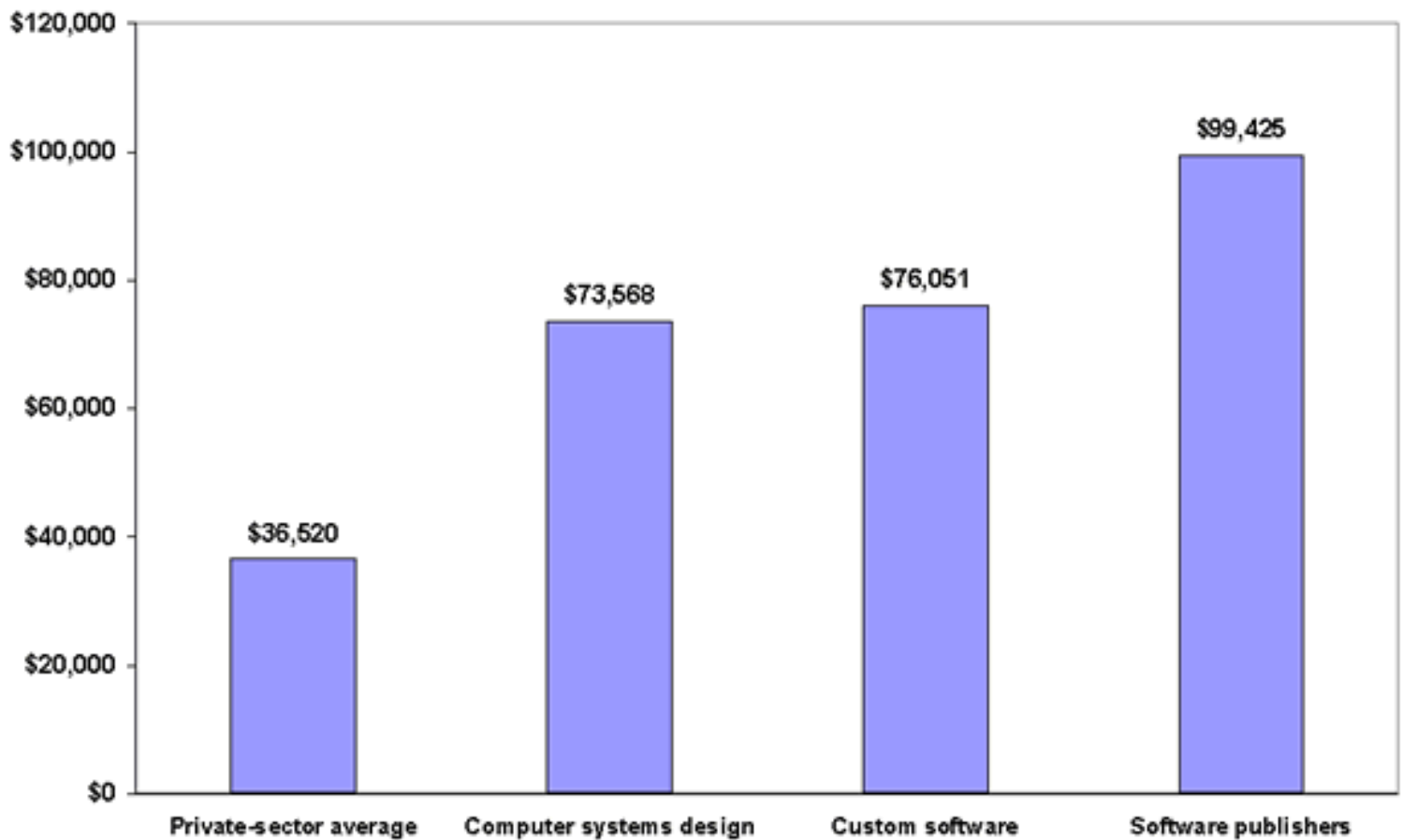
These data on net job losses, falling employment rates, and the reversal of wage growth point to weak demand for the existing stock of U.S. college graduates, a group that, of course, continues to expand.

All of these trends underscore the fact that there is definitely good reason for American workers to be anxious about the demand for white-collar work in general and the effects of white-collar offshoring in particular. The occupations and industries frequently pointed to as being newly vulnerable to offshoring have, indeed, been mired in a deep labor market slump, and these include some of the most highly paid occupations and industries in the American economy, as shown in **Figures 7** and **8**. Furthermore, the effects of offshoring on the wages of white-collar occupations are probably already at work and could have profound implications for the future living standards of American workers.

Figure 7: Average annual salary by occupation, 2003



Source: Bureau of Labor Statistics

Figure 8: Annual salaries by industry, 2002

Source: Bureau of Economic Analysis.

It is often correctly pointed out that offshoring potentially provides access to good, middle-class jobs that would not otherwise be available in India and other developing countries. Expanding the middle class in developing nations is an important goal, and the U.S. reaps great benefits in the long run from prosperity abroad. But the challenge to the U.S. economy is to make sure that the benefits from offshoring also accrue to U.S. workers. While offshoring has had a significant effect only on certain segments of the U.S. labor market so far, over the long run the potential problems resulting from an increase in the global supply of highly educated workers could depress the living standards of American workers who historically have been much less affected by globalization.

Of course, this does not mean that U.S. wages cannot rise in the face of offshoring. In a dynamic economy, there are many influences on U.S. wages: productivity growth in the United States; changes in trade terms between the United States and the rest of the world; and, perhaps most importantly, changes in the way national income is distributed between labor compensation and corporate profits. If the U.S. economy can regain the tight labor market that characterized the late 1990s, wages will rise briskly again.

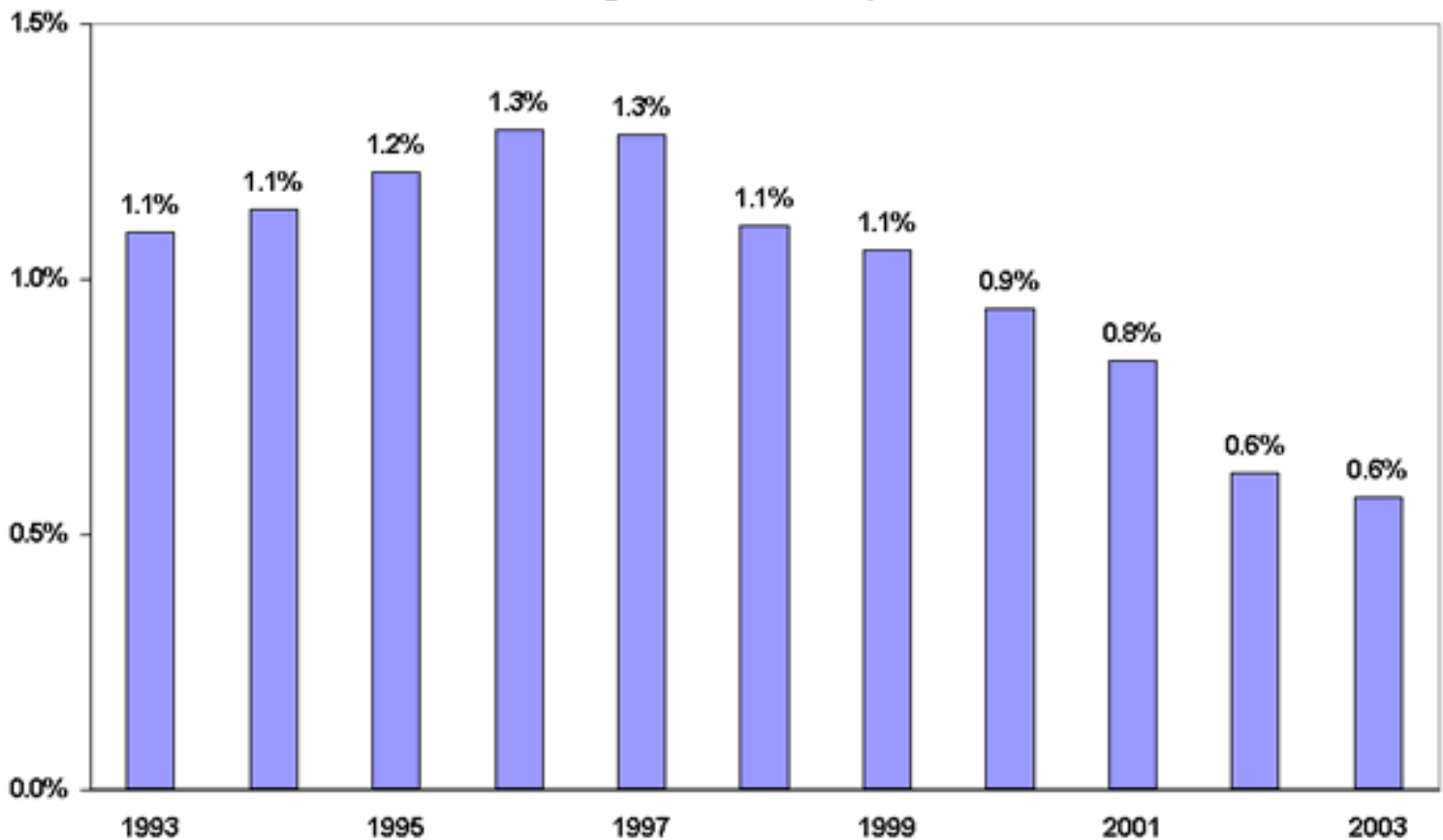
In the absence of a tight labor market, current trends in offshoring and the continued integration of economies with large labor pools into the global economy will likely depress American wage growth.

Doesn't the U.S. run a trade surplus in services?

Many defenders of white-collar offshoring have pointed to the fact that the United States runs a trade surplus in services, that is, it exports more services than it imports. In 2003, the United States ran a \$63 billion trade surplus in services.

However, the service trade surplus is shrinking over time for the United States, as shown in **Figure 9**. In 1997, this surplus was 1.3% of gross domestic product (GDP), in 1999 it was 1.1%, while in 2003 it had fallen to 0.6%.

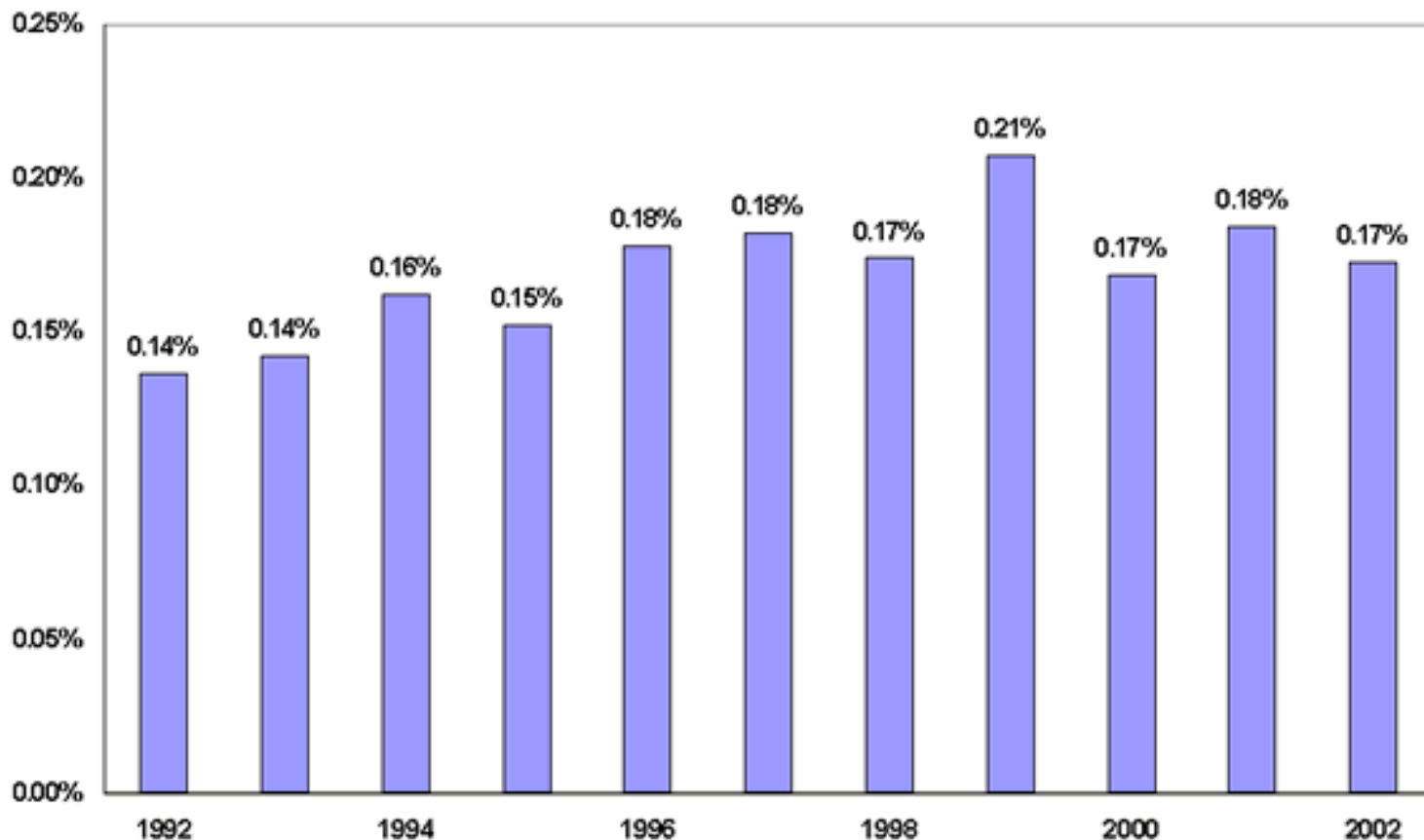
Figure 9: Service trade surplus as a percentage of U.S. gross domestic product



Source: Bureau of Economic Analysis.

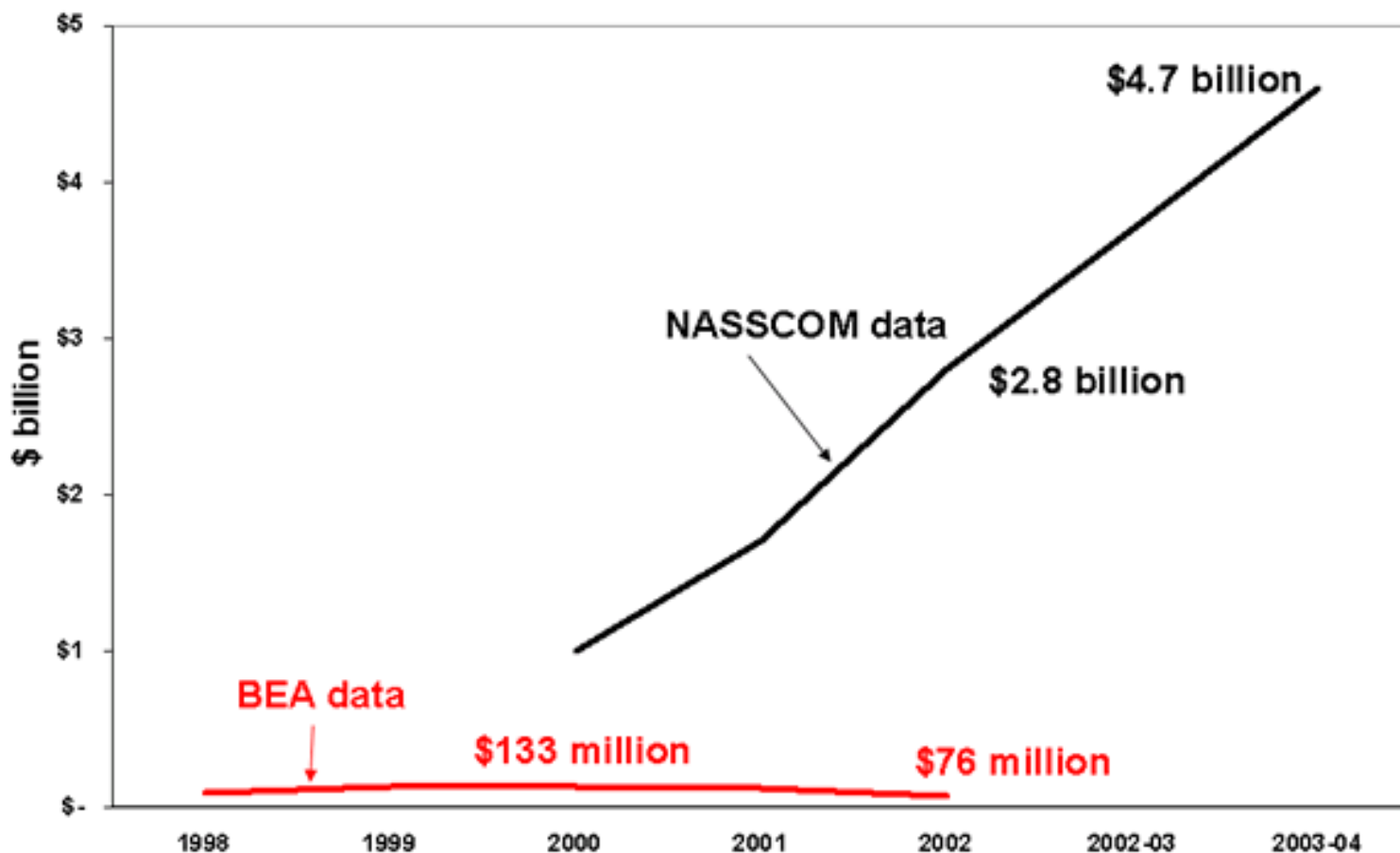
A closer look at the numbers shows that the U.S. runs relatively modest surpluses in the industries most vulnerable to offshoring (see **Figure 10**). The professional, technical, and business services category of U. S. services (which includes accounting, computer programming, and research and development) ran a measured surplus of \$18 billion in 2002. This surplus is below the 1999 peak surplus of \$19.6 billion, and it is trending downward. This downward trend probably has less to do with offshoring than with the fact that, as foreign companies have acquired or established more operations in the United States, they have purchased more services from abroad.

Figure 10: Trade surplus in business, professional, and technical services as a percentage of gross domestic product



Source: Bureau of Economic Analysis and the Indian National Association of Software and Service Companies

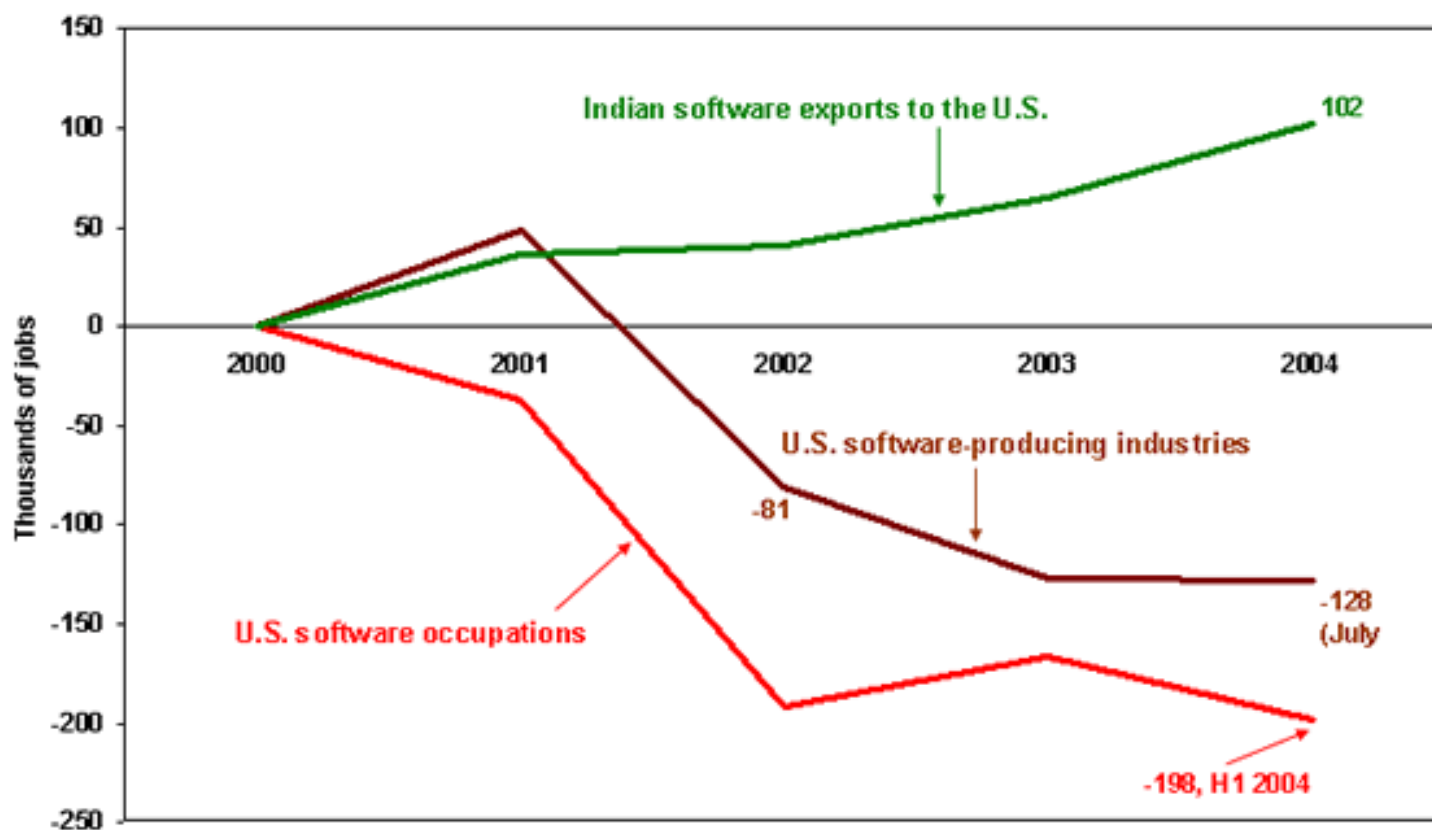
Because the official numbers on trade in services from the Commerce Department's Bureau of Economic Analysis (BEA) appear to be missing substantial amounts of service imports, their data almost surely understate the degree to which offshoring and imports of white-collar work are affecting the U.S. economy. For example, **Figure 11** below shows the change in software and computer services exports from India to the United States from two data sources: the BEA and the Indian software industry association (NASSCOM). The BEA numbers are smaller by orders of magnitude, and actually show a 43% *decline* in the amount of service imports from India from 2000 to 2002 (the most recent year of available data).

Figure 11. U.S. software imports from India

Source: Bureau of Economic Analysis and the Indian National Association of Software and Service Companies (NASSCOM).

The NASSCOM numbers show a rapid increase in these exports and seem much more in line with the anecdotal and qualitative evidence on offshoring from India, one of many countries to which U.S. white-collar jobs have been offshored in recent years.

NASSCOM also provides data on jobs related to exports of software to the U.S. These have grown rapidly in recent years, further suggesting that the BEA numbers miss a substantial portion of the service trade (see **Figure 12**).

Figure 12: Change in software-related jobs since 2000

Sources: EPI calculations of data from the Bureau of Labor Statistics, Current Population Survey, and the National Association of Software and Service Companies (India)

Won't offshoring fade as an issue once the economy recovers?

While offshoring's contribution to current cyclical employment troubles has been modest to date, its impact on the U.S. economy will become more pronounced over time. Historically, the U.S. labor market has provided ample opportunities for highly educated workers to find gainful employment. Note, for example, that over the past 30 years, the share of college graduates in the U.S. workforce has doubled, yet their unemployment rates remain far below the national average.

In fact, policy makers have argued that high levels of education provide U.S. workers with some insulation against the dislocations caused by globalization. Thus, in the manufacturing debate, more education and training has always been put forth as the policy solution for those domestic, non-college-educated workers in competition with less-educated workers from countries with far lower earnings than in the United States.

The United States' comparative advantage, it was argued, was in its relatively large number of educated workers. However, some less-developed countries have been sharply increasing their own supply of educated workers, meaning that offshoring has the potential to vastly increase the global supply of educated labor, eroding the comparative advantage of the United States in this area.

Comparing data from U.S. education statistics and to a recent report from an Indian IT association

provides an instructive example. India is adding about twice as many college graduates to its workforce per year as the United States (1.2 million in the United States versus 2.5 million in India).¹ Of these Indian graduates, 250,000 earned engineering degrees, compared to 70,000 bachelor's degrees in engineering awarded here. Furthermore, the 2003 entering class for Indian engineers is reported to be 375,000, a large jump that suggests the Indian population is responding to expectations of the global market's forthcoming demand in this field.

This supply shock has the potential to significantly depress the earnings of educated workers here, who enjoy a very substantial wage advantage over workers with similar education in less-developed economies. Anecdotal reports reveal that the pay gap between educated workers here and those in offshoring target countries could be as high as 10 to 1. The BLS reports that a programmer in Silicon Valley—an area particularly vulnerable to offshoring of tech jobs—earns about \$78,000 annually, including benefits; the comparable job in India pays around \$8,000.² Other comparisons reveal similar differentials.³

Note that this concern means that offshoring is not solely a threat regarding the loss of jobs. Even if offshoring cannot explain the majority of job loss suffered recently in the U.S. economy, this does not mean that its effects on American labor markets are benign.

What is driving white-collar offshoring?

The information technology (IT) revolution has made location much less important for work for which inputs and outputs can be transmitted digitally. The full impact of the offshoring phenomenon will be felt in the years to come, as a significant proportion of the jobs in America today could be done outside the country, and those jobs can be done much more cheaply abroad. In little more than a decade, governments of nations constituting more than half the world's population (China, India, Eastern Europe) have decided to join the world market system. Those countries have large and rapidly growing pools of talented and educated people with much lower incomes than people with similar skills in the United States.

Most discussions of white-collar offshoring fail to properly identify just how much the IT revolution has opened up opportunities to import white-collar work. Only a minority of U.S. jobs today must be done on site, and many of those are blue-collar jobs: construction, care of children and the sick, mail and package delivery, security, hotel and restaurant attendants, etc. A large share of white-collar work now done in the U.S. could potentially be done offshore. With today's technologies, it's now possible to put online—and therefore potentially offshore—many jobs in industries such as financial services, retail and wholesale, business and professional services, even government and higher education, not to mention the white-collar portions of manufacturing, construction, and health care.

Substantial technological and economic barriers have impeded importation of white-collar work in the past. As a result, U.S. employers have not been able to tap the large pools of talented, educated, underemployed, and low-cost white-collar workers abroad. Until now, importation of white-collar work has been impeded by the cost of establishing sufficient bandwidth, compatible software connections or video hookups, and a secure relationship. With the costs of overcoming those three barriers falling rapidly, many employers will be attracted by the opportunity to replace American employees with much lower-cost foreign employees.

How much will the U.S. economy gain from white-collar offshoring?

Recent anxieties over the economic impacts of white-collar offshoring have spurred a counter-offensive from economists and policy makers arguing that more of this trade is better for the United States.⁴

Two recent studies—one by the Institute of International Economics (IIE) and one by the Mckinsey Global Institute (MGI)—have tried to quantify the benefits to the United States from white-collar offshoring. Both have received much media attention for their assertion that such trade entails enormous benefits for the U.S. economy. The studies' claims are, in the end, not very convincing as to the magnitude of the gains from trade, as they both exaggerate the benefits and ignore large potential costs from offshoring. (For a detailed look at these studies, see Bivens and Price forthcoming.)

One widely reported study (Mann 2003) predicts that offshoring of white-collar work will have enormous benefits for the U.S. economy. The study estimates that rapid globalization of software would have effects comparable to those from globalization of IT hardware that it estimates led to a 0.3% gain in annual productivity growth from 1995-2003, yielding a \$230 billion increase in GDP in 2002. This study has several fatal flaws. First, it substantially overstates the effect of globalization of IT hardware on U.S. prices. For example, it finds a permanent effect on computer prices from the inherently transient effect of increases in global capacity on semiconductor prices. Second, it greatly overestimates the effect of globalization of hardware on GDP because (1) the total value of the capital stock of computer hardware in 2002 was well below \$230 billion; (2) the difference in the size of the capital stock due to globalization must be much lower than the total capital stock because, as even Mann concedes, technological change explains price declines much more than does globalization; and (3) the contribution to GDP from any given capital stock must be less than the value of that capital stock. Finally, the Mann study fails to recognize the fundamental differences in the price dynamics of the labor-intensive software industry and the capital-intensive hardware industry.

The MGI study asserts that every \$1.00 offshored yields \$1.14 in benefits for the U.S. economy, a net gain of \$0.14. These estimates are derived from proprietary information on firms collected by MGI, so it is hard to know whether it is appropriate to make generalizations based on this finding. What can be seen, however, is that the same calculation that yields \$0.14 in benefits for the U.S. economy shows a \$0.26 loss for U.S. workers resulting from every \$1.00 offshored, emphasizing again that the distribution of benefits from offshoring need to be closely tracked.

Who benefits from offshoring?

Economists who advocate expanded trade are voluble in pointing out the benefits of trade, but they are taciturn about the distribution of these gains. Occasionally, even trade advocates will come clean on the skewed distribution of the benefits of trade, pointing out that trade leads to both winners (those who end up with more income) and losers (those who end up with less). The second edition of the textbook *International Economics: Theory and Policy*, by Paul Krugman and Maurice Obstfeld, sums it up best: “Thus trade has a powerful effect on income distribution...owners of a country's abundant factor gain from trade, but owners of a country's scarce factor lose” (p. 78).

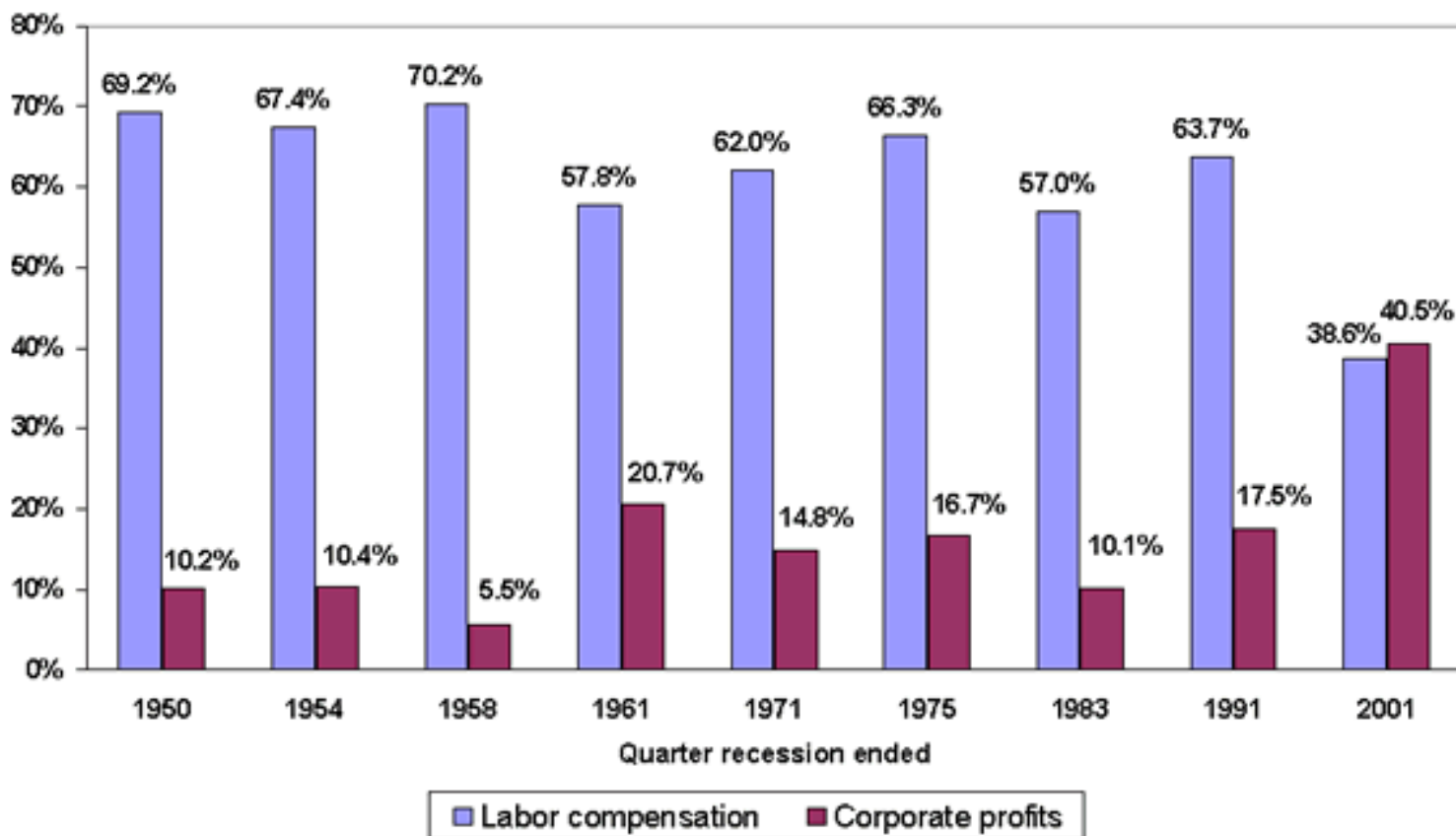
What is usually left completely out of discussions about trade is the *size* of the winning and losing groups. Because proponents of expanded trade predict that the benefits of trade are greater than the losses, they

tacitly suggest trade helps more people than it hurts in the United States. Such is not the case. As the Krugman and Obstfeld textbook quote above states—that trade harms “owners of a country's scarce factor of production”—expanding global trade has hurt, in practice, those U.S. workers without a four-year college degree. In other words, trade expansion has hurt 70% of the American workforce⁵ over the last three decades.

On the other hand, college-educated workers, especially those working in occupations insulated from trade, saw gains due to trade in the 1980s and 1990s. These workers, however, may now see shrinking gains from trade, or even outright losses, as white-collar offshoring starts to pressure their part of the labor market.

The consistently big winners from trade (especially offshoring) are capital-owners—those who derive a significant portion of their income from profits. Profit rates rose in the 1990s relative to previous decades, and they recovered well before wage income did in the latest recovery. In fact, the current recovery is the most profit-biased on record in terms of income growth that is accruing to corporate profits as opposed to labor income.

Figure 13: Labor compensation and corporate profits share of income growth during economic recoveries



Source: Bureau of Economic Analysis.

It has been suggested that white-collar offshoring has the potential to shrink the gap between white-collar

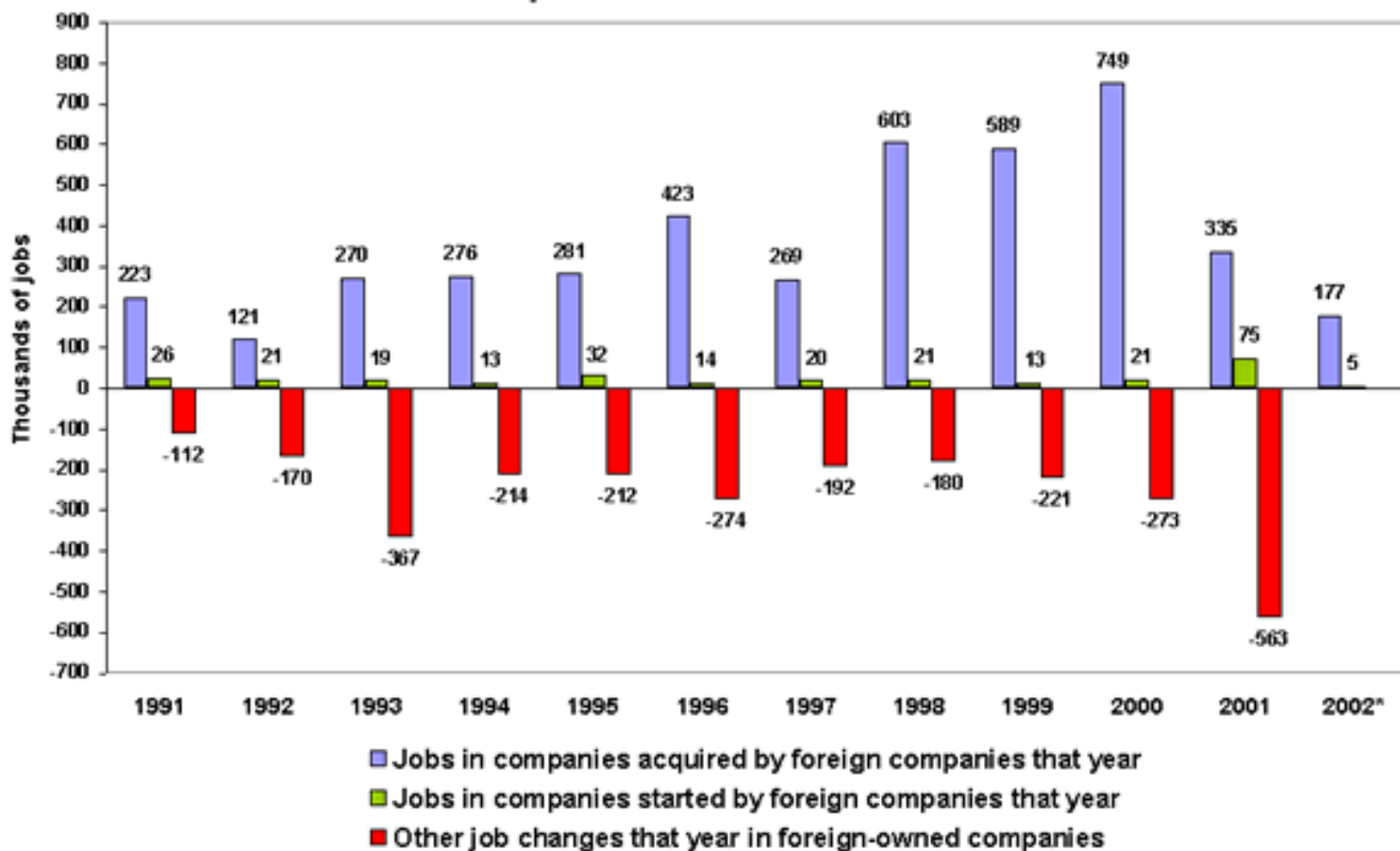
and blue-collar wages. This gap has grown enormously since around 1980; shrinking it is a worthy goal. The optimal way to reduce inequality would be to *increase* blue-collar wages, not to *suppress* white-collar ones. Unless white-collar offshoring has the potential to reduce the prices of goods consumed in large part by blue-collar labor, however, it seems unlikely that it will lead to real wage gains for blue-collar workers.

Businesses are offshoring U.S. work to obtain lower costs. Unless those businesses compete away their gains from cheaper imports and pass them along to blue-collar workers and consumers, white-collar offshoring will not lead to a net increase in the real wages of blue-collar workers (relative to what would have prevailed absent this offshoring).

Isn't offshoring compensated for by "inshoring"?

Recently, a number of economic observers have suggested that "inshoring" has created as many jobs as offshoring has displaced. Inshoring apparently refers to the phenomenon by which foreign companies increase their investments and employment in the United States. The evidence used to assert the benefits of inshoring, however, has so far proven to be weak. The vast majority of employment associated with new investments by foreign companies has taken the form of *acquisitions* of ongoing U.S. companies (such as Daimler's takeover of Chrysler), not the creation of new jobs, as shown in **Figure 14** below.

Figure 14: Jobs related to foreign ownership of companies in the United States



*Incomplete data excludes analysis of jobs in companies started by foreign companies in 2002.

Source: EPI analysis of U.S. Department of Commerce data.

The blue bars represent jobs in firms acquired while the green bars represent jobs in newly established U.S. companies owned by foreign firms. The red bars represent employment changes in foreign-owned companies. While some investments led to increased employment, other foreign businesses were shedding jobs each year.

Between 1991 and 2001, foreign multinationals acquired firms employing 4.1 million workers. However, only 274,000 workers were employed in the newly established U.S. companies owned by foreign firms, for an average of 25,000 jobs per year over this period. Thus, only 6.2% of job growth in foreign companies represented actual new jobs in the United States.

Further, U.S. subsidiaries of foreign multinationals have been a large contributor to the growing U.S. trade deficit in recent years, which has been a powerful drag on increased job growth. Total U.S. exports from foreign-owned firms rose by 69% in the latest decade for which data are available (from \$97 billion in 1991 to \$164 billion in 2001). Total imports of these companies, however, more than doubled (climbing from \$179 billion in 1991 to \$369 billion in 2001). As a result, the U.S. trade deficits of foreign-owned firms rose from \$82 billion to \$206 billion in this period, an increase of 152%.

How is offshoring distinguished from outsourcing?

Outsourcing is a term that refers to the practice of one company hiring another to perform tasks that used to be done in-house. Say that a company that produces automobiles has a cafeteria in one of its plants. If the automaker decides to replace its own payroll employees who run the cafeteria with a catering firm, then it has *outsourced* the running of the cafeteria. Or, if the automaker used to make its own tires, but now buys them from another company that specializes in tire production, it has *outsourced* the tire-producing portion of their business. The term outsourcing, however, does not necessarily indicate nationality—functions can be outsourced to either *domestic* or *foreign* workers.

As international trade grows in importance to the U.S. economy, more and more outsourcing is provided by foreign workers. To take an earlier example, the U.S. automaker may decide to replace its own tire-production line with tires imported from abroad. This is sometimes referred to as *international outsourcing*.

As used in this issue guide, *offshoring* refers to substituting foreign workers for U.S. labor. When a company finds replacements for current U.S. employees *outside the country*, it may hire its own employees abroad (offshoring) or it may *outsource* the work to another company operating abroad.

Take the familiar example of a U.S. company that decides to replace U.S.-based computer programmers with programmers in India. If this programming work is performed for sale in the U.S. market, it is classified as a *service import*. The firm is substituting a *service import* for U.S. employees.

International trade in *goods* is easy to conceptualize. Tangible goods are produced in one nation, shipped over international borders, and sold in others. *Service trade* is a bit harder to imagine. Services in general have been defined as something you pay for but cannot drop on your foot.

But the general principle of service trade is the same as goods trade: work performed in one nation and

sold to residents of another. In the example above, the computer programming performed in India should be classified as a service import (to the United States) and a service export (from India). Work performed in one nation to serve customers in another is classified as an import by the nation receiving the service, regardless of whether it passes physically through a seaport or virtually through fiber optic cables.

There is, however, one aspect of *offshoring* (substituting foreign for U.S. workers) that could occur without a corresponding increase in service imports to the United States. This is when foreign labor is substituted for U.S. *exports* abroad.

Say, for example, that a U.S. financial services firm does the accounting work for a German firm. This service should show up as a service *export* from the United States to Germany. Then, the U.S. firm decides to open up a subsidiary in Germany and begins doing the accounting work from this German-based subsidiary. Its workers in the United States are laid off, and accountants in Germany are hired. There is no increase in service *imports* into the United States; this offshoring shows up as a decline in U.S. service *exports*.

For the past couple of decades, the manufacturing sector has been most affected by *international outsourcing* and *offshoring*. This is because most trade occurs in manufactured goods (about 85% of imports and 70% of exports are manufactured goods). Furthermore, the impact of manufactured goods trade on labor markets has been magnified by the huge deficit in this kind of trade: the United States imports almost \$500 billion more than it exports in manufacturing.

Notes:

1. See "The IT Industry in India ," report by the National Association of Software and Service Companies (NASSCOM), 2004.
 2. These figures were report in the *San Francisco Chronicle*, March 7, pg. A1: "Offshoring's Giant Target: The Bay Area."
 3. See the statement by the AFL-CIO executive council regarding offshoring, provided in the "Offshoring resources on the Web" section of this Issue Guide.
 4. For these references, see the "Further resources on outsourcing" section at the end of this Issue Guide.
 5. This group is scarce in the United States by *global*, not *national* standards, meaning that the proportion of unskilled workers in the United States is much lower than their proportion in the global economy.
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