Chapter Five

Dynamic Gains from U.S. Services Offshoring: A Critical View

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The explosion over the past ten years of U.S. imports of information technology (IT) and IT-enabled services has been a clear boon to the economies of India, China, Singapore, the Philippines, and a number of other developing countries. But there is a considerable debate about the welfare effects of offshoring for the United States. International trade economists generally agree that in the short run the surge in offshoring has brought efficiency gains, but it has not been beneficial to U.S. welfare overall because of inadequate assistance to displaced workers. Accordingly, most economists support an expansion of Trade Adjustment Assistance (TAA)—which currently only covers manufacturing—and a wage insurance plan funded by a tax on employers.

Some economists calculate, however, that over time there are significant gains to the U.S. economy from services offshoring. These longer-term gains, it is typically claimed, are not rooted in traditional free trade theory, but in a model of economic growth in which lower input costs lead to greater investment demand, which in turn brings higher productivity, output, and employment. In this chapter we question the extent to which this growth dynamic has operated in the case of services offshoring. While the cost savings from services offshoring are potentially great, to date these savings have contributed to a historic rise in the share of profits in U.S. national income. But the expected effects for business investment—integral to achieving the dynamic gains from offshoring—have not materialized.

While the globalization of services has in many cases lowered their cost to business, there is no clear indication that this has led to increased demand for these services overall. The cost savings to U.S. firms from services offshoring

revert to firms' profits, and the question of the long-term economic effects then hinges on the extent to which these additional profits are invested in productivity-enhancing and employment-generating activities. As predicted by many of the studies of offshoring, profit shares in the most affected sectors are higher than they would normally be at this stage of the business cycle. But the evidence is that firms are raising dividend payments, buying back their own shares, and undertaking mergers and acquisitions at higher than historical rates, and spending on investment goods and services at lower rates.

Instead of relying on faith in the private sector's dynamism, policymakers should work creatively to raise the chances for the positive growth dynamic to unfold. We oppose tariffs or other forms of protection that would stifle the process and focus on ways to share the benefits of offshoring more equitably and to encourage the dynamic aspects of the process to promote economic growth. We identify three levels at which policy intervention could be effective. At the first level is support for the direct "losers" from services offshoring, that is, workers who lose their jobs and those who get reemployed at lower pay. At the second level are incentives for firms to reinvest profits at a higher rate, including tax incentives for R&D, rescinding tax cuts on dividend income, complementary public investment, and a monetary policy focused on keeping interest rates low. At the third level are broad policies to enhance innovation by making health insurance and old age pensions portable and more fully provided by the government. These policies enhance innovation because they remove the disincentives for workers to resist change in an environment where change, investment, and foreign trade are integral to the innovation process. Moreover, to the extent that taxes to support these programs are progressive, these programs spread the gains from globalization much more equally across the American society than they have been until now.

Services Offshoring and Jobs

The rise in services offshoring has been driven to a great extent by technology: With the unimagined expansion in capacity of the Internet and telecommunications, today any information that can be digitized can be used and manipulated anywhere in the world. The level of services imports is still not very high compared to imports of manufactured goods or exports of services, but services imports have been growing more rapidly than exports for over ten years.

Table 5.1 shows the growth in U.S. imports and exports of private services for the period 1986–2005. The overall balance on services has deteriorated slightly over the period, with some specific private services showing considerable import growth. The trade balance in "Other Private Services"

Table 5.1 Private Services Trade by Type, 1986:Q1–2006:Q3

	Trade balance 2006 (Q1–Q3), US$ million	*Export growth* 1986–2006 (%)*	*Import growth* 1986–2006 (%)*
Total private services	65,331	8.3	7.9
Travel	9,240	7.3	5.0
Passenger fares	−4,146	6.8	6.9
Other transportation	−13,206	5.8	6.6
Royalties and license fees	26,479	10.7	15.4
Other private services**	46,964	9.4	11.5
Education	7,441	7.3	12.2
Financial services	19,746	12.0	8.6
Insurance services	−18,393	9.5	15.1
Telecommunications	535	5.1	1.5
Business, professional, and technical services	20,915	11.2	13.3
Other unaffiliated services	9,665	5.4	8.3

* Export and import growth are calculated as annual compound growth rates.

** The OPS aggregate includes intrafirm and arm's length transactions; OPS categories show only arm's length trade.

Source: BEA Balance of Payments and author's calculations.

and its component "Business, Professional and Technical (BPT) Services" remained in surplus despite more rapid growth in imports. The trade balance worsened significantly in certain subcategories of BPS, including financial services and telecommunications services. However, the share of these services in total services imports remains small. We should note that a number of studies conclude that the official statistics understate the level of offshoring activity, perhaps because so much of it is occurring on an intrafirm basis.[1]

Even the official figures show a very rapid growth of BPT services imports from selected Asian countries, in particular India, China, and Singapore. From 1992 to 2005, U.S. imports of professional and technical services grew at an annual rate of 12.3 percent, with compound growth of 19.3 percent from China, 17.7 percent from Singapore, and 33.5 percent from India.[2]

As many analysts have noted, services offshoring is different from offshoring in manufacturing because it includes many higher-skill jobs, including accountants, programmers, designers, architects, medical diagnosticians, and financial and statistical analysts. With continual improvement in information and communications technology, there is likely to be a rapid broadening of the scope of services subject to international trade.

Blinder (2005, 18) estimates that "the share of current U.S. jobs that will be susceptible to offshoring in the electronic future is two to three times what it is today." And it is likely that this susceptibility will continue to cut across high-skill and low-skill occupations.[3] Given the size and growth of the pool of educated workers in East Asia, South Asia, and Eastern Europe, there is clearly plenty of room for growth in these imports, even in higher-skill sectors. According to Richard Freeman (2005c), "The huge number of highly educated workers in India and China threatens to undo the traditional pattern of trade between advanced and less developed countries."[4]

According to our own calculations, nonmanufacturing employment was 1.2 million lower as the result of a change in trade patterns between 1998 and 2003, almost the same decline in jobs as embodied in trade in manufactured goods over the same period.[5] These represent a small proportion of the overall U.S. labor force, but given the expected continued high growth in services imports and the problem of underreporting, it may turn out that the controversial McCarthy (2004) projection of 3.3 million jobs lost over fifteen years is on the low side. The key, over the long run, lies in the business response to the cost savings from offshoring, and the offsetting employment gains that increased investment can generate.

Offshoring and Economic Welfare

From the perspective of the standard theory of international trade, the fragmentation of production, including the offshoring of intermediate services, constitutes a deepening of the division of labor that enhances the gains from trade beyond those achieved when trade is limited to final goods and services. According to Arndt and Kierzkowski (2001, pp. 2, 6):

> spatial dispersion of production allows the factor intensity of each component, rather than the average factor intensity of the end product, to determine the location of its production. The international division of labor now matches factor intensities of components with factor abundance of locations . . . [E]xtending specialization to the level of components is generally welfare-enhancing.

Heroism in the Static Context

Behind this rosy picture, however, are a number of heroic assumptions. Four in particular stand out: First, there is no international capital or labor mobility. Second, the trade balance will automatically adjust over time to zero. Third, there is always full employment. And fourth, winners can potentially compensate losers and still be better off than before.

If we relax these assumptions, then we can consider the possibility that services offshoring can create unemployment in the United States and lead to a worsening of the balance of trade. In fact, the first three assumptions are closely connected. When capital is internationally mobile, then it will move to where production costs are lowest. That is, absolute advantage will play some role in determining the location of production.[6] A trade imbalance can be associated with net employment gains or losses in a particular country. In other words, if an expansion of imports does not automatically generate an equivalent expansion of exports, then job losses can result.

Even orthodox trade theory shows that trade liberalization brings about both winners and losers. Free trade is best because of the *potential* for the winners to compensate the losers and still remain better off than before liberalization. This is the fourth assumption. Many have expressed doubts about the merits of this assumption when in fact compensation rarely occurs.[7]

To these doubts about the benefits of services offshoring, Paul Samuelson (2004) has added the issue of a possible deterioration in the terms of trade as the result of low-cost import competition in affected services. In a prominent response to Samuelson's skeptical essay, Bhagwati, Panagaryi, and Srinivasan (2004) claim that Samuelson's point is irrelevant since services offshoring is about the creation of newly traded services such as call centers and radiology reports rather than services already traded. While Bhagwati et al. are right to criticize Samuelson on the issue of newly tradable services, they by no means refute his claim that offshoring of services can have negative welfare effects in the United States. And even they conclude that overall benefits from offshoring require the compensation of displaced workers or the ability of displaced workers to find other jobs with the same pay, an issue on which there is at best mixed evidence.[8]

The large and growing overhang of unemployed labor in developing countries means that, in a world where absolute cost competitiveness plays a role in determining the pattern of trade, the United States will face continual pressure to raise imports. The traditional U.S. strategy of abandoning lower value-added varieties and upgrading to higher value-added sectors and protected niches will provide only temporary relief, since a considerable and growing share of the labor overhang in developing countries is relatively high-skilled. The risk is that losers from this trend will cut across the full spectrum of the U.S. labor force, and winners will be those with an ownership stake in companies that are able to raise share values through innovation in new products and in marketing, through peripheral financial activity or through cost-cutting from offshoring itself. We return to this larger picture of corporate performance after we consider the dynamic case for offshoring.

Faith in the Dynamic Context

While economists cite the famous Ricardian principle of comparative advantage to show the benefits of offshoring to all countries, the view that services offshoring will benefit the U.S. economy overall hinges on another argument found in Ricardo—his theory of economic growth and especially of the link between international trade and domestic investment.[9] In Ricardo's view, the importance of trade liberalization was its impact on the profit rate. He saw England's protection of the farm sector as responsible for keeping the price of food high, and, as a consequence, pushing up the real wage. Relatively cheap food imports would lower the real wage paid by employers and thus raise their rate of profit. A higher profit rate would induce a more rapid rate of investment, which in turn would generate a higher rate of economic growth.[10]

The dynamic Ricardian scheme is depicted in figure 5.1. Offshoring of service inputs reduces production costs and raises profit margins. The additional profits provide retained earnings that can support an expansion of business investment. A further incentive for investment demand is provided by the decline in the cost of inputs (now produced abroad). These investments lead to productivity growth, which generates higher levels of income and employment.

A similar dynamic is implied in much of the applied work on the effects of offshoring on the U.S. economy, for example, in the commonly cited research on IT hardware offshoring by Catherine Mann (2003, 2007) and Mann with Kierkegaard (2006). The positive outcome is the result of capital deepening that comes from increased business purchases of IT hardware in response to the price reduction from cheap imports. Mann (2003) estimates that U.S. imports of IT hardware between 1995 and 2002 accounted for 20 percent of the observed decline in IT hardware prices and as a result raised U.S. real GDP by 0.3 percentage points over what it would have been otherwise.

Mann's estimate has been lauded by many as proof of the positive long-term effects of offshoring and has been criticized by others for overstating

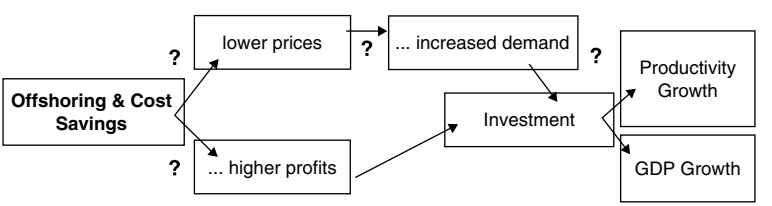

Figure 5.1 U.S. Offshoring and Economic Growth

the share of IT capital income in total national income and thus for overstating the implications for GDP growth.[11] In any case, her study shows that the strongest case for services offshoring is not found in the static efficiency gains identified in the traditional theory of international trade, but in the dynamic process of capital deepening that can occur when the offshored good is an input to production. The higher capital intensity of production following the price decline leads to higher productivity and output.

Profits and Reinvestment

We argue that the same positive dynamic that Mann finds in the case of IT hardware is less likely to be operative in the case of services offshoring. The price declines in semiconductors and the explosion in computing power and IT throughout the 1990s brought about tremendous increases in demand, as not only businesses, but also private households and the government installed these technologies and upgraded them more often. Offshored business services, on the other hand, involve tasks common to the business process before the rise of IT, which allows these tasks to be undertaken abroad. But even with dramatic cost savings and potential price decreases, it is not clear what the demand response will be per unit of output of final goods and services.[12] Thus the price declines from offshoring of services may bring an increase in profits without the same proportional rise in business spending, which can happen if expectations of future returns on domestic investment are too low. Moreover, economies of scale are not as evident in services as in manufacturing, so the incremental investment may not provide the same productivity boost in services as it has in manufacturing.[13] The dynamic Ricardian model that was apparently operative in the case of IT hardware is more questionable in the case of services. Question marks remain at a number of links in the dynamic scheme, as indicated in figure 5.1. A further question mark could be added at the end, concerning the quality of new jobs created by the dynamic process. There is considerable debate over the adequacy of the reemployment rate and the replacement wage (that is, the wage workers earn on average in a new job) for workers who lose their job from import competition.[14]

Of course, higher profits can also be passed through to higher wages or lower consumer prices, but neither appears to have been the dominant trend in the recent period. Most evidence shows that average earnings of workers have stagnated at the same time that increased offshoring has weakened these labor markets, both directly, by raising the number of job seekers, and indirectly, by diminishing wage demands when the threat of offshoring is credible. And there is little evidence of relative price dampening in service-intensive sectors,

as service sector prices have increased more than the GDP deflator since 2000. The point is that the beneficial dynamic from a skewed distribution of the static gains from offshoring is undermined if profit reinvestment does not follow the cost-saving trade.

The structural changes taking place in some categories of services trade with certain regions are too small to be held accountable for the large increase in the level of undistributed profits in the U.S. corporate sector over the past five years. Still, offshoring has contributed to higher margins. Services offshoring has expanded most rapidly during a period when corporate profits have reached a historic high, and the share of profits in national income is higher than at any time since 1969.

These aggregate trends in the profit share are reflected in studies at the firm and industry levels. Firm level surveys find that services offshoring reduces costs to the firm by around 40 percent for the offshored activity.[15] Dossani and Kenney (2003, 7) report that a 40 percent cost saving represents the hurdle rate of return on services offshoring—that is, the minimum cost saving from such sourcing shifts. A number of large firms they surveyed reported savings considerably higher than that. The share of profits in value added in a number of IT services sectors fell as the dot.com bubble burst in the late 1990s and has since rebounded dramatically, in some cases beyond the level enjoyed in the 1990s boom. The profit share in Computer System Design and Information and Professional, Scientific, and Technical Services has almost attained the levels of the mid-1990s (figure 5.2). The Information and Data Processing sector has experienced a rise in its profit share to a level above that enjoyed in the boom period.

For the period 2000–2003, we calculated a strong positive correlation between profit share growth and the growth in offshoring in services. Controlling for changes in other variables that affect the profit share (including the sectoral employment share, capital intensity, and labor productivity), we found that on average a 10 percent increase in offshoring is associated with a 1.34 percent increase in the sectoral profit share. Services offshoring and their threat are certainly a contributing factor in the unprecedented rise in profits and the profit share, even in comparison with other business cycle recoveries.[16]

The increase in profits and profit shares—both economy-wide and in many services sectors—has not been met by an expected rise in business investment. While profits rise procyclically, investment usually rises at an even higher rate in the upturn, so that the ratio of profits to investment normally falls as the economy moves toward the cycle peak. This has not been the case in the latest recovery, as the ratio of profits to investment in

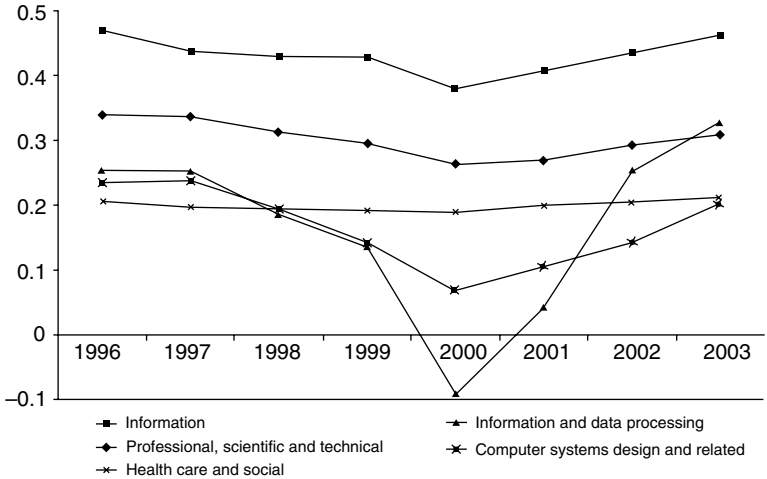

Figure 5.2 Profit Share of Gross Output in Selected Service Sector Industries and Subindustries, 1996–2003

Source: Author's calculations from U.S. Bureau of Economic Analysis, Annual Industry Accounts: Gross-Domestic-Product (GDP)-by-industry Data. See also http://www.bea.gov/bea/dn2.gdpbyind_data. htm. U.S. Bureau of Economic Analysis Annual Input-Output Tables. Last updated on November 15, 2005. http://bea.gov/bea/dn2/i-o_annual.htm.

the corporate sector has risen dramatically since 2000 and to a level higher than in previous recoveries (figure 5.3).

One implication of the pattern shown in figure 5.3 is that the liquidity of the corporate sector is considerably higher than usual. Dividend payments rose to nearly $577 billion in 2005, up almost 7 percent from 2004. Relative to national income, dividend payments were 5.3 percent in 2005, compared to 3.9 percent in 1995 and 2.6 percent in 1985.[17] These figures indicate a long-term trend that reflects many factors unrelated to offshoring. But given the contribution of offshoring to corporate profits, there is the likelihood of a connection. Merger and acquisition activity has surged since 2002 and soared to $1.23 trillion in the first three quarters of 2006, representing a year-on-year increase of 30 percent (Thompson Financial 2006). *The Financial Times* reports that the most recent M&Aactivity pushed this cyclical peak past the Internet bubble (Saigol and Politi 2006). Finally, corporations are buying back stock at an unprecedented rate; $164 billion in the first half of 2005, almost double the amount in the same period in 2004 (Aeppel 2005). Over the past two years, and for the first time since the mid-1960s, the corporate sector is a net lender to the rest of the economy.[18]

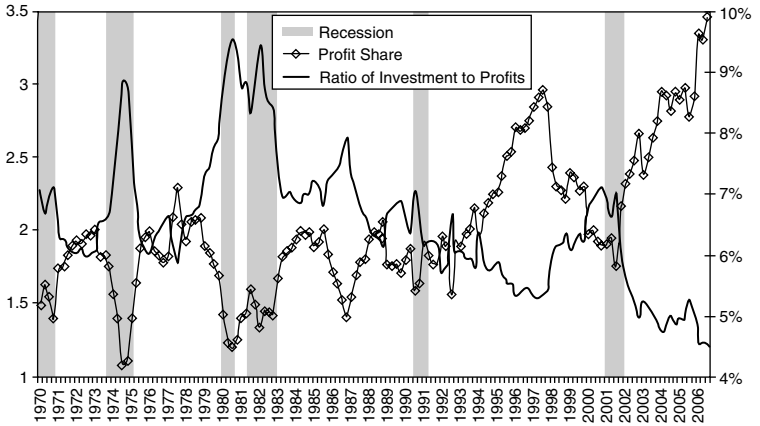

Figure 5.3 Profits and Investment, 1970:I–2006:III

Source: U.S. BEA and author's calculations.

Note: Profit Share (right hand scale) is the share of corporate profits after tax with IVA and CCAdj in national income. The bold series (left hand scale) shows nonresidential private fixed investment relative to corporate profits. Recessions as defined by NBER.

Another possible use of cash flow is for investment abroad. But relative to domestic investment, foreign direct investment, especially the net outflow of foreign direct investment, is very small, averaging 2.9 percent of total investment over the period 1990–2006.[19] This is above levels in the 1970s (1.6 percent) and the 1980s (2.2 percent), but still not high enough to explain the use of funds by non-financial corporations.[20]

Policy Responses

Offshoring is a sensible strategy for firms seeking to cut costs and raise profit by focusing on core competencies. But unregulated private markets will not always meet social demands. In this case, there is no clear evidence that the investment response to cost savings from services offshoring and the productivity and employment growth that should result have materialized at the levels required for the hypothetical dynamic gains from offshoring to be realized. Are there policies that could stimulate such a positive growth dynamic? Tariffs on services imports are not a viable strategy for promoting gains from trade and for overcoming the long-term employment problems associated with import competition in services. Tariffs would hurt developing countries and, since the services are inputs

to production in the United States, would also hurt U.S. firms that import such lower-cost services. A similar effect would result from a large and rapid U.S. dollar devaluation, something many economists have called for in response to the ballooning of the U.S. current account deficit. While some targeted devaluation is appropriate and appears to have occurred in the last quarter of 2006, a large and rapid dollar devaluation would be disruptive and, like a tariff, hurt U.S. trading partners—especially those holding large amounts of dollar reserves. This might trigger a large interest rate increase in the United States, depressing investment, economic growth, and job creation.

Rather than adopting protectionist tariffs or beggar-thy-neighbor devaluation policies, the United States should move to raise competitiveness by sharing the burden of adjustment between firms and workers and encouraging productive reinvestment of the cost savings from offshoring. We identify three levels of policy reform.

Level 1: Adjustment Assistance to Compensate Losers

The expansion of TAA to raise benefit levels and the duration of benefits and, most importantly, to expand coverage to the service sector is a crucial first step in sharing the benefits from offshoring in a more equitable fashion. Although the 2002 Trade Act expanded eligibility and funding, it does not include service sectors except very indirectly. And despite its expanded funding, the actual outlays remain very small, as do the number of workers covered. In 2004, TAA covered 148,000 workers, up from 100,000 in 2000.[21] Far less people participated in the training component of TAA assistance. Proposed legislation by senators Baucus and Coleman goes some distance in remedying the problem and should be passed immediately.[22]

Wage insurance would further protect the losers from offshoring, especially if premiums are paid by employers and if it does not substitute for existing unemployment benefits. The small wage insurance component of the current TAA program is inadequate and covers only manufacturing. The idea behind wage insurance is to provide a wage subsidy to those workers who lose their jobs for reasons beyond their control (from trade or other factors) and find new jobs at lower pay. The plan thus addresses an important problem of adjustment, namely that reemployment often comes at a lower wage. We agree with McKinsey Global Institute (2003) that employers can and should cover the cost of the insurance premium out of their savings from offshoring. Brainard and Litan (2005) put the total cost of an insurance plan that covers 50 percent of lost wages (with a maximum annual benefit of $10,000 for two years) at $3.5 billion or $25 per worker per year. They note (2005, 2) that "this is a small price to help displaced

American workers get back to work more quickly, seek opportunities in new sectors and gain more valuable reskilling through on-the-job training." For slightly higher premiums, even more of the wage-loss gap could be covered.

Level 2: Subsidies and Taxes to Spur Profit Reinvestment

The second level of policies is aimed at raising the elasticity of investment with respect to profits. Here we support two types of incentives, one using tax policy, the other using public investment to "crowd in" private business spending. On the tax side, we support expanding the coverage of investment tax credits, increased tax credit for R&D investment, and accelerated depreciation. These instruments are not unproblematic. The great risk of such business incentives is that they simply become a loophole rather than a spur to employment, innovation, and productivity growth. Accelerated depreciation schemes are particularly prone to such abuse. One way to avoid this is to include employment requirements for eligibility. Also, these programs should be implemented at the national level to avoid interstate competition.

The 2003 tax act lowered the top tax rate on corporate stock dividends from 35 percent to 15 percent and reduced the top capital gains tax rate from 20 percent to 15 percent. In 2006, Congress passed a two-year extension (until 2010) of these lower rates. Many analysts have noted that these tax changes are regressive and redistribute income in favor of wealthier Americans.[23] The changes also reduce the incentive for profit reinvestment. A reversal of the tax reduction would create greater incentive for firms to retain and reinvest rather than distribute and push firms to raise funds through capital markets. Thus the case for reinstating past tax levels on dividend income and capital gains is based both on equity and efficiency considerations, since it will encourage new investment expenditure out of corporate profits, promoting the productivity and employment growth that will also provide a more equitable distribution of income gains.

Nonetheless, investment is more responsive to overall conditions of demand in the economy than it is to small tax advantages. Thus any system of expanded investment tax incentives should be undertaken in conjunction with an expansionary macroeconomic policy, including targeted public investment and a monetary policy focused on low interest rates. Infrastructure investment, in transportation, communications, and Internet access can induce private investment. Also, public investment in research and in the training of more high-skill workers can promote profitable business investment. Federal spending on R&D as a share of GDP has fallen since the early 1990s and has focused excessively on defense rather than on sectors that would spur domestic economic activity, such as energy.

Level 3: Portable Benefits for Increased Efficiency and Equity

Ideally, the regulatory environment and the system of providing social protection in the United States would promote innovation and productivity growth, facilitate rapid adjustment to changing patterns of international competitive advantage and, at the same time, spread the burden of such adjustment across the economy. The existing social contract in the United States works neither for corporations nor for workers. Corporations suffer from high costs of health insurance and pensions to the point where these costs have become a primary reason for offshoring. And workers lose all benefits when they lose a job, and in many cases must work with no benefits other than a wage or salary. Thus, at this third level of policy reform, we propose a reformulation of the way social protection is provided and financed. Health insurance, old-age pensions, child care, and other needs should be provided at some minimum level irrespective of job or job status—employed or not. Such portable benefits would ease the burden of adjustment for those displaced by technological innovation or trade.

The costs of such a comprehensive and portable program must be shared more broadly across the economy, with an emphasis on sharing more equally the benefits from globalization, thus easing the burden of adjustment for those hurt in the process. Madrick and Milberg (2006) offer a broad sketch of such a plan and show how it can be financed with modest increases in personal taxes, payroll taxes, and corporate taxes. It is time to rethink the relation between government and the private sector in this era of globalization. As the wealthiest nation in the world, the United States is in a position to redefine the social contract in a way that compensates globalization's losers and encourages a positive profit-investment dynamic.

There is a growing recognition of the economic divide between haves and have nots across the globe and within the United States. Economists have tended to focus on wage differences between skilled and unskilled workers. In this chapter we have argued that this focus has veiled a deeper divide emerging in the United States between profit and wage income. To date, neither the Republican nor Democratic parties have shown a willingness to address the problem. Growing discontent among losers could easily translate into efforts to slow or halt the globalization process or to place the entire cost of adjustment on business.[24] If a new social compact of the sort we have outlined is to emerge, it will require not just labor union pressure, but also a progressive business view that acknowledges the need to manage globalization more fairly in order to sustain the gains from globalization over the long term. The great burdens on the private sector of rising health care costs and pension obligations may bring the business community around to this view sooner rather than later.

Conclusion

The benefits of offshoring of services to the economies of India, China, and some other East Asian and Eastern European countries are significant and are likely to increase. Income growth in those countries also drives U.S. exports, offsetting job losses from offshoring. Services offshoring has not yet reached levels that constitute a serious labor market disruption in the United States, but affected workers have not been adequately compensated and its dampening effect on wages is hard to quantify. The rate of growth of services offshoring is high and the potential for expansion is great, so the fears of American workers at all levels of skill and training are not misplaced.

At the same time, the cost savings from offshoring are considerable, and offshoring has corresponded with historic highs in the profit share of national income. Despite the profit increases, rates of investment have not grown accordingly. As services offshoring increases, neither the heroic assumptions of static trade theory nor the faith in the dynamic of profit reinvestment give us much confidence that the long-run positive effects articulated by Bhagwati, Mann, and others will be realized.

A more realistic approach would consider that expanded trade in intermediate services is likely to create unemployment and income inequality but has the possibility of generating gains in productivity and economic growth that can more than offset the negatives. We propose policies at three levels. First, we support the expansion of the benefits (level and duration) and coverage of TAA and its wage insurance to include services workers, with insurance premiums paid by corporations. Second, we advocate tax credits to promote investment, and the reversal of tax reductions on capital income, especially dividends. We also support public spending on infrastructure and technology to "crowd in" private investment. Third, we urge a broad reform of health insurance, pensions, and unemployment insurance, providing a minimum level of such benefits and making them portable across jobs. This approach pushes the policy discussion forward to the issues of how to make the economy more flexible without reducing the well-being of those adversely affected by offshoring.

Finally, adjustment to economic change is easiest and less costly to society when economic growth is more rapid. When aggregate demand is rising rapidly, the labor market effects of offshoring are more likely to be absorbed elsewhere in the economy. This simply brings out the importance of a pro-growth adjustment to the U.S. international payments imbalance rather than a deflationary policy of trade protectionism and large dollar devaluation.

Notes

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1. NASSCOM data on Indian software exports to the U.S. are 5 to 10 times those reported in official U.S. government data on imports. For suggestions on how to improve services trade data, see Sturgeon (2006) and GAO (2004).
2. BEA, International services trade statistics, http://www.bea.gov/bea/di/intlserv.htm, Table 5b and author's calculation.
3. Lohr (2006), for example, summarizes a recent report for the National Academies on the expected rapid expansion of offshoring of corporate R&D activity, especially to India and China.
4. Predictions vary on the magnitude of expansion in the scope of services trade. In addition to Blinder (2005), see Jensen and Kletzer (2005) and Bardhan and Kroll (2003).
5. Our calculations are contained in Milberg and Schneider (2007). Groshen, Hobijn and McConnell (2005) report very similar results. Note that these figures include changes in final and intermediate goods trade.
6. See Jones (2000) for a formal model.
7. Even Paul Samuelson (2004, 115), the founder of the modern theory of free trade, expressed doubt, writing: "Should noneconomists accept this as cogent rebuttal if there is not evidence that compensating fiscal transfers have been made or will be made? Marie Antoinette said, 'Let them eat cake.' But history records no transfer of sugar and flour to her peasant subjects."

   Responding to the many criticisms he received following the publication of this article, Samuelson (2005, 243) added that "None of my chastening pals expressed concern about globalization's effects on greater inequality in a modern age when transfers from winners to losers do trend politically downward in present-day democracies." Although they are staunch free traders, Bhagwati, Panagariya, and Srivivasan (2004) do support an expansion of U.S. Trade Adjustment Assistance to compensate losers from trade—an implicit recognition, however, that offshoring has brought potential, not actual, improvement.
8. Moreover, Bhagwati, Panagariya, and Srivivasan take up only a part of the problem. They rule out consideration of intra-firm trade, that is, trade within multinational corporations. Intra-firm trade accounts for a large share of trade in goods and a growing share of services trade. If the issue of the welfare effects of offshoring on the labor market hinges on the degree of import competition, then all imports must be included in the analysis. Moreover, intra-firm trade presumes prior foreign direct investment, the capital movement that is problematic for the standard trade theory. MGI (2003), for example, includes profit repatriated from offshore service providers as part of U.S. gains from offshoring.
9. The original statement is Ricardo (1815).
10. Today we do not assume a subsistence real wage and thus the decline in input prices should lower final goods and services prices and thus raise the real wage, ceteris paribus. This is a potentially important aspect of the offshoring question,

but it has not been at the heart of the discussion of the gains from offshoring, which has instead focused on investment and productivity responses to the lower input prices on the one hand and lower nominal wages on the other.

11. For praise, see, for example, Bhagwati, Panagariya, and Srivivasan (2004). For a critique, see Bivens (2005).
12. There is scant research on price elasticities of demand in services, especially business services. One recent study of household demand for all services suggests that services demand is rather price inelastic, but elastic in some types of services. See Gardes and Starzec (2004, 25 and Table A1).
13. See Blinder (2005) for a discussion of Baumol's disease in the context of the rise of services offshoring.
14. For details, see the discussion of the "Kletzer effect" in Milberg (forthcoming).
15. See McKinsey Global Institute (2003).
16. The estimated profit share equation includes controls for all the variables typically used in such a model. See Milberg and von Arnim (2006) for more detailed discussion of the econometric model and estimation results. Note that for manufacturing sectors in this period the correlation is small and negative, presumably because offshoring in manufacturing had already reached very high levels by 2000.
17. Source: BEA and author's calculations.
18. Flow of Funds, Board of Governors of the Federal Reserve System. Barbosa-Filho et al. (2005) report net borrowing cycles by major sectors for the U.S. economy post–World War II. The business sector's net borrowing—investment expenditures less undistributed profit income—turned negative only occasionally and briefly and appears to be at all time high levels since the late 1960s. Bivens and Weller (2006) attribute this cash position of corporations to a longer-term change in corporate governance. Bates, Lemmon and Linck (2006) find the cash-to-assets ratio of U.S. firms to be at a historic high and attribute this to risk, that is an increase in the volatility of cash flow. Hedging this risk requires more cash holdings relative to the value of assets.
19. While these figures are small relative to domestic investment, they do not invalidate the finding by Harrison and Macmillan (2006) that increased U.S. foreign direct investment in low-income countries reduces U.S. employment.
20. Another possibility is that investment is simply lagging behind its usual cyclical pattern. Two often-cited possible factors in such an investment lag are (a) the overhang of IT investment resulting from the bust after the dot.com boom and (b) the effects of higher productivity growth in the late 1990's that lowered investment needs for a given amount of output growth. With the U.S. economy headed into another slowdown—suggested by several indicators—it does not appear, that there will be a return to the pattern seen in previous cycles.
21. See http://www.doleta.gov/tradeact/
22. The Trade Act of 2002 grants the U.S. president the so-called Fast Track Promotion Authority—the right to introduce a trade agreement to an "up or down" vote in Congress, that is without amendments possible. This power was granted along with extensions to the Trade Adjustment Assistance program. However, the current TAA program does not cover services workers. Senators Baucus and Coleman have proposed legislation to do so, but the bill did not reach the floor in the last Congress. Baucus and Coleman will reintroduce the

bill in the session starting in 2007. See http://www.taacoalition.com for more information.

23. See, for example, Friedman and Richards (2006).
24. See, for example, the "Agenda for Shared Prosperity" promoted by the Economic Policy Institute at http://www.sharedprosperity.org/.