

The Impact of Globalization on Income and Employment

The Downside of Integrating Markets

GLOBALIZATION is the process by which markets integrate worldwide. Over the past 60 years, it has accelerated steadily as new technologies and management expertise have reduced transportation and transaction costs and as tariffs and other man-made barriers to international trade have been lowered. The impact has been stunning. More and more developing countries have been experiencing sustained growth rates of 7-10 percent; 13 countries, including China, have grown by more than 7 percent per year for 25 years or more. Although this was unclear at the outset, the world now finds itself just past the midpoint in a century-long process in which income levels in developing countries have been converging toward those in developed countries. Now, the emerging economies' impact on the global economy and the advanced economies is rising rapidly.

Until about a decade ago, the effects of globalization on the distribution of wealth and jobs were largely benign. On average, advanced economies were growing at a respectable rate of 2.5 percent, and in most of them, the breadth and variety of employment opportunities at various levels of education seemed to be increasing. With external help, even the countries ravaged by World War II recovered. Imported goods became cheaper as emerging markets engaged with the global economy, benefiting consumers in both developed and developing countries.

But as the developing countries became larger and richer, their economic structures changed in response to the forces of comparative advantage: they moved up the value-added chain. Now, developing countries increasingly produce the kind of high-value-added components that 30 years ago were the exclusive purview of advanced economies. This climb is a permanent, irreversible change. With China and India--which together account for almost 40 percent of the world's population--resolutely moving up this ladder, structural economic changes in emerging countries will only have more impact on the rest of the world in the future.

By relocating some parts of international supply chains, globalization has been affecting the price of goods, job patterns, and wages almost everywhere. It is changing the structure of individual economies in ways that affect different groups within those countries differently. In the advanced economies, it is redistributing employment opportunities and incomes.

For most of the postwar period, U.S. policymakers assumed that growth and employment went hand in hand, and the U.S. economy's performance largely confirmed that assumption. But the structural evolution of the global economy today and its effects on the U.S. economy mean that, for the first time, growth and employment in the United States are starting to diverge. The major emerging economies are becoming more competitive in areas in which the U.S. economy has historically been dominant, such as the design and manufacture of semiconductors, pharmaceuticals, and information technology services.

At the same time, many job opportunities in the United States are shifting away from the sectors that are experiencing the most growth and to those that are experiencing less. The result is growing disparities in income and employment across the U.S. economy, with highly educated workers enjoying more opportunities and workers with less education facing declining employment prospects and stagnant incomes. The U.S. government must urgently develop a long-term policy to

address these distributional effects and their structural underpinnings and restore competitiveness and growth to the U.S. economy.

[JOBLESS IN THE U.S.](#)

BETWEEN 1990 and 2008, the number of employed workers in the United States grew from about 122 million to about 149 million. Of the roughly 27 million jobs created during that period, 98 percent were in the so-called nontradable sector of the economy, the sector that produces goods and services that must be consumed domestically. The largest employers in the U.S. nontradable sector were the government (with 22 million jobs in 2008) and the health-care industry (with 16 million jobs in 2008). Together, the two industries created ten million new jobs between 1990 and 2008, or just under 40 percent of total additions. (The retail, construction, and hotel and restaurant industries also contributed significantly to job growth.) Meanwhile, employment barely grew in the tradable sector of the U.S. economy, the sector that produces goods and services that can be consumed anywhere, such as manufactured products, engineering, and consulting services. That sector, which accounted for more than 34 million jobs in 1990, grew by a negligible 600,000 jobs between 1990 and 2008.

Dramatic, new labor-saving technologies in information services eliminated some jobs across the whole U.S. economy. But employment in the United States has been affected even more by the fact that many manufacturing activities, principally their lower-value-added components, have been moving to emerging economies. This trend is causing employment to fall in virtually all of the U.S. manufacturing sector, except at the high end of the value-added chain. Employment is growing, however, in other parts of the tradable sector--most prominently, finance, computer design and engineering, and top management at multinational enterprises. Like the top end of the manufacturing chain, these expanding industries and positions generally employ highly educated people, and they are the areas in which the U.S. economy continues to have a comparative advantage and can successfully compete in the global economy.

In other words, the employment structure of the U.S. economy has been shifting away from the tradable sector, except for the upper end of the value-added chain, and toward the nontradable sector. This is a problem, because the nontradable sector is likely to generate fewer jobs than is expected of it in the future. Moreover, the range of employment opportunities available in the tradable sector is declining, which is limiting choices for U.S. workers in the middle-income bracket. It would be unwise to assume that under present circumstances, employment in the government and health care in the United States will continue to grow as much as it had been growing before the recent economic crisis. If anything, it is remarkable that the U.S. economy did not have much of an employment problem until the recent economic crisis. If the nontradable sector continues to lose its capacity to absorb labor, as it has in recent years, and the tradable sector does not become an employment engine, the United States should brace itself for a long period of high unemployment.

[FOR WHAT IT'S WORTH](#)

ONE WAY to measure the size of a company, industry, or economy is to determine its output. But a better way is to determine its added value--namely, the difference between the value of its outputs, that is, the goods and services it produces, and the costs of its inputs, such as the raw materials and energy it consumes. (Value added comes from the capital and labor that turn the inputs into

outputs.) Goods and services themselves are often purchased as intermediate inputs by other companies or industries, legal services purchased by a corporation being one example. The value added produced by all the industries in all the sectors of an economy adds up to that country's GDP.

Unlike employment, value added in the tradable and nontradable parts of the U.S. economy has increased at a similar rate since 1990. In the nontradable sector, which experienced rapid employment growth, this means that value added grew slightly faster than employment: value added per employee increased modestly, by an annual average of 0.7 percent since 1990. On the tradable side of the U.S. economy, where employment levels barely increased, both value added overall and value added per employee rose very swiftly as the U.S. tradable sector moved up the value-added chain and grew in sync with the global economy. Whereas in the nontradable sector, value added per employee grew from \$72,000 to over \$80,000 between 1990 and 2008, in the tradable sector it grew from \$79,000 to \$120,000--in other words, it grew by just about 12 percent in the nontradable sector but by close to 52 percent in the tradable sector.

Most striking are the trends within the tradable sector. Value added rose across that sector, including in finance, where employment increased, and in manufacturing industries, where employment mostly declined. In fact, at the upper end of the manufacturing chain, value added increased so much that it outweighed the losses at the lower end caused by the movement of economic activity from the United States to other countries.

Value added represents income for someone. For employed people, it means personal income; for shareholders and other owners of capital, profit or returns on investment; for the government, tax revenues. Generally, the incomes of workers are closely correlated with value added per employee (this is not the case in the mining industry and utilities, however, where value added per employee is much higher than wages because these activities are very capital intensive and most value added is a return on capital). Since value added in the nontradable part of the U.S. economy did not rise much, neither did average incomes in that sector. In the tradable sector, on the other hand, incomes rose rapidly along with value added per employee thanks both to rising productivity gains in some industries and the movement of lower-income jobs to other countries. And since most new jobs were created in the nontradable part of the economy, in which wages grew little, the distribution of income in the U.S. economy became more uneven.

The overall picture is clear: employment opportunities and incomes are high, and rising, for the highly educated people at the upper end of the tradable sector of the U.S. economy, but they are diminishing at the lower end. And there is every reason to believe that these trends will continue. As emerging economies continue to move up the value-added chain--and they must in order to keep growing--the tradable sectors of advanced economies will require less labor and the more labor-intensive tasks will shift to emerging economies.

Highly educated U.S. workers are already gravitating toward the high-value-added parts of the U.S. economy, particularly in the tradable sector. As labor economists have noted, the return on education is rising. The highly educated, and only them, are enjoying more job opportunities and higher incomes. Competition for highly educated workers in the tradable sector spills over to the nontradable sector, raising incomes in the high-value-added part of that sector as well. But with fewer jobs in the lower-value-added part of the tradable sector, competition for similar jobs in the

nontradable sector is increasing. This, in turn, further depresses income growth in the lower-value-added part of the nontradable sector.

Thus, the evolving structure of the global economy has diverse effects on different groups of people in the United States. Opportunities are expanding for the highly educated throughout the economy: they are expanding in the tradable sector because the global economy is growing and in the nontradable sector because that job market must remain competitive with the tradable sector. But opportunities are shrinking for the less well educated.

Faced with an undesirable economic outcome, economists tend to assume that its cause is a market failure. Market failures come in many forms, from inefficiencies caused by information gaps to the unpriced impacts of externalities such as the environment. But the effects on the U.S. economy of the global economy's structural evolution is not a market failure: it is not an economically inefficient outcome. (If anything, the global economy is generally becoming more efficient.) But it is nonetheless a cause for concern in that it is creating a distributional problem in the advanced economies. Not everyone is gaining in those countries, and some may be losing.

Although everyone does benefit from lower-priced goods and services, people also care greatly about the chance to be productively employed and the quality of their work. Declining employment opportunities feel real and immediate; the rise in real incomes brought by lower prices does not. For example, according to recent surveys, a substantial number of Americans believe that their children will have fewer opportunities than they have had. The slow recovery from the recent economic crisis may be affecting these perceptions, which means that they might dissipate as the situation improves and growth returns. But the long-term structural evolution of the U.S. and global economies suggests that distributional issues will remain. These must be taken seriously.

MAKING IT WORK

ANALYSTS HAVE been quick to point out that not all the structural changes under way in the U.S. economy should be attributed to greater openness in the global economy. Some important changes in employment patterns and income distribution are the result of labor-saving information technology and the automation of transactions. Automation has undoubtedly cut jobs in the information- and transaction-intensive parts of value-added chains throughout the U.S. economy, in both the tradable and the nontradable sectors. But if that were the only trend, why would employment decline so much more in manufacturing than in other industries?

One answer might be that information processing and automation occupy a more significant fraction of the value-added chain in manufacturing. But this is not true. Information-processing technology, for example, has eliminated jobs throughout the U.S. economy, including in finance, retail, and the government--all areas in which employment has grown. The structural trends affecting the U.S. economy cannot be explained by changes in technology alone. To think otherwise tends to yield the misleading conclusions that technology, not the global economy, is the principal cause of the United States' employment challenge and that the most important forces operating on the structure of the U.S. economy are internal, not external. In fact, all these factors are relevant, with some more significant in some sectors of the economy than in others.

If giving technology as the preferred explanation for the U.S. economy's distributional problems is a way to ignore the structural changes of the global economy, invoking multinational companies (MNCs) as the preferred explanation is a way to overstate their impact. MNCs are said to underpay and otherwise exploit poor people in developing countries, exporting jobs that should have stayed in the United States.

MNCs do, indeed, play a central role in managing the evolution of the global economy. They are the principal architects of global supply chains, and they move the production of goods and services around the world in response to supply-chain and market opportunities that are constantly changing. MNCs have generated growth and jobs in developing countries, and by moving to those countries some lower-value-added parts of their supply chains, they have increased growth and competitiveness in advanced economies such as the United States. A June 2010 report by the McKinsey Global Institute estimated that U.S.-based MNCs accounted for 31 percent of GDP growth in the United States since 1990.

With ample labor available in various skill and educational categories throughout the tradable sector globally, companies have little incentive to invest in technologies that save on labor or otherwise increase the competitiveness of the labor-intensive value-added activities in advanced economies. In short, companies' private interest (profit) and the public's interest (employment) do not align perfectly. These conditions might not last: if growth continues to be high in emerging economies, in two or three decades there will be less cheap labor available there. But two or three decades is a long time.

In the meantime, even though public and private interests are not perfectly aligned today, they are not perfectly opposed either. Relatively modest shifts at the margin could bring them back in sync. Given the enormous size of the global labor force, the dial would not need to be moved very much to restore employment growth in the tradable sector of the U.S. economy. Specifically, the right combination of productivity-enhancing technology and competitive wage levels could keep some manufacturing industries, or at least some value-added pieces of their production chains, in the United States and other advanced countries. But accomplishing this will require more than a decision from the market; it must also involve labor, business, and governments. Germany, for one, has managed to retain its advanced manufacturing activities in industrial machinery by removing rigidities in the labor market and making a conscious effort to privilege employment over rapid rises in incomes. Wages may have increased only modestly in Germany over the past decade, but income inequality is markedly flatter there than in the United States, where it is higher than in most other industrial countries and rising steadily.

Conditioning access to the domestic market on domestic production is a form of protectionism and a way to try to limit the movement out of the country of jobs and of value-added components in the supply chain. This is more common than might be supposed. It exists in the aerospace industry; and in the 1970s and 1980s, in the car industry, quotas on Japanese imports to the United States led to an expansion of the manufacture of Japanese cars in the United States. However, if the large economies--such as China, the European Union, Japan, or the United States--pursue protectionist measures on a broad front, the global economy will be undermined. Yet that may be exactly what happens if employment challenges such as the ones affecting the United States are not tackled differently. With pressure on government budgets at all levels, rapidly rising health-care costs, a

fragile housing market, the postcrisis effort to curb excess consumption and boost savings, and the risk of a second economic downturn, it is highly unlikely that net employment in the nontradable sector of the U.S. economy will continue to grow as rapidly as it has been.

The drop in domestic consumption in the United States has left the country with a shortage of aggregate demand. More public-sector investment would help, but the fiscal consolidation currently under way may make expanding government investment difficult. Meanwhile, because private-sector investment responds to demand and currently there is a shortfall in demand caused by the economic crisis and increased savings by households, such investment will not return until domestic consumption or exports increase. Therefore, the United States will need to focus on increasing job growth in the tradable sector. Some growth will naturally come from the high-value-added part of that sector. The question is whether there will be enough growth and whether the educational attainment of U.S. workers will keep pace with rising job requirements at that level. There are reasons to be skeptical.

THE BIG TRADEOFF

IT IS a common view that the market will solve the disparities in employment and incomes once the economic crisis recedes and growth is restored. Warren Buffet and other very smart, experienced, and influential opinion-makers say so clearly. But as this analysis suggests, they may not be right. And as long as their view dominates U.S. public policy and opinion, it will be difficult to address the issues related to structural change and employment in the United States in a systematic way.

What is needed instead of benign neglect is, first, an agreement that restoring rewarding employment opportunities for a full spectrum of Americans should be a fundamental goal. With that objective as a starting point, it will then be necessary to develop ways to increase both the competitiveness and the inclusiveness of the U.S. economy. This is largely uncharted territory: distributional issues are difficult to solve because they require correcting outcomes on the global market without doing too much damage to its efficiency and openness. But admitting that not all the answers are known is a good place to begin.

With considerable uncertainty about the efficacy of various policy options, a multistakeholder, multipronged approach to addressing these distributional problems is best. The relevant knowledge about promising new technologies and market opportunities is dispersed among business, the government, labor, and universities, and it needs to be assembled and turned into initiatives. President Barack Obama has already appointed a commission, led by Jeffrey Immelt, the CEO of General Electric, to focus on competitiveness and employment issues in the U.S. economy. This is an important step forward. But it will be hugely difficult to invest in human capital, technology, and infrastructure as much as is necessary at a time of fiscal distress and declining government employment. And yet restoring opportunities for future generations requires making sacrifices in the present.

Given the structural changes under way in the U.S. economy--especially the growing premium on highly educated workers at the top end of the value-added chain--education should be boosted. As many people as possible should be able to compete in that part of the economy. But if this goal is clear, the ways to achieve it are less so. Improving the performance of the educational system has been a priority for some years, yet the results are in doubt. For example, the Organization for

Economic Cooperation and Development administers a set of standardized tests, the Program for International Student Assessment, across more than 60 countries, advanced and developing, to measure the cognitive skills of teenage students. The United States ranks close to the average in reading and science and well behind most countries in math.

The problems in the quality and effectiveness of parts of the U.S. educational system have been recognized for some time. Numerous attempts to improve matters, including administering national standardized tests and providing merit-based compensation, have thus far yielded inconclusive results. And the problem extends beyond the school system. A lack of commitment to education in families and in communities makes the entire field of education seem unattractive, demoralizing dedicated teachers and turning off talented students from teaching. That, in turn, reduces the incentives of communities to value the primacy of education. To break this pattern, it will be necessary to shift communities'--and the country's--values about education through moral leadership, at both the community and the national levels. Creating attractive employment opportunities conditional on educational success is another important incentive. One comes full circle, in other words: increased educational effectiveness is needed for the United States to be competitive, and the promise of rewarding employment is a necessary incentive for committing to improving education.

As important as education is, it cannot be the whole solution; the United States will not educate its way out of its problems. Both the federal and state governments must pursue complementary lines of attack. They should invest in infrastructure, which would create jobs in the short term and raise the return on private-sector investment in the medium to longer term. They should also invest in technologies that could expand employment opportunities in the tradable sector of the U.S. economy at income levels other than the very top. The private sector will have to help guide these investments because it has much of the relevant knowledge about where these opportunities might lie. But this effort will also require the participation of the public sector. The U.S. government already invests heavily in science and technology but not with job creation as its primary focus; that has generally been viewed only as a beneficial side effect. It is time to devote public funding to developing infrastructure and the technological base of the U.S. economy with the specific goal of restoring competitiveness and expanding employment in the tradable sector.

The tax structure also needs to be reformed. It should be simplified and reconfigured to promote competitiveness, investment, and employment. And both loopholes and distorting incentives should be eliminated. For example, corporate tax rates and tax rates on investment returns should be lowered in order to make the United States more attractive for business and investment. MNCs with earnings outside the United States currently have a strong incentive to keep their earnings abroad and reinvest them abroad because earnings are taxed both where they are earned and also in the United States if they are repatriated. Lower tax rates would mean a loss in revenue for the U.S. government, but that could be replaced by taxes on consumption, which would have the added benefit of helping shift the composition of demand from domestic to foreign--a necessary move if the United States wants to avoid high unemployment and an unsustainable current account deficit.

But even these measures may not be sufficient. Globalization has redefined the competition for employment and incomes in the United States. Tradeoffs will have to be made between the two.

Germany clearly chose to protect employment in the industries of its tradable sector that came under competitive threat. Now, U.S. policymakers must choose, too.

Some will argue that global market forces should simply be allowed to operate without interference. Tampering with market outcomes, the argument goes, risks distorting incentives and reducing efficiency and innovation. But this is not the only approach, nor is it the best one. The distribution of income across many advanced economies (and major emerging economies) differs markedly. For example, the ratio of the average income of the top 20 percent of the population to the average income of the bottom 20 percent is four to one in Germany and eight to one in the United States. Many other advanced countries have flatter income distributions than the United States, suggesting that tradeoffs between market forces and equity are possible. The U.S. government needs to face up to them.

EXPERIMENTING THE WAY FORWARD

THE MASSIVE changes in the global economy since World War II have had overwhelmingly positive effects. Hundreds of millions of people in the developing world have escaped poverty, and more will in the future. The global economy will continue to grow--probably at least threefold over the next 30 years. One person's gain is not necessarily another's loss; global growth is not even close to a zero-sum game. But globalization hurts some subgroups within some countries, including the advanced economies.

The late American economist Paul Samuelson once said, "Every good cause is worth some inefficiency." Surely, equity and social cohesion are among them. The challenge for the U.S. economy will be to find a place in the rapidly evolving global economy that retains its dynamism and openness while providing all Americans with rewarding employment opportunities and a reasonable degree of equity. This is not a problem to which there are easy answers. As the issue becomes more pressing, ideology and orthodoxy must be set aside, and creativity, flexibility, and pragmatism must be encouraged. The United States will not be able to deduce its way toward the solutions; it will have to experiment its way forward.

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