ECONOMIC ISSUES 11

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WASHINGTON, D.C.

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ISBN 1-55775-679-1
ISSN 1020-5098

Published September 1997

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Preface

The Economic Issues series aims to make available to a broad readership of nonspecialists some of the economic research being produced in the International Monetary Fund on topical issues. The raw material of the series is drawn mainly from IMF Working Papers, technical papers produced by Fund staff members and visiting scholars, as well as from policy-related research papers. This material is refined for the general readership by editing and partial redrafting.

The following paper draws on material originally contained in IMF Working Paper 97/43, "The Effect of Globalization on Wages in the Advanced Economies," by Matthew J. Slaughter, Assistant Professor of Economics, Dartmouth College, and Phillip Swagel, an economist in the IMF's Research Department. David Driscoll of the IMF's External Relations Department prepared the present version. Readers interested in the original Working Paper may purchase a copy from IMF Publication Services ($7.00).

Does Globalization Lower Wages and Export Jobs?

Globalization—the international integration of goods, technology, labor, and capital—is everywhere to be seen. In any large city in any country, Japanese cars ply the streets, a telephone call can arrange the purchase of equities from a stock exchange half a world away, local businesses could not function without U.S. computers, and foreign nationals have taken over large segments of service industries. Over the past twenty years, foreign trade and the cross-border movement of technology, labor, and capital have been massive and irresistible. During the same period, in the advanced industrial countries, the demand for more-skilled workers has increased at the expense of less-skilled workers, and the income gap between the two groups has grown. There is no doubt that globalization has *coincided* with higher unemployment among the less skilled and with widening income inequality. But did it *cause* these phenomena, as many claim, or should we look to other factors, such as advances in technology? This paper seeks to answer that question.

Basic Facts

It is best to start with the facts. Are economies around the world becoming more integrated? Have increased unemployment and widening income disparity in fact coincided with increased economic integration?

Global Integration

The share of imports and exports in overall output provides a ready measure of the extent of the globalization of goods markets. Although foreign goods are available in every country now more than ever before, the expansion of product market integration has not been continuous over time. World trade in relation to output grew from the mid-1800s to 1913, fell from 1913 to 1950 because of the two world wars and protectionist policies implemented during the Great Depression of the 1930s, and then burgeoned after 1950. Only in the 1970s, however, did trade flows reach the same proportion of output as at the turn of the century, a result of the easing of tariffs and quotas, more efficient communications, and falling transportation costs.

For many advanced economies the most important decade for globalization since World War II was the 1970s, when the ratio of trade to output rose markedly in both advanced and developing economies in the wake of the two oil shocks. In the developing countries, exposure to international trade picked up again in the late 1980s, coinciding with their movement toward trade liberalization.

The rise in the ratio of exports to total output likely understates the degree of product market globalization. More and more output in the advanced economies consists of largely nontradable services: education, government, finance, insurance, real estate, and wholesale and retail trade. Perhaps it would be more accurate to measure the importance of international trade by considering merchandise exports as a share of the production of tradable goods only. This alternative measure shows a much larger role for trade. However measured, globalization has occurred and gives no sign of slowing down.

Labor Market Developments

An important trend in labor markets in the advanced economies has been a steady shift in demand away from the less skilled toward the more skilled. This is the case however skills are defined, whether in terms of education, experience, or job classification. This trend has produced dramatic rises in wage and income inequality between the more and the less skilled in some countries, as well as unemployment among the less skilled in other countries.

In the United States, for example, wages of less-skilled workers have fallen steeply since the late 1970s relative to those of the more skilled. Between 1979 and 1988 the average wage of a college graduate relative to the average wage of a high school graduate rose by 20 percent and the average weekly earnings of males in their forties to average weekly earnings of males in their twenties rose by 25 percent. This growing inequality reverses a trend of previous decades (by some estimates going back as far as the 1910s) toward greater income equality between the more skilled and the less skilled. At the same time, the average real wage in the United States (that is, the average wage adjusted for inflation) has grown only slowly since the early 1970s and the real wage for unskilled workers has actually fallen. It has been estimated that male high school dropouts have suffered a 20 percent decline in real wages since the early 1970s.

In other countries, the impact of the demand shift has been on employment rather than on income. Except in the United Kingdom, the changes in wage differentials have generally been much less marked than in the United States. Countries with smaller increases in wage inequality suffered instead from higher rates of unemployment for less-skilled workers.

What explains the differences in outcomes for wages and employment across countries is differences in labor market structures. In countries with relatively flexible wages set in decentralized labor markets, such as the United States and, increasingly, the United Kingdom, the decline in relative demand for less-skilled labor has translated into lower relative wages for these workers. In contrast, in countries with relatively rigid wages set in centralized labor

markets, such as France, Germany, and Italy, it has meant lower relative employment.

Two other facts about these labor market trends shed some light on the impact of trade. The first is that about 70 percent of the overall shift in U.S. labor demand in manufacturing was a change in skill demands *within* industries, not *across* industries from less skill-intensive to more skill-intensive. At all levels of industrial classification, the majority of U.S. manufacturing industries during the 1980s employed relatively more high-skilled workers than in the 1970s, even though wages of these workers had risen.

The second finding is that income gaps have widened in a number of developing countries as well as in the advanced economies, and evidence suggests that labor demand in developing countries has also shifted toward workers with high skill levels relative to the average. For example, research reveals that trade liberalization in Mexico in the mid-to-late 1980s led to increased relative wages of high-skilled workers. We might have expected trade liberalization to boost the demand for unskilled labor and raise unskilled wages, but in fact the opposite has happened in some developing countries.

Does Import Competition Affect Wages?

Not surprisingly, people often link increased globalization to the decline in relative wages of less-skilled workers in the advanced economies. But does increased international trade, especially with developing countries, in fact worsen income inequality? There are two approaches to answering this question. One focuses on the role of the price of imports in lowering the prices of products and thus

lowering wages. The second uses the quantity rather than the price of imports as a measure of the intensity of import competition.

Effect of Import Prices on Wages

Economic theory suggests that international trade affects the prices of products in both exporting and importing countries and this in turn affects the price of labor—that is, wages—within countries by influencing the demand for labor. Changes in product prices brought about by competition from imports alter the profit opportunities facing firms. Firms respond by shifting resources toward industries in which profitability has risen and away from those in which it has fallen. Trade flows thus give rise to shifts in the demand for labor, as more workers are needed in newly profitable sectors and fewer in unprofitable sectors. If the supply of labor is fixed, these demand changes lead to a rise in wages, since workers will demand a premium for switching into more profitable industries.

Theory also suggests that import competition lowers the price of products (such as apparel and footwear) made by low-skilled labor relative to the price of products (such as office machines) made by skilled labor, so that domestic firms shift toward producing skill-intensive goods. But have product prices in the advanced economies in fact changed in this way? If so, trade might have contributed to rising income equality, but it must first be shown that changes in product prices are the result of trade rather than other, purely domestic, influences.

A great deal of research has been done on this question, and although the conclusions are not robust, there appears to be little evidence of larger price increases in skilled-labor-intensive products in advanced countries; if anything, price increases were larger in the unskilled-labor-intensive industries. Rapid technology change seems to have led to relative price declines in skill-intensive industries rather than the price decreases in unskilled-labor-intensive industries one would expect in the face of import competition from developing countries. In most cases, trade with developing nations has played only a small role, if any, in raising income inequality in the advanced economies.

Effect of Import Volumes on Wages

A second way of measuring how trade affects wages is to focus on the volume of trade and to analyze the factors embodied in these flows rather than the prices of imports. Trade can be viewed as effectively shipping from one country to another the services of the workers engaged in the production of traded goods. All else equal, imports add to the labor endowment of the recipient country and reduce the labor endowment of the shipping country.

Data on U.S. trade flows have been analyzed to infer the quantities of labor embodied in trade flows. The United States tends to export skilled-labor-intensive products and to import unskilled-labor-intensive products, so that the growing importance of trade in the U.S. economy has increased the effective supply of unskilled labor in that country relative to the supply of skilled labor. Analysis suggests that trade accounted for around 15 percent of the total rise in income inequality during 1980–85, but that effect diminished in later years. Further studies have shown, for the advanced economies as a whole, that trade with developing countries has led to about a 20 percent decline in the demand for labor in manufacturing, with the decline concentrated among unskilled workers. The results of these latter studies are subject, however, to some uncertainty because of the influence of labor-saving technology in the advanced economies. Other studies have estimated that shifts in product market demand, including the effect of imports, account for less than 10 percent of the increase in wage differential.

Synthesis

Whether analyzed in terms of import prices or of import volumes, nearly all research finds only a modest effect of international trade on wages and income inequality. The average estimate of the effect of trade on wages and employment is not zero—most research finds some role for trade—but it is certainly lower than what might be expected from purely anecdotal evidence, and certainly far from the claim that import competition makes a “giant sucking sound.”

This conclusion might seem puzzling in light of the presumption that the advanced economies have become more open to interna-

tional trade since the 1970s. There are at least two explanations. First, it is possible that on balance the advanced economies have *not* become substantially more open to trade because, although tariffs have fallen, they have been replaced with nontariff barriers (for example, voluntary export restraints in autos and steel). Second, firms in the advanced economies might have upgraded their product mix—producing higher value-added goods—in the face of low-wage foreign competition. If this is true, foreign competition has been blunted and need not lead to large changes in relative product prices.

The issue of how to measure properly the impact of trade on labor markets is still largely unresolved—if anything, the disagreements are becoming more contentious. What is remarkable, however, is the common finding across both literatures of only a small impact of trade on wages and income inequality.

Other Links

The previous section addressed only one aspect of the link between globalization and labor markets: whether international trade has directly contributed to increased income inequality and to lower wages and higher unemployment for unskilled workers. Does trade influence the labor market in other ways, and what effects do capital mobility, movements of workers from country to country, and the spread of technology have on that market?

Other Influences of Trade

Trade can affect labor markets beyond shifting demand from unskilled to skilled workers and thus changing wages. One such

effect is the influence of import competition on interindustry wage differentials, a phenomenon in which seemingly equivalent workers are paid more in some industries (for example, aerospace and petroleum) than in others. While the existence of these wage differentials is well established, there is less consensus about their cause. One explanation is that wage differentials reflect unobserved worker characteristics and are thus consistent with competition in the labor market. For example, Boeing may attract mechanics who are in fact more highly skilled, even though they appear to have substantially the same education and experience as mechanics in lower-paying industries. Another explanation—which applies particularly to such unionized industries as autos and steel—is that higher wages reflect profits shared with workers by firms earning above-normal profits in imperfectly competitive product markets, where union bargaining power allows workers to extract these benefits.

If this latter explanation is correct, international trade can affect wages by influencing product market competition and the profitability of firms. Depending on the nature of wage bargaining, import competition that squeezes firms' profits can lead not only to smaller wage premia in high-wage industries, but also to a reordering of the differentials across industries as unskilled workers in declining industries, such as steel, find their wages falling behind the wages of unskilled workers in more successful industries. If an industry becomes more competitive worldwide, this would be expected to result in both lower wages and smaller wage differences across countries.

This is important because many who oppose free trade do so not because of its redistributive effects *within* countries but because they worry about its equalizing effects *across* countries. For example, opponents of the North American Free Trade Agreement are concerned that import competition will force wages for unskilled workers in the United States down to the level of Mexican wages. The idea is that each country exports the services of labor with which it is well endowed and imports the services of labor that is scarce. Trade thus increases the relative supply of each country's scarce labor, thereby decreasing its price (that is, wages), and decreases its relative supply of abundant labor, thereby increasing

its price (wages). This leads to a convergence of labor costs across countries. In principle, therefore, NAFTA might be expected to lower the wages of less-skilled workers in low-skilled-labor-scarce United States and raise wages of less-skilled workers in low-skilled-labor-abundant Mexico until the same wage structure prevails in both countries.

In practice, there is a critical caveat. This is that the theoretical possibility of wage convergence is subject to many restrictive assumptions, such as identical consumer tastes and identical production technologies across countries, perfect labor mobility across industries within each country, and production of the same mix of goods across all countries. The assumption that labor, even unskilled labor, is as productive in Mexico as in the United States is unlikely to be substantiated.

Capital Mobility and Labor Markets

Capital flows that change a country's stock of capital relative to labor potentially affect the relative price of labor. The volume of capital flows across borders has increased rapidly since about 1970, growing at a rate much higher than that of international trade in products. The claim is often made that outflows of capital from advanced economies have lowered wages in the advanced economies as multinational firms establish or expand overseas affiliates, to which the firms then "export" or outsource jobs.

While this process of outsourcing can generate a shift in demand toward more skilled labor within firms, as has happened in most U.S. industries, the process apparently has not yet been large enough to add noticeably to income inequality. Home and foreign labor are at best weak substitutes for each other and might even be complements, so that employment rises and falls together at home and abroad. When firms outsource to independent contractors rather than affiliates, the results appear to have only a modest effect on wages of unskilled workers in the United States. Even the combined effects of trade flows and capital movements remain smaller than the share of changes in inequality explained by technological advances.

Labor Mobility and Wages

Movements of labor from one country to another can also affect wages. An important issue in the advanced economies is whether immigration of less-skilled workers from the developing countries depresses the earnings of less-skilled natives. For the United States, one study has estimated that as much as a third of the overall increase in U.S. wage inequality can be attributed to increased immigration during the 1980s, an effect two to three times as large as that attributed to imports of goods. By contrast, other studies have found only small effects of immigration, but such studies have been criticized as investigating too restricted a geographical area. For example, although research had concluded that the 1980 boatlift of Cubans into Miami did not depress wages of less-skilled workers in that city relative to nearby cities, a later analysis revealed that in fact less-skilled natives adjusted to the influx of immigrants by moving out of Florida altogether.

In recent years, many European countries have experienced larger flows of labor (both inward and outward) relative to the size of their populations than has the United States. Immigrants in European countries are typically blamed for increases in unemployment rather than for declines in wages as in the United States. But studies have found that both wage and employment effects are in general small. Unfortunately, rigidities in European labor markets limit the speed of adjustment to migration and import competition, so that any adverse effects may tend to be longer lasting than in the United States.

Immigration can also lead to increased growth, particularly if, as in the case of Israel, immigrants such as scientists and engineers bring with them significant human capital. In this case, immigration potentially leads to increased investment and higher wages and output. In recent years, however, immigrants to most advanced economies have had on average lower levels of human capital than natives do, suggesting that economy-wide growth effects from recent flows of immigration will be less immediate.

Technology Flows and Wages

An inflow of technology can raise labor prices by increasing productivity. In general, one would expect wages across countries to

equalize as technology and production techniques spread. Increased trade may contribute to innovation and the spread of technology, and thus indirectly affect wages.

One potential channel through which technology flows from country to country is the transfer of technology by multinational firms from the parent to its affiliates. Higher foreign investment in a particular industry is usually associated with higher wages in that industry. A recent study of Mexico and Venezuela, however, indicates that foreign direct investment appears to raise wages only within the plants of the foreign affiliates; there is no evidence that the technology spills over to increase wages or productivity in domestically owned firms.

Public Policy Issues

Increased globalization has been viewed with concern in many advanced economies. There is a common belief that globalization harms the interests of workers, especially unskilled workers, either directly through immigration or indirectly through trade and capital mobility. Particularly with respect to import competition, these beliefs appear to be at odds with the empirical evidence that globalization has only a modest effect on wages, employment, and income inequality in the advanced economies. (By contrast, changes in technology have led to a pervasive shift toward more-skilled workers to the detriment of less-skilled ones.) Moreover, the belief that globalization threatens wages and jobs is contradicted by the historical evidence that free trade and the mobility of labor and capital improve global welfare and tend to improve national welfare for all countries involved.

Still, despite the overall benefits of globalization for national welfare, there are adjustment costs for particular groups within a nation: globalization produces winners and losers. The adjustment of those groups of workers displaced by import competition occurs slowly and with significant costs, such as the need to obtain information about new opportunities, relocation, and the loss of firm- or industry-specific knowledge. Policymakers must keep in mind potential dislocations and ensure that those who are displaced do not become marginalized.

It is important, however, that any policy actions do not impede adjustment but provide incentives for workers and firms to adjust and therefore gain from changes in the economic environment. The adjustment costs can be minimized by encouraging flexible labor markets and by reducing structural rigidities facing firms, such as onerous work rules, staffing requirements, and hiring and firing costs. Other policies might include gathering and spreading information about labor market conditions, standardizing professional certification procedures across countries, and enhancing training and educational opportunities so that workers in the advanced economies can upgrade their skills to match the demands of the changing global economy.

Unfortunately, policymakers with short political time horizons might be more concerned with avoiding these short-term adjustment costs than with nurturing the long-term benefits of free trade, increased mobility of labor and capital, and labor market reforms. This view is misguided. The world economy has never been healthier than it is today. A good deal of the credit for this higher standard can be traced to globalization.

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ISBN 1-55775-679-1