

# GLOBALIZATION

## AND ECONOMIC MOBILITY

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### KEY FINDINGS:

- Changes in trade relationships with less-developed countries decreased the relative wages of high school dropouts by about 10 percent between 1980 and 1995 (Borjas, Freeman, and Katz 1997).
- Approximately 36 percent of displaced manufacturing workers in import-competing industries are reemployed at similarly paying or higher-paying jobs; about 35 percent experience earnings losses of more than 15 percent (Kletzer 2004).
- Between 2001 and 2003, workers in trade-competing service industries were approximately 75 percent more likely to experience job loss than were workers in service industries that did not compete with trade (Jensen and Kletzer 2005).
- Foreign investment by U.S. firms likely has little impact on exports or aggregate domestic employment (Lipsey 2004).
- Investment by foreign firms in the United States has not contributed noticeably to skill-based technical change, one of the major drivers of increasing inequality (Blonigen and Slaughter 2001).

*Globalization—the heading generally applied to the developments in trade and information technology that have made it easier for goods and services to flow back and forth across national boundaries—has the potential to heavily influence patterns of economic mobility in the United States. By allowing businesses to look internationally for efficient solutions, globalization may raise overall productivity and allow for widespread increases in living standards. However, critics have observed that globalization often pushes less-skilled U.S. workers into damaging competition with lower-paid foreign substitutes, reducing their bargaining power and making it more difficult for them to share in globalization’s benefits. In other words, globalization seems likely to lead to income growth (i.e., upward absolute mobility) at the high end of the skill spectrum, but may decrease rates of upward mobility among less-skilled workers both in absolute terms and in comparison to their higher-skilled peers.*



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Current research does not directly address the impacts of globalization on economic mobility. However, a large body of **literature** discusses the implications that globalization has for unemployment and inequality in the United States. Together, these measures provide a reasonable proxy for **intragenerational mobility**. If globalization causes job or earnings losses for low-skilled individuals at a given point in time, it may slow income growth over time for this group as well. Similar inferences are possible if globalization increases inequality, particularly if it does so by widening the gap between low- and middle-income families. Conclusions regarding the effects of globalization on **intergenerational mobility** will necessarily be more speculative, since globalization itself is a relatively new phenomenon. However, to the extent that globalization promotes economic growth over the long run, it will likely lead to upward absolute mobility as well, provided that any associated increases in inequality are not too large.

Research on the international flow of goods and services can be grouped into three main categories according to the type of good or service. The first group seeks to assess the implications of traditional **international trade**—in particular, the increasing tendency of corporations to import intermediate goods for assembly in U.S. products. The second addresses impacts of what is commonly termed **outsourcing**—the use of foreign workers to perform services (like running call centers) that have traditionally been reserved for American workers. The third considers the consequences of **foreign direct investment** (FDI); i.e., U.S. firms' international investments, and foreign investments in the United States.

This review considers the implications that international trade, outsourcing, and FDI have for patterns of intragenerational mobility, in light of research on their wage, employment, and inequality effects. The text box below summarizes several key findings.

### **Globalization and Economic Mobility**

#### ***International Trade***

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- Approximately 36 percent of displaced manufacturing workers in import-competing industries are reemployed at similarly paying or higher-paying jobs; about 35 percent experience earnings losses of more than 15 percent (Kletzer 2004).

#### ***Services Outsourcing***

- Between 2001 and 2003, workers in trade-competing service industries were approximately 75 percent more likely to experience job loss than were workers in service industries that did not compete with trade (Jensen and Kletzer 2005).
- Services outsourcing increased labor productivity by about 5 percent between 1992 and 2000—approximately 10 percent of the total increase over the period (Amiti and Wei 2006).

#### ***Foreign Direct Investment***

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- Investment by foreign firms in the United States has not contributed noticeably to skill-based technical change, one of the major drivers of increasing inequality (Blonigen and Slaughter 2001).

### **International Trade**

Researchers investigating the labor market effects of international trade generally choose one of two approaches: either they focus on the way trade alters outcomes in the labor market as a whole, or they home in on the hardships faced by individuals whose work status has been affected

by trade. These two strategies are complementary. While the first seeks to estimate the aggregate size of trade-associated labor market disruptions (generally in comparison to the effects of other potential causes of job or wage losses), the second aims to describe those disruptions in detail.

Most recent reviews of the literature on the aggregate labor market effects of trade conclude that importing intermediate goods has relatively little impact on national-level employment and inequality. Though economic theory holds that importing intermediate outputs is equivalent to increasing the supply of the American workers in import-competing industries, and should therefore exert downward pressure on the wages of these workers, the size of such effects appears to be modest. This has held even as the imports from less-developed countries have increased as a percentage of U.S. GNP.<sup>1</sup> In contrast, the obstacles faced by workers who are displaced by trade are typically larger than those faced by other workers. The table below summarizes two key empirical studies.

### Wage and Employment Effects of International Trade

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Borjas, Freeman, and Katz 1997 (1960, 1970, 1980, 1990 Census PUMS; 1995 CPS merged ORG)	<ul style="list-style-type: none"> <li>○ Assesses the proportions of skilled and unskilled labor at various levels of immigration and trade, then evaluates the wage consequences of the skill distribution.</li> <li>○ Findings: elimination of trade with less-developed countries (LDC) in 1995 would have increased wages of HS dropouts by .012 to .033 log points (roughly 1 to 3 percent). Changes in trade with LDCs account less than 10 percent of the decrease in relative wages of U.S. dropouts between 1980 and 1995.</li> <li>○ For comparison: changes in immigration levels account for 27 to 55 percent of the decrease in relative wages of dropouts over the same period.</li> </ul>
Kletzer 2004 (CPS Displaced Worker Survey Supplement covering 1979-1999)	<ul style="list-style-type: none"> <li>○ Organizes industries by type (manufacturing or non-manufacturing) and level of import competition. Assesses reemployment and earnings recovery rates for workers in each category.</li> <li>○ Findings: 63.4 percent of manufacturing workers in trade-competing sectors found jobs by the time they were surveyed (up to three years after displacement), compared to about 65.8 percent of other manufacturing workers.</li> <li>○ Regardless of the level of trade competition, about 36 percent of displaced manufacturing workers who found new jobs were reemployed in jobs with equal or greater earnings. About 35 percent took jobs with earnings losses of more than 15 percent.</li> </ul>

Consider first the aggregate-level literature. Katz and Autor (1999) summarize evidence from the 1990s and conclude that “demand shifts from skill-biased technological change and domestic sources of changes in relative skill supplies appear to be much more significant factors in the recent expansion of the U.S. college wage premium [a major driver of increasing inequality] than trade’s impact.” During the Clinton Administration, the Council of Economic Advisers reached a similar consensus, assigning international trade responsibility for roughly 10 percent of the

<sup>1</sup> It should be noted that the work reviewed in this section does not reflect changes in this pattern that have taken place since the 1990s. Imports of manufactured goods from less-developed countries have continued to increase, potentially magnifying the negative effects of trade. For one estimate of the effects of more recent trade levels on wages and employment, see Bivens (2007).

increase in inequality in the 1980s and early 1990s, somewhat more than the amount attributed to (respectively) declining unionization rates and the falling real value of the minimum wage, but far less than the roughly 45 percent attributed to technological change (Council of Economic Advisers 1997). In one important empirical study, Borjas, Katz, and Freeman (1997) found that trade with less-developed countries accounted for only 10 percent of high school dropouts' wage losses between 1980 and 1995, while immigration accounted for between 27 and 55 percent.

Though the drawbacks of trade are modest in their effects on the population as a whole, the negative consequences for the relatively small group of workers who are displaced by trade can be quite pronounced. Haveman (1993; as cited in Richardson 1995) finds that displaced workers in trade-competing sectors tend to suffer through longer periods of transitional unemployment than do other displaced workers—37 weeks, on average, compared to 22. These findings, however, are not nearly as robust after controlling for industry. That is, trade-displaced workers tend to face dramatically more adverse outcomes than do other displaced workers, but not more so than other displaced workers in similar industries. For instance, Kletzer (2004) used displaced worker surveys to find that 63.4 percent of manufacturing workers in trade-competing sectors who had been displaced in the past three years were reemployed at the time of the survey, a rate only slightly lower than the 65.8 percent reemployment rate for other manufacturing workers. Earnings losses are also similar for trade-competing and non-competing workers: roughly 36 percent of the workers in each group are eventually reemployed at no loss of income, while roughly 35 percent are reemployed with earnings losses of greater than 15 percent.

The picture that emerges is one in which trade-displaced workers are more likely to work in sectors characterized by older workers, longer job tenures, and lower educational attainment—traits that make reemployment more difficult regardless of the reason for job loss. Trade does cost some workers their jobs, and these workers tend to be drawn from particularly vulnerable subgroups.

Research on earnings recovery and reemployment after trade displacement can be interpreted more or less directly in terms of short-term economic mobility. The evidence thus suggests that international trade leads to downward economic mobility for a relatively small group of low-skill workers. By eliminating some of the higher-paying jobs available to such workers, trade may also inhibit upward mobility. Though these effects most likely make only a modest contribution to overall mobility rates, the consequences for affected workers are no doubt very large.

Over the long term, the mobility consequences of international trade are likely more positive. By allowing countries to specialize in what they do best, trade may increase real income, at least at the aggregate level. Frankel and Romer (1999), for instance, estimate that, *ceteris paribus*, a one percentage-point increase in the ratio of trade to GDP increases a country's average per capita income by at least half a percent. Bradford, Grieco, and Hufbauer (2005; as cited in Orszag and Deich 2006) conduct a meta-analysis using methods from four different studies, and find that, in 2003, trade added roughly \$1 trillion to the U.S. economy. Freeman (2003) provides a tongue-in-cheek summary of the delicate balance in the trade debate, writing that “some will gain and some will lose... but the gainers will make more than the losers will lose... and neither the gains nor losses will be big enough to measure afterwards.” In this light, the effects of changes in trade policy on economic mobility in the country as a whole will likely prove to be quite muted.

### **Services Outsourcing**

Outsourcing—defined here as the internationalization of services like computer programming and call-answering—is the frequent subject of political scrutiny. However, because the technology

required to internationally integrate the service sector has only recently become available, long term effects are difficult to gauge. Economic theory suggests that the mobility consequences could be pronounced: just as importing intermediate outputs could exert downward pressure on the wages of the U.S. workers who produce competing goods, importing services traditionally provided by middle-class service and IT workers could depress wages for those workers. Such concerns lead some economists to worry that that service outsourcing could lead to a “hollowing out” of the U.S. middle class (GAO, 2005) by lowering wages paid to traditionally middle- and upper-middle-class workers like computer programmers and engineers while raising corporate profits that primarily accrue to those at the very top of the income distribution. Alternate models suggest that, over time, outsourcing could in fact increase the demand for high-skilled labor in the United States, thereby increasing wages and facilitating upward mobility. The table below summarizes two recent, important studies of the effects of outsourcing on productivity and employment.

### **Productivity and Employment Effects of Services Outsourcing**

<b><i>Study (dataset)</i></b>	<b><i>Methods and Key Results</i></b>
Amiti and Wei 2006 (BLS data on service input to industry 1992-2000; IMF balance of payments yearbooks 1992-2000)	<ul style="list-style-type: none"> <li>○ First-differences regression of productivity on services offshoring, materials offshoring, and a set of covariates.</li> <li>○ Findings: services offshoring increased labor productivity by about 5 percent between 1992 and 2000, or roughly 10 percent of the total increase in labor productivity over the period.</li> </ul>
Jensen and Kletzer 2005 (January 2004 Displaced Worker Survey; 2000 Census PUMS)	<ul style="list-style-type: none"> <li>○ Identifies tradable or non-tradable services based on geographic distribution of production (most other papers use published industry categories). Contrasts employment trends in tradable and non-tradable services and manufacturing industries; considers demographic and reemployment trends in displaced workers within each category.</li> <li>○ Findings: greater risk of job loss in tradable services sector than in non-tradable services sector. Employment growth in tradable services is strong, except for individuals with low skills.</li> </ul>

Current evidence does not lend itself to simplistic interpretation. On one hand, services outsourcing may lead to job losses. A frequently cited report by the Forrester research group estimates that 3.3 million service-sector jobs could move abroad by 2015, up from 400,000 in 2004 (McCarthy 2002). This equates to approximately 250,000 jobs lost per year, or less than 2 percent of annual involuntary job loss (Brainerd and Litan 2004). Bhagwati et al. (2004) reach a similar estimate using data on employer’s stated reasons for layoffs. Jensen and Kletzer (2005) find that workers in tradable non-manufacturing jobs were approximately 75 percent more likely to experience job loss than were workers in similar but non-tradable jobs between 2001 and 2003.

However, focusing on job losses alone does not fully capture the effects of services outsourcing. Jensen and Kletzer (2005) find that, between 1998 and 2002, growth in the tradable service employment was at least equal to growth in non-tradable service employment. In combination with the results above, this finding implies that services outsourcing does not eliminate jobs as much as it increases job turnover. Further, individuals displaced from tradable-service occupations tend, as a group, to do fairly well after job loss, particularly compared to displaced manufacturing workers. This can be attributed to their higher skill levels: Jensen and Kletzer report that 75 percent of displaced workers from tradable non-manufacturing occupations had at

least some college experience, compared to 46 percent of displaced manufacturing workers. In sum, offshoring does cost some service-sector workers their jobs, but these people tend to get back on their feet more quickly than do, for example, manufacturing workers displaced by traditional international trade. As result, one might expect outsourcing to increase the short-term volatility of income. Its effects on the intragenerational mobility of permanent income, however, remain quite hazy.

Over the long term, the effects of service outsourcing on mobility are likely tied to its impact on overall productivity. Most reports conclude that services outsourcing fosters productivity growth over the long term, though current evidence should be considered preliminary.<sup>2</sup> Mann (2003) examines declines in the prices of PC components due to increases in global production capacity. She estimates that rising global production lowered the prices of domestic IT by about 20 percent, spurring IT investment and adding 0.3 percentage points per year to average GDP growth between 1995 and 2002. Amiti and Wei (2006) estimate a first-differences regression of productivity on services offshoring, materials offshoring, and a set of covariates. They find that services offshoring increased labor productivity by about 5 percent between 1992 and 2000, or roughly 10 percent of the total increase in labor productivity over the period.

### **Foreign Direct Investment**

FDI is closely linked to both international trade and services outsourcing. Purchasing intermediate goods abroad is international trade; purchasing the foreign company that produces those goods is FDI. Similarly, employing a foreign firm to process technical support claims is services outsourcing, while purchasing that firm is FDI. As with these other manifestations of globalization, FDI has played an increasing role in production in recent years,<sup>3</sup> and has the potential to alter labor force outcomes by shifting demand for different types of work. Researchers typically distinguish between inward FDI (foreign investment in the U.S.) and outward FDI (U.S. investment abroad). Like international trade and outsourcing, outward FDI is double-edged: it could make it more difficult for U.S. workers to get ahead by increasing their vulnerability to foreign competition, but it could also help sustain economic growth by allowing U.S. firms to produce goods more efficiently. Inward FDI is generally seen in a more positive light.<sup>4</sup> Foreign firms operating in the United States create job opportunities for U.S. workers, and may also improve the productivity of domestic firms by bringing with them international best practices. However, even if inward FDI is a net benefit, it may increase inequality by increasing demand for high-skill labor and decreasing demand for low-skill labor. The table below summarizes several studies investigating the tradeoffs inherent in FDI.

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<sup>2</sup> In particular, the relatively short time-frame over which the consequences of services outsourcing can be assessed, combined with the strong assumptions often used to quantify the benefits of outsourcing argue for caution when interpreting these results. See Bivens (2005) for a critique of Mann (2003).

<sup>3</sup> By one rough estimate, FDI played a role in 5 percent of world output in 1985, 6 percent in 1990, and 10 percent in 2000 (Lipsey 2004). Graham and Krugman (1995) find that the level of investment by foreign firms in the US increased dramatically in the 1980s.

<sup>4</sup> For instance, communities often bid to host foreign companies' manufacturing facilities.

## FDI Effects on the U.S. Labor Market

<i>Study (dataset)</i>	<i>Methods and Key Results</i>
Blonigen and Slaughter 2001 (NBER manufacturing productivity data 1958-1994; various other sources of FDI data)	<ul style="list-style-type: none"> <li>○ Evaluates contribution of foreign investments to skill upgrading in various U.S. industries.</li> <li>○ Compares skill upgrading and foreign investment activity within various industries.</li> <li>○ Findings: Foreign direct investment in the United States does not seem to be a major contributor to skill-based technical changes, on of the major causes of increasing in equality.</li> </ul>
Lipsey 2004 (Review of literature on home and host country effects of outsourcing)	<ul style="list-style-type: none"> <li>○ Studies of the United States and other developed countries generally show that investment abroad by multinational firms has little impact on home-country exports or employment. Within firms, foreign investment appears to reduce domestic labor intensity, but this effect is not evident at the industry level.</li> <li>○ Foreign investment in the United States generally contributes to rising average wage levels and higher productivity.</li> </ul>
Lipsey 1999 (1989 Department of Commerce survey on outward FDI by U.S. firms)	<ul style="list-style-type: none"> <li>○ Presents descriptive measures of the contribution of U.S.-based multinational firms to productivity and employment. Regresses domestic employment of multinational firms on a set of covariates including affiliate production.</li> <li>○ Findings: Foreign investment by U.S. multinationals between 1977 and 1997 had no impact on aggregate employment. However, within firms, higher levels of production by foreign affiliates are associated with somewhat lower employment, but possibly with higher wages as well.</li> </ul>

In terms of its potential effects on earnings and employment in the United States, outward FDI resembles other types of international exchange, like trade and services outsourcing, in that it promotes overall growth but may be accompanied by costs for individuals at the bottom of the skill distribution. Kravis and Lipsey (1988) use data from a 1982 Department of Commerce study of U.S. firms' investment abroad, and regress parent company employment on parent company sales and sales of foreign affiliates. They find that, in most industries, increased affiliate sales reduce parent-company employment, with each additional million dollars of affiliate sales corresponding to approximately 3 to 10 lost jobs, depending on the industry. They also find a "faintly positive" relationship between affiliate production and parent-company skill level (using average wage as a proxy for skill), suggesting that increasing outward FDI may increase the demand for skilled domestic workers.

Lipsey (2004) conducts a qualitative review of the major papers on the subject. He finds that, at the firm level, increased international production is often associated with decreasing domestic labor intensity, and, more loosely, with a shift towards high-skill domestic jobs. At the industry level, however, studies find negligible effects. Lipsey speculates that this discrepancy may be the result of substitution between multinational and non-multinational firms. For instance, the effects of a multinational firm substituting foreign production for domestic production may be mitigated if national firms respond by increasing the labor intensity of their domestic work. The evidence that outward FDI has harmful mobility consequences is, on the whole, quite tenuous; but, if outward FDI does decrease upward mobility for any group, it is likely to be less-skilled workers. Researchers seeking to assess the effects of outward FDI on U.S. economic growth generally look at FDI's effects on exports or overall employment. Effects here are relatively muted. Brainard and Riker (1997) use confidential firm data provided by the U.S. Department of Commerce to

estimate a regression model of the relationship between wages and employment in developing countries and U.S. employment. They find that, while decreasing wages in one developing country tend to decrease employment in countries competing for U.S. FDI, employment in the United States is affected only marginally. For instance, a 10 percent decrease in wages paid by multinationals to Mexican employees decreases employment at Malaysian affiliates by 1.6 percent while employment at U.S. parent companies falls only 0.17 percent. Lipsey (1999) compares aggregate data on multinational production and employment, and finds no evidence that the shift of production to foreign affiliates reduced employment between 1977 and 1997. In sum, current research indicates that outward FDI will likely have only minimal effects on economic mobility, as its impacts on overall economic growth and skill demand have been quite small.

Studies of inward FDI often focus on the wage differential between foreign- and domestically owned firms. In general, firms in the former group tend to pay higher wages than those in the latter, though it is difficult to tell whether there is indeed a wage premium for workers at a given skill level. Feliciano and Lipsey (1999) match 1987 and 1992 Economic Census data on firm establishment with Bureau of Economic Analysis data on foreign firm ownership, and regress average wages on a set of covariates including ownership, industry, plant location, and plant size. They find that, controlling for these characteristics, foreign ownership has little effect on manufacturing wages but increases non-manufacturing wages by 7-8 percent. Conyon et al. (1999; as cited in Lipsey 2002) use longitudinal firm data from the U.K. to estimate the effect of foreign acquisition on wages. They find that firms purchased by foreign companies typically raise wages by about 3.4 percent, compared to a 2.1 percent decrease in firms acquired by domestic companies, even after controlling for firm and industry effects. Further, inward FDI does not seem to be a major contributor to the widening gap between the wages of low- and high-skilled workers, although the findings here are preliminary (Blonigen and Slaughter 2001). Because it is possible that foreign firms tend to acquire only those U.S. firms that are particularly promising, it is difficult to determine whether foreign acquisition causes wage growth, or is merely correlated with it. However, the data do suggest that inward FDI is at least neutral when it comes to promoting wage growth (and therefore upward mobility) over the short term, and may in fact be beneficial.

In the long run, as with trade and outsourcing, the effects of inward FDI on upward mobility are likely tied to its impacts on productivity. The evidence that inward FDI increases the productivity of developed countries like the United States is fairly strong.<sup>5</sup> Keller and Yeaple (2003), find significant gains, estimating that technology transferred from foreign companies operating in the United States accounted for 14 percent of productivity growth in U.S. firms between 1987 and 1996. Similarly, Haskel, Pereira, and Slaughter (2007) find that, in the United Kingdom, a 10 percentage-point increase in foreign investment in a given industry increases plant-level productivity by about half a percent. Foreign investment in the United States, therefore, likely encourages upward mobility over the long term.

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<sup>5</sup> Studies of less-developed countries often find negligible or negative productivity effects; see, for example Aitken and Harrison 1999, or the review Lipsey and Sjolholm (2005).



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