Democratic Commissioners' Views

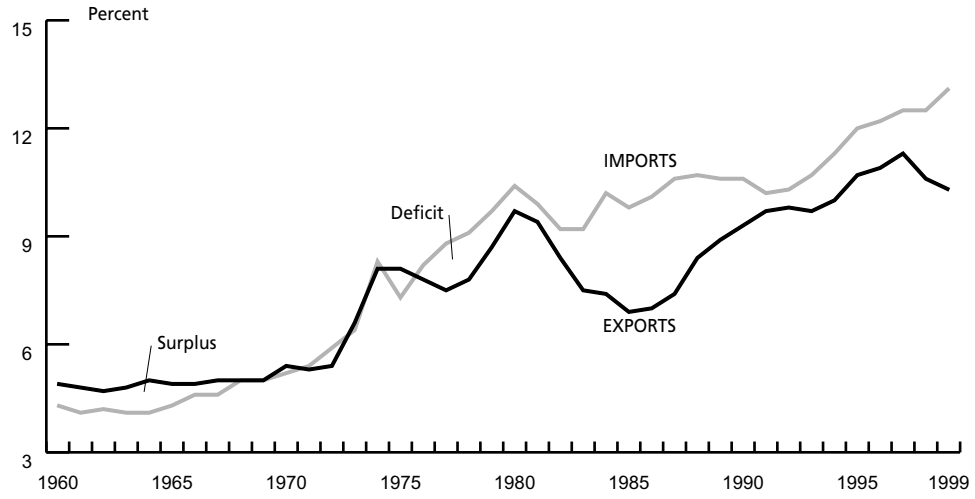
The consequences of the U.S. trade deficit: job loss, wage suppression, inequality, and loss of competitiveness

I. Introduction

Trade is becoming an ever more important part of the American economy. The United States has witnessed rapid globalization in recent decades–between 1960 and 2000, exports plus imports as a percentage of GDP grew from 9 percent to 24 percent (see Figure 3.1). Every year more Americans enjoy the higher incomes that come from selling products to foreigners and the lower prices available from buying foreign goods. At the same time, it is equally true that every year more Americans face international competition and threats to their earnings capacity from products and services made abroad.

The rapid globalization from 1960 to 1980 occurred in a context of roughly balanced trade.[1] In the 1960s, America ran a small trade surplus of $32 billion–about $3.2 billion per year (see Figure 3.2). In the 1970s, the United States had a small deficit on goods and services trade of $82 billion, or $8.2 billion per year. In the next twenty years from 1980 to 1999, globalization took place in the context of grossly unbalanced trade accounts. The United States has run an aggregate trade deficit in excess of $1,715 billion since 1980–a deficit of about $94 billion per year. In 1980, the United States was the world's largest net creditor (American assets abroad far exceeded foreign assets in the United States). In 2000, the United States is the world's largest net debtor, with more than $1.5 trillion in net debts.

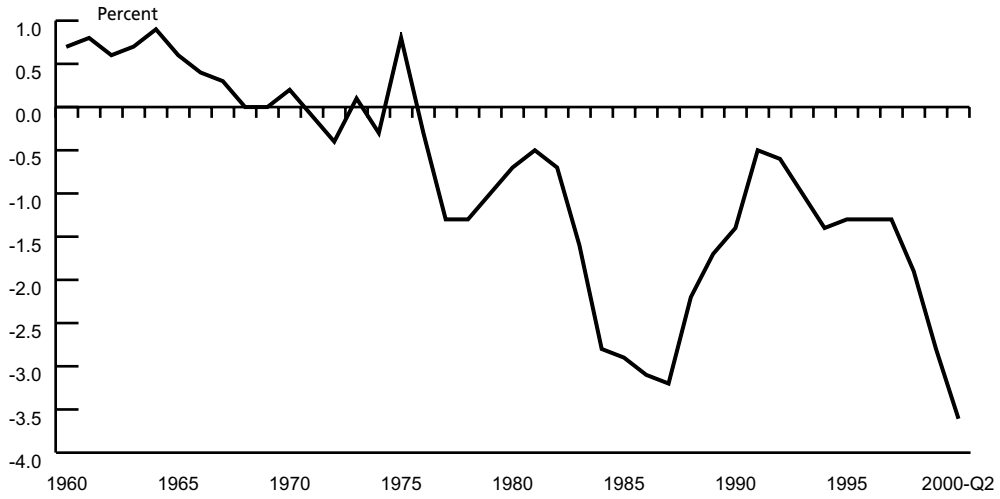
Figure 3.1
Exports and Imports of Goods and Services as a Share of U.S. GDP, 1960-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Account (Quarterly)

[1] The United States had a small surplus in goods and services trade in the 1950s that began to decline in the 1960s and 1970s. The crossover to a deficit first occurred in 1971 (see figure 3.2).

Figure 3.2
Trade Balance (Exports-Imports) as a Share of GDP, 1960 Through The Second Quarter of 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Account (Quarterly)

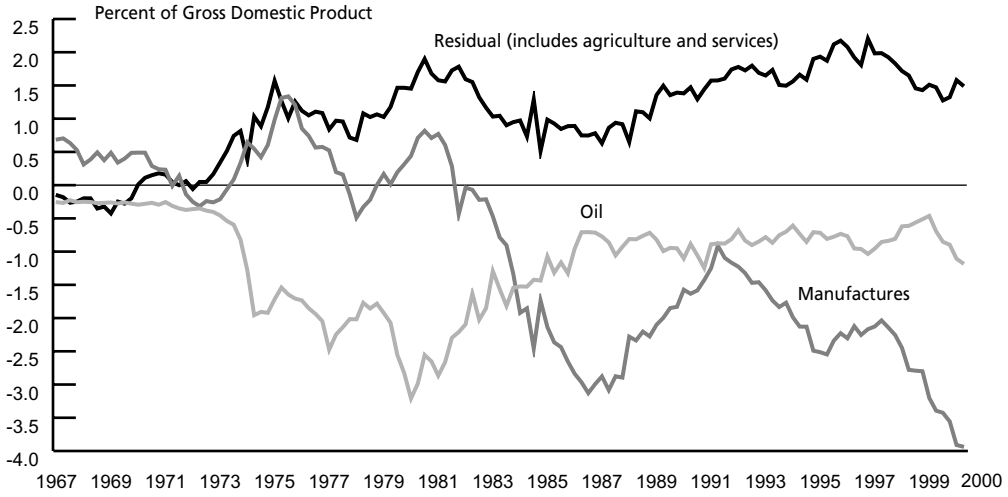
The rapid globalization that was relatively painless and noncontroversial before 1980 in the era of roughly balanced trade has become painful and controversial since 1980 due to the persistently unbalanced growth of imports over exports. With imports far in excess of exports, those Americans who directly benefit from earning their living in exporting industries are far fewer in number than those whose incomes are directly impacted by wage pressures and job losses in import-competing industries. As described in Chapter 1, this means that, in a democracy, in the long run the growth of unbalanced trading accounts and highly unfair trading relations will undermine political support for open trading relations and increased trade levels and reduce the political viability of these policies and trends. In a democracy, those who lose from trade have every right to attempt to limit their losses politically. If the United States is to gain from the benefits of growing international trade and continue to promote the movement toward greater globalization, then it is essential that chronic trade deficits be addressed. There is also a tremendous need for much more direct assistance for those who are displaced from their current jobs, for any reason (see Chapter 5).

The costs of America's decades of unbalanced trade with the rest of the world have been large and are manifest in a number of ways. These costs include job loss and increased economic insecurity for U.S. workers as well as downward pressure on the wages of U.S. workers and growing income inequality. Persistent trade deficits have also contributed to the erosion of the U.S. manufacturing base and the loss of long-run competitiveness.

As Figures 3.3 and 3.4 show, manufacturing is responsible for essentially all of the U.S. trade and current account deficits. Figure 3.3 examines the major components of the U.S. trade

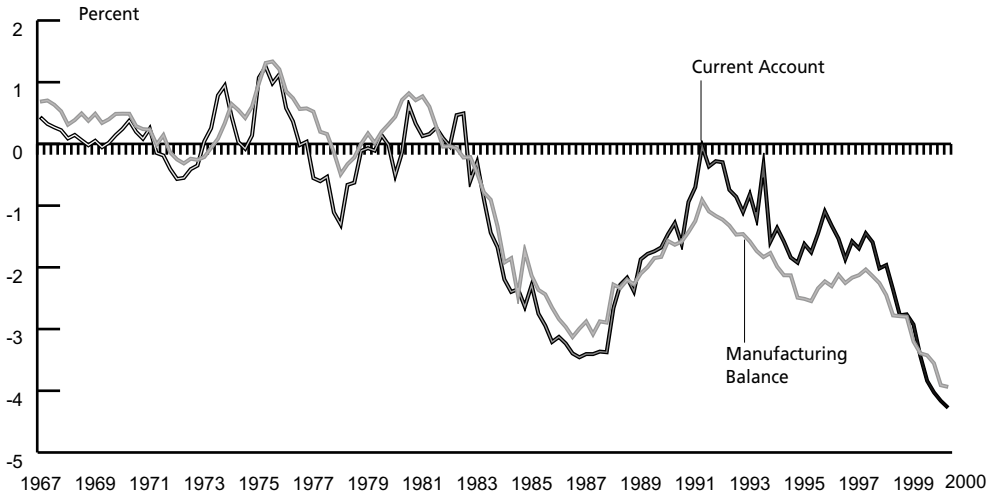
balance since 1967. During that period, the manufacturing balance declined steadily, although it experienced a slight improvement during recessions. In the second quarter of 2000, it reached a deficit of 3.9 percent of GDP. On the other hand, the U.S. trade deficit in oil products has shown relative improvement since the late 1970s for two reasons: energy conservation and the steady growth of GDP relative to oil consumption. Recent oil price increases are unlikely to reverse this long-term trend. The United States does have a surplus in services and other commodities that ranged between 1 percent and 2 percent of GDP during the 1990s. However, that level is barely large enough to pay the U.S. oil bill.

Figure 3.3
Major Components of the U.S. Balance of Trade in Goods and Services as a Share of GDP: 1967 through the Second Quarter of 2000



Sources: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Account (Quarterly), and analysis by Wynne Godley, the Levy Institute

Figure 3.4
Current Account and Manufacturing Trade Balance as a Share of U.S. GDP: 1967 through the Second Quarter of 2000



Sources: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Account (Quarterly), and analysis by Wynne Godley, the Levy Institute

Thus, as Figure 3.4 shows, the U.S. deficit in manufacturing has tracked the U.S. current account deficit very closely since 1967. In fact, during that time, the manufacturing deficit almost equaled the current account deficit, as the overlapping trends in Figure 3.4 indicate. Therefore, if the United States is going to reduce or eliminate its current account deficit, the manufacturing sector will be the focus for such improvement. If the trade deficit is to be eliminated, manufacturing industries will have to increase their output of exports and import-competing goods by at least 4.3 percent of GDP, and probably by much more.[2] This will require at least a 30 percent increase in U.S. manufacturing output.[3]

In addition, as discussed in Chapter 4, the buildup of U.S. net international debt to finance the current account deficit has increased the risk of economic and financial crisis in the world economy. The very large and growing level of U.S. net international debt also threatens to erode future U.S. incomes as payment on America's foreign debt grows. Moreover, persistent trade deficits create the prospect of a "hard landing" at the end of the current economic boom, a worrisome possibility because large net international debt positions have always led to a hard landing in the past – there are no known examples of a "soft landing." Finally, as U.S. indebtedness to foreigners grows, it may become more difficult for the United States to maintain a high level of influence and policy independence internationally.

The issue is not one of trading more or trading less but of finding the best balance in our trade patterns that will allow us to enjoy the benefits of growing trade while minimizing the cost. This

[2] U.S. payments of interest and other property income to foreigners are likely to rise rapidly in the future until the current account deficit is eliminated, as shown in Chapter 4. Any increase in services, agricultural products, and other commodity exports will probably be more than offset by growth in the outflow of net interest and property income for some time to come. Thus, manufacturing will have to expand by more than 4 percent just to catch up with the growing current account deficit and to offset losses from financial outflows.

[3] Manufacturing employment was 14.3 percent of total U.S. employment in 1999 (U.S. Bureau of Labor Statistics Data, Most Requested Series: homepage: http://stats.bls.gov/datahome.htm.) If production of manufactures were to increase by an amount equal to 4.3 percentage points of GDP, then employment in this sector would have to increase by more than 29 percent. However, the current account deficit is likely to expand significantly as a share of GDP before it begins to decline, so the required increase in employment and output could be even larger.

means our policies should pursue roughly balanced trade where jobs lost in import-competing industries are replaced by jobs gained in exporting industries and where the goal of trade negotiations is reciprocity –- equivalent access for both sides to the other's markets within any industry. It also means that we need to encourage enforcement and, over time, upward harmonization of labor rights and environmental standards and to stop the global race to the bottom in wages, working conditions, and environmental quality.

This chapter focuses on the effects of America's persistently unbalanced trade on U.S. incomes and competitiveness. In the following chapter, we turn our attention to the effects of the growing net international debt of the United States (as a result of years of current account deficits) on the sustainability of the current expansion.

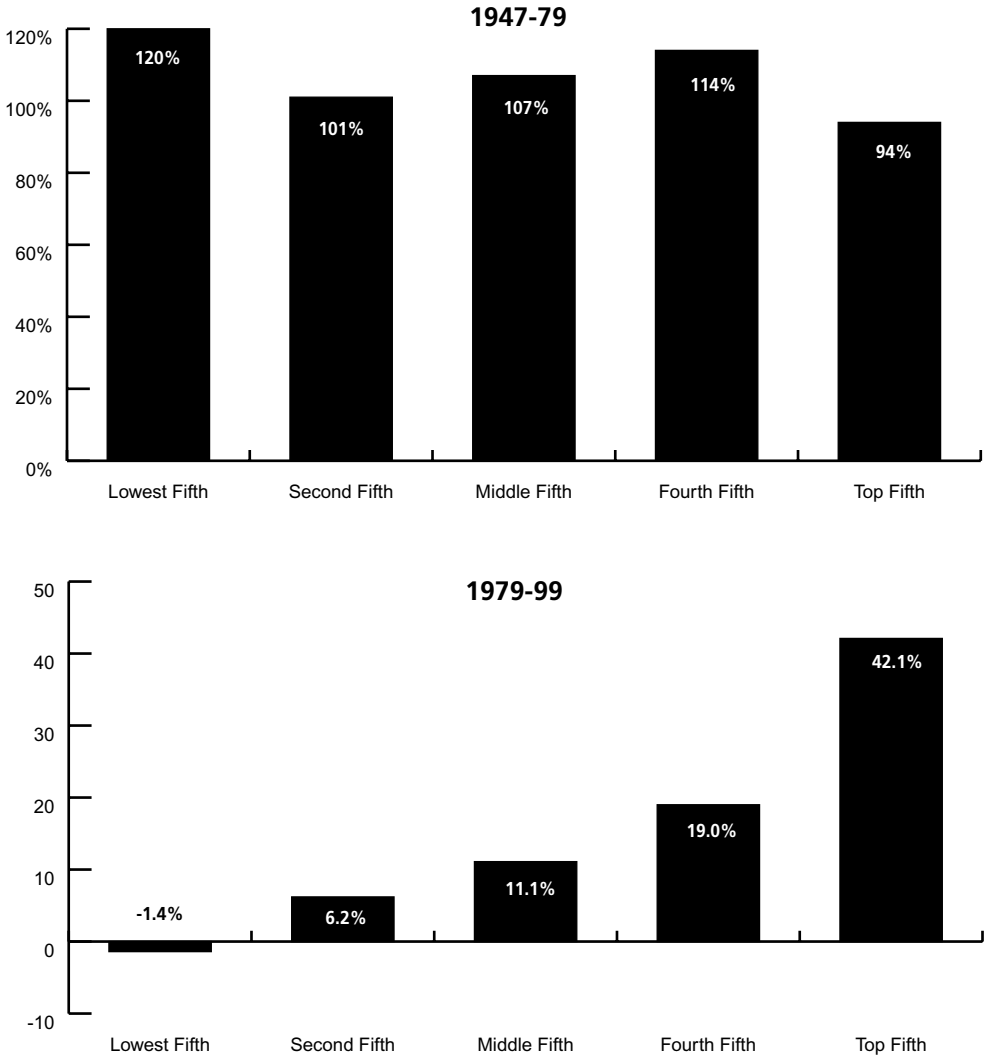
II. The context: Long-term stagnation and growing inequality

To understand the role of globalization and structural trade deficits in our economic life and society, it is critical to understand the overall economic context of the last few decades. Specifically, the period from 1973 to 1995 can be characterized as one of increasing economic globalization and sluggish growth of family income and growing income inequality.[4] Since 1995, however, there has been faster income growth, which has benefited all income classes; incomes have grown across the board, and poverty has declined. Nevertheless, over the longer term, including the 1990s business cycle, incomes have grown slowly. For instance, the median family's income (inflation adjusted) grew just 0.6 percent per year from 1989 to 1999, only slightly faster than the 0.5 percent annual growth on average, in the previous 1973-79 and 1979-89 business cycles.[5] And, income inequality has not fallen in the recent recovery as might be expected, as those with the least skills and lower income levels disproportionately gained employment or lowered their unemployment rates. Because the wages of those at the top have continued to grow more rapidly than those at the bottom of the income scale, income inequality in the United States is now much higher than it was in the 1970s and is much higher than in other advanced countries. Figure 3.5 illustrates the changing pattern of income growth over the postwar period. Between 1947 and 1979 there was strong income growth at the bottom (120 percent) and the weakest growth at the top (94 percent). That is, there was strong and equalizing growth. In contrast, growth was much slower between 1979 and 1999 (slower overall and on an annual basis). The last twenty years also saw the incomes of those at the bottom stagnate (down 1.4%), while those at the top grew by 42.1 percent (and 65.6 percent for the wealthiest 5 percent). Thus, there was slow and very unequal growth over the last twenty years (see Figure 3.5).

[4] Income, as the Census Bureau defines it, is money income, including wages, interest, rent, government cash assistance, (Social Security, unemployment insurance, temporary assistance to needy families) but excluding capital gains and noncash assistance (e.g., food stamps).

[5] Lawrence Mishel, Jared Bernstein, and John Schmitt. "State of Working America: 2000-01" (Advance Proofs) (Washington, DC: Economic Policy Institute, 2001). September 3, 2000. Table 1.2, p.36.

Figure 3.5
Family Income, Percent Change by Income Fifth



Source: Economic Policy Institute analysis of data from the U.S. Bureau of the Census (various years)

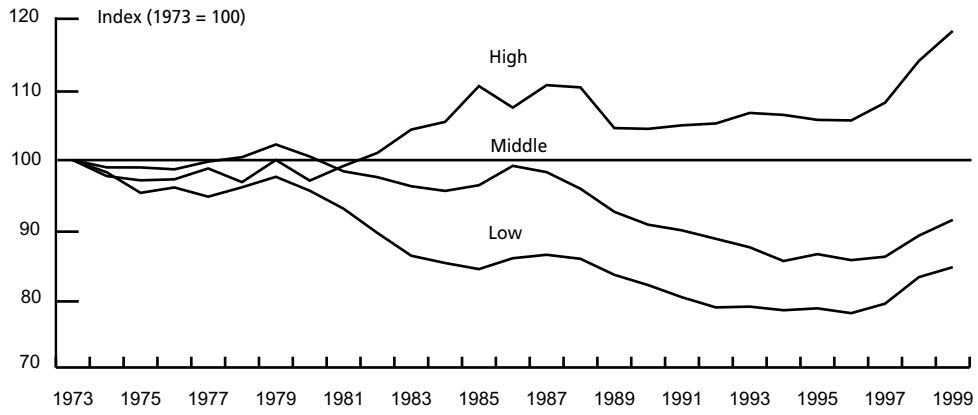
These income trends were driven, in large part, by economic rather than demographic trends. The major factor driving the income growth and inequality trends, in fact, has been the sluggish growth in hourly wage jobs and, as a result, a widening wage gap. Like income growth, wage growth has accelerated since 1995. However, there has been a persistent gap in the wage growth between the highest earners and middle-wage earners. During the 1990s, however, the wage gap between those in the middle and low earners has actually narrowed as a result of low unemployment and a set of minimum wage increases.

These hourly wage trends are best illustrated for men (Figure 3.6) and women (Figure 3.7) separately, because their wage experiences have differed and because some factors affect men and women differently.

Figures 3.6 and 3.7 show the wage trends for high, middle, and low–wage workers relative to 1973. (Both figures are constructed as an index where 1973=100, so that any line below 100 indicates that wages are below their 1973 level. Wage growth is reflected in a rising line, and wage decline in a falling line). High-wage males saw their wages rise in the 1980s, stagnate in the early 1990s but grow rapidly in recent years and were, in 1999, roughly 20 percent greater than in 1973. The wages of middle-wage men, however, fell steadily from 1979 to 1995 before rising for a few years, still ending 10 percent lower in 1999 than in 1973. Low-wage men lost even more ground than middle-wage men in the 1980s and early 1990s and ended up with wages substantially below their 1973 levels. The "fanning out" of the lines in Figure 3.6 illustrates the widening wage gap.

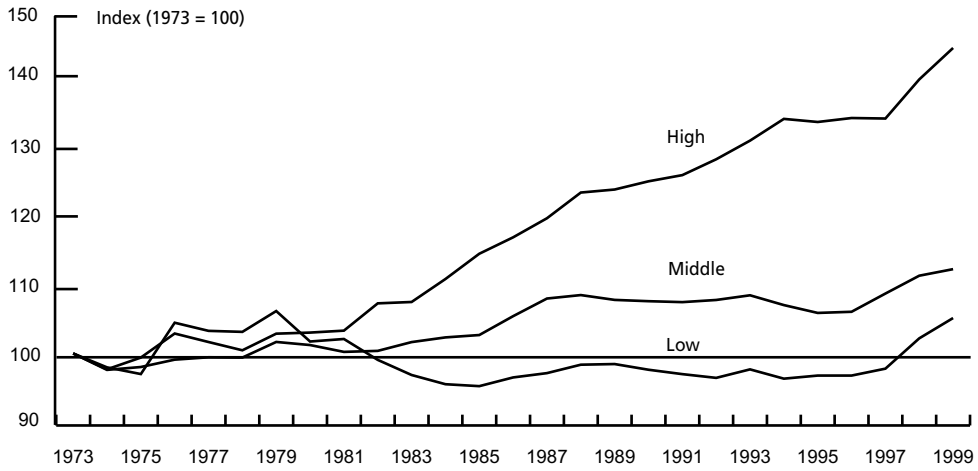
Wage growth was faster among women than men, but there has been a similar fanning out or widening of the wage gap: while wages of low- and middle-wage women in 1999 were about 10 percent above their 1973 levels, the wages of high-wage women were nearly 40 percent higher. The performance of wages for workers at the middle and the bottom, therefore, has been quite disappointing. This is especially so when compared to the productivity growth of the economy - nearly 50 percent since 1973. So, it is understandable that working families perceive unfairness

Figure 3.6
Hourly Wages for U.S. Men by Wage Level, 1973-99



Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01. Op cit. Figure 2B, p. 126.
High, middle and low wages are, respectively, the ninety-fifth, fiftieth, and twentieth percentile wages

Figure 3.7
Hourly Wages for U.S. Women by Wage Level, 1973-99



Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01. Op cit. Figure 2B, p. 126.
High, middle and low wages are, respectively, the ninety-fifth, fiftieth, and twentieth percentile wages

and perceive that they have been struggling to move ahead (especially given the growth of family work hours), because, in fact, that has been the case.

> *Middle-income households are working more hours than ever to stay ahead…In 1999, combined work hours for this family totaled 3,918, an increase of 33 hours, or about three-quarters of a week, compared to 1998. Since 1989, this family type has added 279 hours of work in the paid labor market, about seven additional weeks.* [6]

It is certainly true that globalization and the trade deficit have not been the sole cause of all these wage and income problems or even the "major cause." But the negative effects of globalization and trade deficits on wage trends for middle- and low-wage workers are magnified by several other factors that also put downward pressure on wages. The impact of globalization and trade deficits on wage trends has been serious and consequential and by no means can be labeled "small." Those hoping to see globalization advance need to be attentive to the related wage and income problems of working families.

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[6] Jared Bernstein, "Income Picture": Income Rises in 1999, but So Do Work Hours, (Washington, DC: Economic Policy Institute, September 26, 2000).

III. U.S. trade deficits, job loss, and economic insecurity

The steady growth in our trade deficits over the past two decades has meant millions of fewer jobs in manufacturing and related sectors. Ironically, it has become commonplace for public officials to claim that trade has contributed to the substantial job creation seen in the United States in the 1990s. For example, on March 8, 2000, Deputy U.S. Trade Representative Richard Fisher argued, "We have created nearly 21 million new jobs nationwide since 1992…. Trade is not the sole cause of this success, but it is a vital component."[7] Others have claimed that up to one-third of all jobs created have been due to the growth in exports. From this, many people have inferred that the growth of trade has had a positive effect on economic growth and job creation during the economic expansion since 1992. This inference is incorrect. In fact, the effect of trade on economic growth and job creation has been negative, not positive, because the trade deficit has greatly expanded in this period. At full employment, growing trade deficits shift jobs from manufacturing to services (nontraded goods). In this situation, trade affects the composition of employment (i.e., which industries workers are in). When unemployment is at recessionary levels, however, trade deficits actually change both the level and composition of employment. The level of unemployment is generally determined by fiscal and monetary (macroeconomic) policies and is also influenced by unexpected shocks, such as the oil embargo of 1973.

Trade includes imports as well as exports. If imports (which limit job growth) expand more rapidly than exports (which add to job growth), as they have during this expansion, the net effect of trade will be to reduce growth and employment. Because of the expansion of domestic markets, however, overall economic growth and job creation have expanded, despite the negative impact of ongoing trade deficits. Table 3.1 summarizes the contributions to growth of all the components of GDP between 1992 and 1999: consumption, investment, international trade (exports minus imports), and government spending. Real GDP increased by $1,976 billion in this period, as shown in the first column of the table, a 28.7 percent expansion, or about 3.6 percent per year. The increase in each of the components of GDP is also shown in the first column. International trade (exports minus imports) declined by more than $300 billion, in real terms, as the trade deficit grew.

The growth in GDP in the current recovery is allocated to each of its components in the second column of Table 3.1. The growth in personal consumption spending provided 70.7 percent of the increase in U.S. output. The growth in private domestic investment contributed an additional 37.3 percent of growth in this period, while government spending accounted for 6.3 percent. The effect of international trade, however, was to reduce GDP by 15.4 percent. The growth of exports increased output by 19.8 percent, but the growth of imports reduced output even more–by 35.2 percent.

[7] Deputy U.S. Trade Representative Richard Fisher, "Speech to the New England Council, New England and China's WTO Accession, " Washington, D.C., March 8, 2000.

Table 3.1
Contributions to Growth in Real GDP and Jobs, 1992-99

	Growth in Real GDP (billions of 1996 dollars)	Shares of Growth	Jobs Gained or Lost (thousands)
Real gross domestic product	1,976	100%	20,732
Components:			
Personal consumption expenditures	1,397	70.7%	14,659
Gross private domestic investment	738	37.3%	7,742
International trade (net exports)	-304	-15.4%	-3,192
Exports	392	19.8%	4,108
Imports	-696	-35.2%	-7,300
Government expenditures	125	6.3%	1,308

Source: Economic Policy Institute analysis of National Income and Product Accounts (Residual Omitted)

There have been 20.7 million jobs created in the domestic economy since 1992. In the last column of Table 3.1, these jobs are allocated in proportion to the change in output in each sector. These estimates show that while rising exports created about 4.1 million jobs, faster rising imports led to a loss of 7.3 million jobs, for a net decline of 3.2 million jobs due to the trade deficit. Even if other techniques may yield different estimates of the size of the trade effect, there can be no debate about the fact that trade has not added to job growth in this period and certainly has been a negative factor, particularly for manufacturing. These data clearly show that trade affects both the composition of jobs and also displaces jobs (from rising imports); even when the economy is growing rapidly and unemployment rates are falling overall. This effect on manufacturing and competitiveness will be examined in section VI of this chapter.

Tables 3.2 and 3.3 present a more detailed view of the long-term distribution of job losses resulting from America's chronic trade deficits in the past two decades, using data from 1979 to 1994.[8] The employment effects of the trade deficit presented in Tables 3.2 and 3.3 are drawn from examining data from 1979 to 1994 for 183 industries in all sectors of the economy. Changes in both gross exports and gross imports separately as well as in net exports (exports minus imports) are calculated by industry and then industry-level input-output analysis is used to estimate the number of jobs associated with a given change in the trade flow. By comparing the ratio of imports and exports to output in 1994 to the situation in 1979, it is possible to calculate the job loss as a result of the chronic growth of trade deficits during this period. The trade deficit eliminated about 2.4 million jobs during these 15 years, mostly in manufacturing (Table 3.2). In 1992,

[8] See Robert Scott, Thea Lee, and John Schmitt, Trading Away Good Jobs: An examination of Employment and Wages in the U.S., 1979-94, (Washington, DC: Economic Policy Institute, October 1997).

when unemployment was 7.5 percent, the impact was to shift from high-wage to low-wage jobs in the economy, resulting in a net loss of manufacturing jobs in that period. Even if one assumes that employment levels in the United States are controlled by macroeconomic factors (such as the intervention of the Federal Reserve) and that we are at full employment, the effect of large and persistent trade deficits still presents itself in the dislocation of workers, the shifting composition of jobs, and in deteriorating job quality (i.e., wages and other measures of desirability) as will be shown below.

Table 3.2
Trade and Employment, 1979-94 (Thousands of Jobs)

	Total Employment, 1989		Job Changes Induced By:*								
	Whole Economy	Manufacturing Only	Gross Imports			Gross Exports			Net Exports		
			1979-89	1989-94	1979-94	1979-89	1989-94	1979-94	1979-89	1989-94	1979-94
Total	120,554	19,811	-2,629	-1,750	-4,706	864	1,362	2,340	-1,765	-387	-2,366
Men	64,339	12,850	-1,537	-998	-2,738	532	813	1,411	-1,005	-185	-1,327
Women	56,215	6,960	-1,092	-751	-1,968	332	549	929	-760	-202	-1,039
White	96,720	16,006	-2,084	-1,396	-3,739	708	1,114	1,915	-1,376	-281	-1,825
Black	11,803	1,783	-247	-159	-434	77	117	204	-170	-41	-230
Hispanic	6,296	1,092	-155	-92	-265	39	56	101	-117	-35	-165
Other	5,735	929	-142	-104	-267	41	74	121	-101	-30	-146
College	22,377	2,796	-362	-324	-750	148	293	460	-215	-31	-290
Non-college	98,177	17,015	-2,267	-1,425	-3,956	717	1,069	1,880	-1,550	-356	-2,076
Some College	37,738	5,078	-658	-479	-1233	256	424	713	-403	-55	-519
High School	37,627	7,461	-956	-579	-1641	303	431	774	-653	-148	-867
Less Than HS	22,812	4,476	-653	-368	-1083	158	215	393	-495	-153	-690
Wage Range**											
90-99	11,736	2,226	-269	-231	-545	106	197	315	-163	-34	-230
75-89	13,486	2,678	-309	-229	-584	123	202	340	-186	-27	-244
50-74	19,994	3,770	-435	-296	-792	166	259	447	-269	-36	-345
21-49	31,818	5,651	-713	-457	-1,259	235	361	629	-478	-96	-631
0-20	43,520	5,485	-903	-537	-1,526	234	343	610	-670	-194	-916
Agriculture	3,381	.	-129	-93	-237	12	-34	-17	-117	-127	-254
Manufacturing	19,811	.	-2,078	-1,276	-3,608	500	803	1,359	-1,577	-473	-2,248
Services	66,278	.	-233	-164	-430	108	296	421	-125	132	-9
Other	31,085	.	-189	-216	-432	244	297	577	55	81	145

**Assumes import and export shares in output remained at their 1979 level. Excluding effects on wholesale and retail trade and advertising.*
***Wage ranges are percentile of the real 1979 wage distribution.*
Source: Scott, Lee, and Schmitt, Trading Away Good Jobs, Table 1

Table 3.3
Trade and Employment Shares (%), 1979-94

	"Total Employment, 1989"		Job Changes Induced By:*								
	Whole Economy	Manufacturing Only	Gross Imports			Gross Exports			Net Exports		
			1979-89	1989-94	1979-94	1979-89	1989-94	1979-94	1979-89	1989-94	1979-94
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Men	53.4%	64.9%	58.5%	57.1%	58.2%	61.6%	59.7%	60.3%	56.9%	47.8%	56.1%
Women	46.6%	35.1%	41.5%	42.9%	41.8%	38.4%	40.3%	39.7%	43.1%	52.2%	43.9%
White	80.2%	80.8%	79.3%	79.8%	79.5%	81.9%	81.8%	81.8%	78.0%	72.6%	77.1%
Black	9.8%	9.0%	9.4%	9.1%	9.2%	8.9%	8.6%	8.7%	9.7%	10.6%	9.7%
Hispanic	5.2%	5.5%	5.9%	5.2%	5.6%	4.5%	4.1%	4.3%	6.6%	9.1%	7.0%
Other	4.8%	4.7%	5.4%	5.9%	5.7%	4.8%	5.5%	5.2%	5.7%	7.6%	6.2%
College	18.6%	14.1%	13.8%	18.5%	15.9%	17.1%	21.5%	19.6%	12.2%	8.0%	12.3%
Noncollege	81.4%	85.9%	86.2%	81.5%	84.1%	82.9%	78.5%	80.4%	87.8%	92.0%	87.7%
Some College	31.3%	25.6%	25.0%	27.4%	26.2%	29.6%	31.1%	30.5%	22.8%	14.2%	22.0%
High School	31.2%	37.7%	36.4%	33.1%	34.9%	35.1%	31.6%	33.1%	37.0%	38.3%	36.6%
Less Than HS	18.9%	22.6%	24.8%	21.0%	23.0%	18.3%	15.8%	16.8%	28.1%	39.5%	29.1%
Wage Range**											
90-99	9.7%	11.2%	10.2%	13.2%	11.6%	12.2%	14.5%	13.5%	9.2%	8.8%	9.7%
75-89	11.2%	13.5%	11.8%	13.1%	12.4%	14.3%	14.8%	14.5%	10.5%	6.9%	10.3%
50-74	16.6%	19.0%	16.5%	16.9%	16.8%	19.2%	19.0%	19.1%	15.2%	9.4%	14.6%
21-49	26.4%	28.5%	27.1%	26.1%	26.8%	27.2%	26.5%	26.9%	27.1%	24.9%	26.6%
0-20	36.1%	27.7%	34.4%	30.7%	32.4%	27.0%	25.2%	26.1%	37.9%	50.0%	38.7%
Agriculture	2.8%	-	4.9%	5.3%	5.0%	1.3%	-2.5%	-0.7%	6.7%	32.8%	10.7%
Manufacturing	16.4%	-	79.0%	72.9%	76.7%	57.9%	58.9%	58.1%	89.4%	122.2%	95.0%
Services	55.0%	-	8.9%	9.4%	9.1%	12.5%	21.8%	18.0%	7.1%	-34.1%	0.4%
Other	25.8%	-	7.2%	12.4%	9.2%	28.2%	21.8%	24.6%	-3.1%	-20.9%	-6.1%

*Assumes import and export shares in output remained at their 1979 level. Excluding effects on wholesale and retail trade and advertising.
**Wage ranges are percentile of the real 1979 wage distribution.
Source: Scott, Lee, and Schmitt, Trading Away Good Jobs

The vast majority of lost job opportunities were in America's manufacturing sector; 95 percent of the job loss resulting from the 1979 to 1994 trade deficits took place in that sector (Table 3.3). Fully 83 percent of the total of 2.7 million jobs manufacturing lost between 1979 and 1994 was explained by displacement due to the trade deficit.[9] Most of these displaced workers moved into service sector jobs with lower pay and benefits.

To estimate the effect of trade changes on different types of workers and jobs, the job losses and gains in each of the 183 industry groups are matched to the characteristics of workers and jobs in each industry group. Industry characteristics include the industry's average wage as well

[9] Howard Shatz provides an alternative interpretation of these results. Between 1979 and 1994, U.S. manufacturing fell from 23.4 percent to 16.0 percent in 1997 (and 14.3 percent in 1999). If manufacturing had maintained its share of total U.S. employment, then about 7.9 million more workers would have been employed in this sector. The decline in the U.S. trade balance which displaced 2.4 million workers, as shown in Table 3.2, explains 28.5 percent of total lost job opportunities in this period. Sources: Jeffrey D.Sachs and Howard J. Shatz, Trade and jobs in U.S. Manufacturing, Brookings Papers on Economic Activity, No. 1, (Washington, D.C.: The Brookings Institution) pp. 1-84, and Bureau of Labor Statistics, "Most Frequently Requested Series," http://stats.bls.gov/, and Howard Shatz, personal communication.

as its workers' educational level, sex, and race.[10] Tables 3.2 and 3.3 show that some disadvantaged workers suffered disproportionately from the displacement of jobs due to rising import competition. That is, Hispanics and other minorities as well as workers without any college education suffered a disproportionately high net loss of jobs relative to their share of total employment. Although the trade deficit eliminated more employment opportunities for the non-college-educated, even among college-educated workers, the result of America's persistent trade imbalances was a net loss of 290,000 jobs.

Table 3.4 focuses on the loss of job opportunities by wage group (well paid and lower paid) and by education level as a result of the chronic trade deficits in the fifteen years ending in the mid-1990s. Every group considered in Table 3.4, regardless of income or education level, suffered a net job loss between 1979 and 1994 as a result of America's trade deficit. Losses were proportionally larger for non-college-educated workers. This is one of the reasons why trade has been considered a factor in the growth of wage inequality, as discussed below. While the job losses from trade are concentrated among the non-college-educated groups, it is striking that the trade deficit resulted in a large net loss of high-skilled, highly paid job opportunities as well. Increased import shares in this period displaced almost twice as many highly paying, high-skilled jobs in the United States as increased export shares created. To the extent that trade deficits occur in the context of low unemployment, these results demonstrate the shift in the composition of jobs and the disproportionate effect on low-wage and non-college-educated workers.

Table 3.4 Trade and Job Quality* (Thousands of Jobs)

	1979-89	1989-94	1979-94
(a) Wages			
Well Paid**			
Exports	229	399	655
Imports	-578	-460	-1,129
Total	-349	-61	-475
Low Pay**			
Exports	234	343	610
Imports	-903	-537	-1,526
Total	-670	-194	-916
(b) Education			
College			
Exports	148	293	460
Imports	-362	-324	-750
Total	-215	-31	-290
Noncollege			
Exports	717	1,069	1,880
Imports	-2,267	-1,425	-3,956
Total	-1,550	-356	-2,076

*Excluding effects on wholesale and retail trade and advertising.

**Wages in well-paid jobs are at or above the seventy-fifth percentile of the 1979 wage distribution (in real terms). Low-paying jobs are at or below the twentieth percentile in the 1979 wage distribution (in real terms).

Source: Scott, Lee, and Schmitt, Trading Away Good Jobs, Table 3

[10] Industry characteristics data are drawn from the 1 percent public use microdata sample of the 1990 decennial census.

Although most displaced workers eventually find new jobs, the costs of job loss and dislocation to workers and communities are high. Most of the workers displaced by the trade deficit find new jobs but in lower-paying industries at lower wages and with less benefits. On average, workers lose about 16 percent of their earnings in a new job following a job loss and a quarter of workers with health insurance lose their coverage following a job loss.[11] For older workers, in particular, the poor prospects of finding a job with comparable earnings and benefits following trade-related job loss often lead to permanent displacement from the workforce. Persistent and large trade deficits have put pressure on millions of jobs and substantially undermined economic security for U.S. workers and communities over the last two decades.

IV. U.S. Trade deficits and deteriorating job quality

As shown in the section above, it is misleading for some analysts and officials to claim that trade has spurred job growth in the American economy over the last two decades of persistent U.S. trade deficits. A second common assertion in support of the role of trade in improving domestic employment opportunities in recent years is that jobs in sectors with high export shares pay significantly higher than the average U.S. wage.[12] This statement is also misleading and needs to be qualified in at least three important ways. First, many jobs in import-competing industries that are suffering job losses also pay above-average wages. Second, only a small number of industries, accounting for less than 5 percent of total national employment, have high levels of either import or export shares. Finally, a much larger number of industries, involving from 20 to 40 percent of total employment, have rapidly growing shares of imports or exports. In these sectors on the cutting edge of America's increasing trade flows, wages in import-competing industries are higher than they are in sectors with rapidly growing export shares. Because industries facing fast-growing import competition pay higher wages than do sectors with rapidly growing exports, there has been a deterioration of the quality of jobs in the U.S. economy due to job losses from chronic U.S. trade deficits and the expansion of total trade as a share of output (GDP).

Again using data from 1979 to 1994, Table 3.5 presents two ways of measuring the sensitivity to foreign trade of U.S. industries.[13] First, industries are chosen based upon their import or export penetration ratios–trade-sensitive industries are those where imports or exports represent more than a fixed percentage of total industry consumption (in the case of imports) or output (in the case of exports). Table 3.5 uses a 20 percent share of consumption or output in 1992-94 as the cutoff level for high import or export sensitivity. The second means of determining whether industries are sensitive to foreign trade involves the growth of the import or export shares. In this case, Table 3.5 uses a cutoff level of 2 percent annual growth or greater from 1979 to 1994 in import or export share to indicate an industry that is sensitive to foreign trade.

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[11] For reduction in earnings after job loss, see Henry Farber, The Changing Face of Job Loss in the United States, 1981-95 (Princeton, N.J.: Princeton University Press, 1997). For loss of benefits following job loss see Mishel, Bernstein, and Schmitt, State of Working America 1996-97.

[12] See, for example, the Executive Office of the President's report to Congress, Study on the Operation and Effects of the North American Free Trade Agreement (Washington, DC: U.S. Trade Representative's Office, 1997), which claims "jobs in exporting sectors pay 13 to 16 percent more than the average U.S. wage." Also see Andrew Bernard and J. Bradford Jensen. "Exporters, Jobs, and Wages in U.S. Manufacturing: 1976-87," Brookings Papers on Economic Activity, Microeconomics, (Washington, D.C.: The Brookings Institution, 1995), pp. 67-112, and Richardson and Rindal, 1996.

[13] These two methodologies of measuring import and export sensitivity are adopted from Robert W. Bednarzik, "An Analysis of U.S. Industries Sensitive to Foreign Trade, 1982-1987," Monthly Labor Review (February1993), pp. 15-31.

Table 3.5
Characteristics of Jobs in Import- and Export-Competing Industries (1996 dollars)

	Whole Economy	Average 1992-1994 Import Share Greater Than 20%	Annual Growth In Import Share, 1979-94 Greater Than* 2%	Average 1992-1994 Export Share Greater Than 20%	Annual Growth In Export Share, 1979-94 Greater Than* 2%
(a) All Industries					
Average Wage	$14.15	$15.63	$14.73	$18.23	$14.09
College Share	20.8%	16.1%	22.2%	24.4%	19.2%
Jobs per $1m					
Direct	22.8	8.6	14.2	7.2	16.2
Indirect	7.7	8.1	8.4	7.1	10.3
Total	30.5	16.7	22.6	14.3	26.5
No. of Inds.	183	183	183	183	183
Emp. Share	100	4.1%	19.7%	3.8%	39.5%

*Comparing average import and export shares in 1979-1981 with average shares for the 1992-1994 period.
Source: Scott, Lee, and Schmitt, "Trading Away Good Jobs," Table 4

As Table 3.5 shows, the industries characterized by high import and export shares represent a very small portion of total U.S. employment. Of 183 industries, only nineteen industries export 20 percent or more of their output; they account for only 3.8 percent of U.S. jobs. The industries where the import share is 20 percent or greater account for only 4.1 percent of total U.S. jobs.

The data in Table 3.5 confirm that jobs in high export-share industries pay wages above the national average–industries in which 20 percent or more of output is exported paid an average hourly wage of $18.23 in 1992-94 compared to a national average of $14.15. These high export share industries also employ a somewhat higher-than-average ratio of college-educated workers. But many industries facing high import shares also pay wages above the national average–industries with a 20 percent or higher import share paid an average hourly wage of $15.63, or $1.48 above the national average.

Turning to the industries in which trade growth is fastest, Table 3.5 shows that industries that exceed annual trade growth of 2 percent make up a substantial part of the economy. Twenty percent of all jobs are in industries in which annual import growth exceeds 2 percent, while 40 percent of total national employment is in industries with annual export growth of 2 percent or greater. By this measure of trade sensitivity, it is import-competing industries that pay higher

wages, while export-competing industries pay wages slightly below the national average. Industries where the import share is growing faster than 2 percent per year pay, on average, $14.73 per year, or 4.1 percent more than the average job. In contrast, industries where the export share is growing faster than 2 percent a year pay only $14.09 per hour, or 0.4 percent less than the $14.15 national average.

Recent research by Lester Thurow using input-output analysis confirms these results.[14] In fact, Thurow not only finds that both import-competing and export industries paid above the economy wide average (21percent higher) but also that import-competing sectors paid 5 percent more than the export sector.

As the globalization of U.S. industries has proceeded in the context of persistent trade deficits, we have lost more good jobs in industries with rapidly growing import competition than we have gained in higher-paying sectors experiencing rapid export growth. Consequently, despite the claims that gains in job quality from expanding exporting sectors outweigh the job losses that have accompanied the trade deficit, America's unbalanced trade has had a negative effect on the distribution of wages and job opportunities in the United States over the last two decades.

Looking forward, even a balanced expansion of trade (where imports and exports grow in tandem) cannot be expected to lead to better-paying jobs. In most exporting industries, the jobs likely to be gained from exports will pay less than jobs lost or not created by import growth. However, to the extent that increasing the competitiveness of U.S. manufacturing eliminates the trade deficit, thereby reducing imports, average wages are likely to rise in the economy.

V. U.S. trade deficits and downward pressure on U.S. wages

Trade deficits are directly linked to falling wages for production workers and to recent increases in the overall inequality of income distribution in the United States. Figure 3.8 presents the U.S. trade balance from 1947 to 1999 along with the average real wage for United States production workers. Real wage growth flattened out in 1973 and began to fall after 1978, declining more or less steadily through 1996. Since 1996, there has been a small upturn in real wages but not enough to return workers to their 1978 real wage level. Figure 3.8 illustrates that the stagnation and decline in real wages for U.S. production workers strongly corresponds with the worsening of the U.S. balance of trade in goods: this trade balance first became negative in the early 1970s, when real wage growth in the United States ended and the period of real wage decline, which began in the late 1970s, has been a time of persistent trade deficits for the United States. While an array of factors has contributed to the decline in U.S. wages, trade has certainly been a significant cause.

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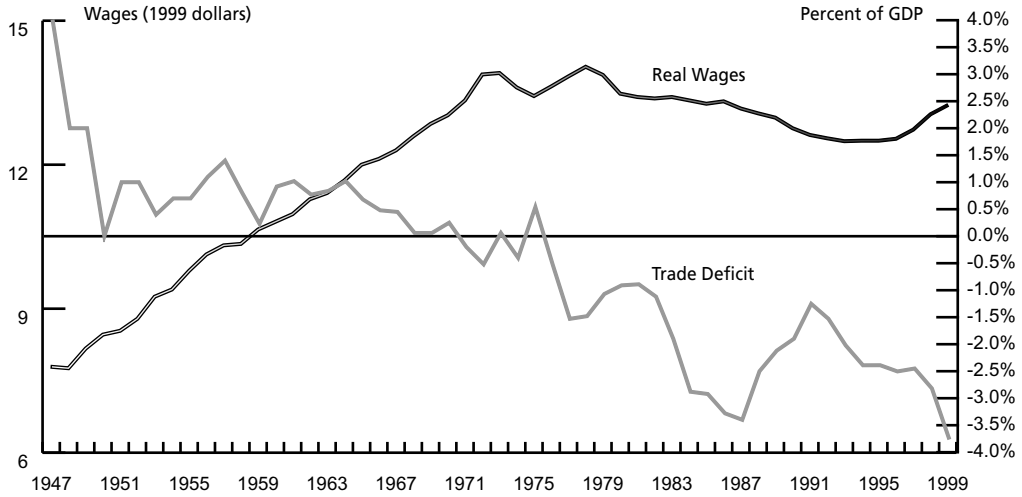
[14] Lester Thurow, "Wage Dispersion: Who Done it?" Journal of Post Keynesian Economics, Vol. 21, No. 1, (1998) pp. 25-37.

Figure 3.8
Real Wages and the U.S. Trade Deficit, 1947-99



Note: Trade deficit measures trade in goods only. The goods trade deficit is similar in scale and trend to the current account (see Figure 2.1)
Source: Robert E. Scott, Briefing on "*The Impacts of the Trade Deficit on the U.S. Economy*," September 9, 1999 and updated with information from the U.S. Department of Labor, Employment Hours and Earnings, BEA, National Income and Product Accounts, and Census Bureau, FT-900

As discussed in section III above, the steady growth in U.S. trade deficits over the past two decades has eliminated millions of American manufacturing jobs and job opportunities. Most displaced workers find jobs in other sectors where wages are much lower–leading to lower average wages for U.S. workers. Even those workers who are not displaced by imports have seen downward pressure on their wages as a result of chronic trade deficits. Lower wages abroad, especially in some developing countries, and the intense import competition in many industries that has accompanied U.S. trade deficits have consistently lowered the prices of goods in these industries. While many economists point to the benefits of lower prices for consumers, import competition also puts downward pressure on the wages of U.S. workers, especially those workers producing import-competing goods.

The effect of the U.S. trade deficit on wages goes beyond just those workers exposed directly to foreign competition. As the trade deficit limits jobs in the manufacturing sector, the new supply of workers to the service sector (from displaced workers plus young workers not able to find manufacturing jobs) depresses the wages of those already holding service jobs.

Another link between America's chronic trade deficits and stagnant and falling real wages is the "threat effect" of increased import competition and capital mobility in bargaining between employers and workers.[15] Employers' credible threats to relocate plants, to outsource portions of their operations, and to purchase intermediate goods and services directly from foreign producers can have a substantial impact on workers' bargaining positions. The use of threats is

[15] Kate Bronfenbrenner, "The Effects of Plant Closings and the Threat of Plant Closings on Worker Rights to Organize," Supplement to Plant Closings and Worker's Rights: A Report to the Council of Ministers by the Secretariat of the Commission for Labor Cooperation (Bernan Press, 1993).

widespread but hard to document. A Wall Street Journal survey in 1992 reported that one-fourth of almost five hundred American corporate executives polled admitted that they were "very likely" or "somewhat likely" to use NAFTA as a bargaining chip to hold down wages.[16] In a unique study of union organizing drives in 1993-95, it was found that over 50 percent of all employers made threats to close all or part of their plants during organizing drives.[17] This study also found that strike threats in National Labor Relations Board (NLRB) union certification elections nearly doubled following the implementation of the NAFTA agreement and that threat rates were substantially higher in mobile industries, where employers can credibly threaten to shut down or move their operations in response to union activity.

The Trade Deficit Review Commission asked the author of this study, Kate Bronfenbrenner of Cornell University, to update her 1993-1995 study by looking at the impact of threats of capital mobility on union organizing campaigns that occurred in 1998-1999, five years after NAFTA took effect.[18] In her updated study, Bronfenbrenner found that most employers continue to threaten to close all or part of their operations during organizing drives, despite the fact that, in the last five years, unions have shifted their organizing activity away from industries most impacted by trade deficits and capital flight–for example, apparel and textile, electronics components, food processing, and metal fabrication. According to the updated study, the threat rate increased from 62 percent to 68 percent in mobile industries such as manufacturing, communications, and wholesale distribution. Meanwhile, in 18 percent of campaigns with threats, the employer directly threatened to move to another country–Mexico, primarily–if the union succeeded in winning the election.

The updated study found that threats of plant closings were unrelated to the financial condition of the company. Also, they were no less likely to occur in companies in stable financial condition than in those facing bankruptcy. Instead, the new study found that the threats were simply another extremely effective tactic in employers' arsenal for thwarting worker efforts to unionize. At 38 percent, the election win rate associated with organizing campaigns where employers made threats was, significantly lower than the 51 percent win rate where there were no threats. Win rates were lowest–32 percent on average–in campaigns with threats in more mobile industries such as manufacturing, communications, and wholesale distribution. Because of the mobile nature of those industries, the threats there were more credible.

Bronfenbrenner's later study also found that, because of rapidly escalating rates of corporate restructuring and foreign direct investment, companies targeted for organizing are much likelier than they were in 1993-95 to be subsidiaries of large, multinational parent companies and have foreign operations, customers, and suppliers. The 30 percent win rate for organizing campaigns with these global multinational companies suggests that the existence of other sites in Latin America, Asia, or Africa serves as an unspoken threat of plant closing for many U.S. workers.[19]

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[16] Cited in Alan Tonelson, Race to the Bottom (Westview Press, 2000), p. 47.
[17] Kate Bronfenbrenner, "We'll Close! Plant Closings, Plant-Closing Threats, Union Organizing and NAFTA," Multinational Monitor (March 1997), pp. 8-13.
[18] Kate Bronfenbrenner, "Uneasy Terrain: The impact of capital mobility on workers, wages and union organizing," Commissioned Research Paper for the U.S. Trade Deficit Review Commission, September 2000.
[19] Ibid.

Bronfenbrenner described the impact of these threats in her testimony to the Commission:

> *Under the cover of NAFTA and other trade agreements, employers use the threat of plant closure and capital flight at the bargaining table, in organizing drives, and in wage negotiations with individual workers. What they say to workers, either directly or indirectly, is if you ask for too much or don't give concessions or try to organize, strike or fight for good jobs with good benefits, we'll close, we'll move across the border just like other plants have done before.*[20]

In the context of ongoing U.S. trade deficits and rising levels of trade liberalization, the pervasiveness of employer threats to close or relocate plants may conceivably have a greater impact on real wage growth for production workers than actual import competition.

This "threat effect," of course, goes beyond the impact on collective bargaining agreements and union organizing drives and affects all workers, union or nonunion. Employers have frequently invoked "globalization" or "foreign competition" as a cause of the need to shut down or relocate a facility or demand wage restraints or to explain poor financial performance. This is reflected in company statements as well as in the local and national press. So, it should not be surprising that workers see globalization and imports as a threat to their livelihood. Nor should anyone be surprised that, in this context, workers and unions accept lower wages than they otherwise would.

The recent controversy over the need to permit greater immigration of information-technology (IT) workers is a case in point. The high-technology industry has claimed that there is an IT worker shortage. Moreover, since global competition prevents them from raising wages to attract more workers, the claim goes, the only options are to relocate work overseas or bring foreign workers to the United States. Whether one accepts that there is or is not an IT worker shortage, it is possible to recognize that we have an industry that is a leader in our economy and in the world claiming that globalization prevents them from raising wages for highly educated, skilled computer programmers. Should it be any surprise that IT workers fear globalization's effect on their livelihood? If highly skilled workers in the world's leading sector are threatened by globalization, is there reason to doubt that workers with more modest skills and in less dominant industries also feel threatened?

VI. U.S. trade deficits and increasing earnings inequality

The stagnation and decline in U.S. real wages since the early 1970s has been joined by another disturbing development in the U.S. labor market–growing earnings inequality in the 1980s and 1990s. Both economic theory and empirical research have highlighted growing import penetration and persistent trade deficits as significant factors in driving this trend.

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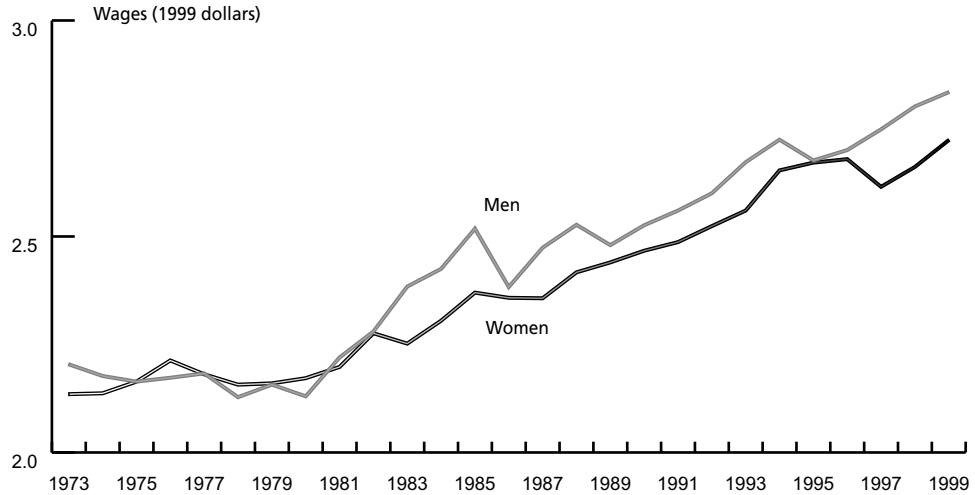
[20] Kate Bronfenbrenner, Testimony before the U.S. Trade Deficit Review Commission, "Trade in Traditional Manufacturing" October 29, 1999, http://www.ustdrc.gov/hearings/99testimony.html.

As a first step, it is worth reviewing the trend in wage inequality. In section I, we discussed the changes in the real hourly wage levels of high-, middle-, and low-wage men and women. In this section we discuss changes in the wage gaps among men's and women's wages to illustrate changes in the wage structure. Figure 3.9 shows the wage gap between high- and middle-wage workers, among men and women separately, over the 1973-99 period. Specifically, these graphs show the degree to which a ninety-fifth percentile worker–a high-wage worker who makes more than 95 percent but less than 5 percent of the workforce–fared relative to a middle-wage worker at the fiftieth percentile. Figure 3.10 presents the 50/10 wage gap over the 1973 to 1999 period for men and women. These graphs show the depth to which a middle-wage worker at the fiftieth percentile fared relative to a low-wage worker who makes less than all but 10 percent of the workforce. The gap between men and women closed between 1988 and 1998 in this group.

All of the growing wage inequality since the mid-1980s was generated by a divergence between the top and everybody else. This reflects, in part, the ongoing effects of trade since the mid-1980s on the "median worker." Among other things, this reflects the falling earnings of middle-class families struggling to support themselves with jobs in the manufacturing sector. Production jobs in manufacturing used to be "good" jobs–those that provided a middle-class income for families–but such families have been squeezed for the last fifteen years as wages of production workers have stagnated.[21]

One important component of wage inequality is the wage gap between different educational groups. The wages of college-educated workers have grown more rapidly than the wages of non-college-educated workers since 1979; with the real wages of non-college-educated workers having fallen sharply (until recently).

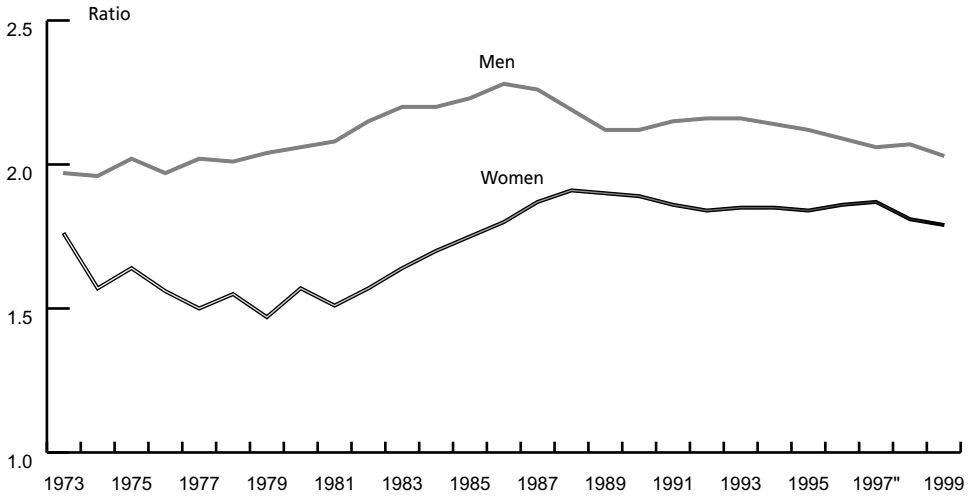
Figure 3.9
95/50 Percentile Wage Inequality, 1973-99



Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01, Figures 2I and 2J, p. 146

[21] Hourly earnings for production and nonsupervisory workers in manufacturing industries fell from $13.13 in 1983 to $12.78 in 1998 as measured in 1998 constant dollars. Calculated from Bureau of Labor Statistics data and adjusted for inflation using the CPI-U-X1 index.

Figure 3.10
50/10 Percentile Wage Inequality, 1973-99



Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01. Figures 2I and 2J, p. 146

Table 3.6
Change in Real Hourly Wage for Men by Education, 1973-1999 (1999 dollars)

Year	Less than High School	High School	Some College	College	Advanced Degree
Hourly wage					
1973	$13.61	$16.14	$16.50	$22.26	$24.72
1979	13.36	15.65	16.28	21.28	24.21
1989	11.03	13.77	15.18	21.42	26.64
1995	9.43	12.78	14.26	21.14	27.50
1999	9.78	13.34	15.12	23.52	29.66
Annualized percentage change					
1973-79	-0.3%	-0.5%	-0.2%	-0.8%	-0.4%
1979-89	-1.9	-1.3	-0.7	0.1	1.0
1989-99	-1.2	-0.3	-0.0	0.9	1.1
1989-95	-2.6	-1.2	-1.0	-0.2	0.5
1995-99	0.9	1.1	1.5	2.7	1.9
1979-99	-1.3	-0.7	-0.3	0.2	0.7
Share of employment					
1973	30.6%	34.4%	19.2%	10.3%	5.4%
1979	22.3	35.0	22.4	13.2	7.1
1989	15.9	35.2	24.4	15.7	8.8
1995	12.6	33.2	28.3	17.3	8.6
1999	12.5	32.6	27.6	18.3	9.0

Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01, Table 2.19, p.155

Table 3.7
Change in Real Hourly Wage for Women by Education, 1973-1999
(1999 dollars)

Year	Less than High School	High School	Some College	College	Advanced Degree
Hourly wage					
1973	$8.21	$10.16	$10.98	$15.20	$20.13
1979	8.57	10.16	10.92	13.82	17.70
1989	7.66	9.90	11.47	15.52	20.23
1995	7.19	9.73	12.82	16.22	21.35
1999	7.39	10.17	13.32	17.50	22.61
Annualized percentage change					
1973-79	0.7%	0.0%	-0.1%	-1.6%	-2.1%
1979-89	-1.1	-0.3	0.5	1.2	1.3
1989-99	-0.3	0.3	1.5	1.2	1.1
1989-95	-1.0	-0.3	1.9	0.7	0.9
1995-99	0.7	1.1	1.0	1.9	1.4
1979-99	-0.4	0.0	0.7	0.5	0.4
Share of employment					
1973	25.6%	44.0%	17.5%	9.9%	3.1%
1979	17.2	43.0	23.4	12.0	4.4
1989	11.2	38.8	27.8	15.4	6.8
1995	8.8	33.6	32.8	17.4	7.4
1999	9.0	32.0	31.9	19.0	8.2

Source: Mishel, Bernstein, and Schmitt, State of Working America 2000-01, Table 2.20, p. 156

Tables 3.6 and 3.7 present the wage trends and employment shares, as a percentage of the workforce, for workers at various education levels over the 1973-99 period, for men and women separately. Both tables make clear that the usual terminology of the "less educated" and "more educated" is misleading. First of all, this language usually corresponds to economic research on the wage differences between college graduates and those without a college degree–primarily high school graduates. However, nearly 75 percent of the workforce in 1999 (80 percent in 1979) had less than a four-year college degree. Thus, the category of "unskilled" or "less-educated" worker that is frequently used actually corresponds to the vast majority of the workforce. The fact that male workers with some college education (one to three years) also experienced falling real wages (down 12.5 percent from 1979 to 1995) reinforces the point that the "less-educated" group–those frequently described as having falling wages–are clearly not "unskilled" and that wage problems have been widespread. For instance, male high school graduates saw their wages fall by 18.3 percent from 1979 to 1995, and, despite a 4.4 percent growth over the

1995-99 period, still had wages in 1999 that were roughly 15 percent below their 1979 level. Correspondingly, the wages of women high school graduates fell 4.2 percent over the 1979-95 period and returned in 1999 to their 1979 level–the equivalent of saying that two decades of productivity growth passed by women high school graduates.

Even among the college educated (those with four years of college but no post-graduate study), there were no wage gains over the 1979-95 period among men (women college graduates gained 17 percent). So, while some college graduates, primarily women or those with advanced degrees, did well, many (including male college graduates) experienced wage problems.

This pattern of wage growth across education groups is consistent with the idea of persistently large U.S. trade deficits playing a substantial role in increasing earnings inequality among these groups. With U.S. import growth increasing more rapidly than U.S. export growth, the fall in the wages of less-educated workers in import-competing sectors due to trade, as predicted by economic theory, is expected to be more marked than the rise in the wages of the more-educated workers in the export sectors. As seen in Tables 3.6 and 3.7, the increase in wage inequality is characterized by sharply falling wages for non-college-educated workers and relatively small increases in the wages of college-educated workers, especially for men.

It is also worth noting that while the education wage gap between high school and college graduates has widened considerably, this has not been the case with the wage gap at the "bottom" of the education ladder–between those with and without a high school degree. When controlling for race, age, and other human capital characteristics, the high school premium has been relatively flat over the last three decades.[22] Neither the dramatic widening of the wage gap at the bottom that occurred in the 1980s nor the flattening and decline of this wage gap in the 1990s had any thing to do with education. The flat high school wage premium also reinforces the point that the adverse wage trends among the non-college-educated workforce over the last few decades have been widespread–equivalent for both high school graduates and high school "dropouts."[23]

Another recent study shows that manufacturing jobs contribute to a more equal distribution of family incomes. From 1968 to 1998, the manufacturing share of private employment fell from 35.3 percent to 17.7 percent. According to Tom Palley, ever since 1980, when the manufacturing trade balance began to move into deficit (see Figure 3.4), the decline in the manufacturing employment share accounts for 40 percent of the increase in income inequality. The increased openness of the economy alone accounts for 17 percent of that increase. However, that percentage rises to 27 percent when the negative impact of increased openness on the manufacturing share of employment is taken into account.[24]

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[22] See Mishel, et al., State of Working America: 2000-01, Table 2.17, p.145.

[23] It is also important to explain the growth of "within-group wage inequality," the growth of inequality among workers of similar education and experience. See Thurow, "Wage Dispersion," and Mishel, Bernstein, and Schmitt, State of Working America, pp. 144-150. Roughly half of the growth in wage inequality is due to the growth of within-group wage inequality.

[24] Thomas I. Palley, "Manufacturing Matters: The Impact on Productivity Growth, Wages and Income Distribution" (Washington, DC: Public Policy Department, AFL-CIO, 2000), Economic Policy Paper E035.

Economic theory and a large and growing body of research suggest that expanding trade has played a large role in the growth of inequality in income distribution in the last twenty years. The economic theory of international trade states that trade will lower the price of import-competing products and thus lower the real wages of workers engaged in producing those goods; likewise, trade is expected to raise the price of export goods and increase the wages of the workers producing export goods. Because the United States tends to import goods that make intensive use of less-skilled and less-educated workers in production, economic theory suggests that the increasing openness of the U.S. economy to trade will lower the wages of less-skilled workers in the United States relative to other workers.[25] Economic theory also suggests that as trade persists and expands over time, it will lead to a phenomenon known as "factor price equalization"–the movement of wages for workers with similar skills in different countries toward a common level. For the United States, of course, this implies a fall in wages for less-skilled workers from trade, as the earnings of less-skilled workers in the rest of the world are on average much lower than their U.S. level.

Box 3.1

OECD factor price equalization

The source of rapidly raising imports over most of the past quarter of a century has been not low-wage third world countries but imports from other first world countries. Trade among OECD countries rose from 38 percent of the total in 1953 to 76 percent in 1990 before falling to 60 percent in 1996. In the early 1970s, imports were rising rapidly from the rest of the OECD and were certainly large enough to have had big effects on the observed wages in the United States. The rest of the OECD, as we have seen, was then a low-wage area in comparison with the United States. The timing and pattern across countries are right. The problems start in the early 1970s as imports from Japan or continental Europe surged in medium-skill industries such as autos, steel, and machine tools. Contributing to the scarcity of medium-skill jobs, productivity grows faster in these industries than in the rest of the economy. In the 1970s and 1980s, the effective supply of college-educated workers, male and female, also rises just as the medium-skill jobs that had traditionally gone to high school male workers are becoming scarcer. College-educated workers end up taking more and more of a smaller supply of high-wage, medium-skill jobs. OECD factor price equalization explains why Japan and continental Europe have not faced the same problems. Factor price equalization was occurring between the United States and the rest of the OECD and not between the developing and developed world. Only at the very end of the period did third world competition begin to play a role in first world wages, and only then did the rest of the OECD begin to experience some of the widening inequalities and falling real wages that had originated much earlier in the United States.*

* Thurow, "Wage dispersion."

[25] That trade will lower the price of import-competing goods and thus the wages of the workers producing those goods is, in the terminology of international economics, known as the Stolper-Samuelson theorem. This theorem is derived from the Heckscher-Ohlin model of international trade. The main implication of this model is that countries will tend to concentrate on producing (and exporting) goods that use the factors that the country possesses in abundance compared to its trading partners. The country will import goods that use the factors that it possesses in relative less abundance. For the United States, the Hechscher-Ohlin model implies that export goods will be produced using high-skilled or more-educated labor intensely and import goods will use less-skilled and less-educated labor. Studies of the factor content of U.S. goods confirm that import-intensive industries employ proportionately more less-skilled and less-educated workers relative to export-intensive industries. See Paul Krugman and Maurice Obstfeld, International Economics, Theory and Policy, 5th ed. (W.W. Norton, 1999) for a textbook presentation of the Hechsher-Ohlin model of international trade.

This process of "factor price equalization" is not limited to increased integration of production with low-wage, developing countries. Thurow, in fact, has argued that it was increased integration among the advanced economies since the 1970s that explains most of globalization's impact on wage inequality (see Box 3.1). This is possible because wages in major European countries were substantially below U.S. levels as late as the mid-1970s.

Over the past decade, a number of researchers have drawn upon economic theory together with empirical data on trade flows and the labor market to test the relationship between trade and the growing wage inequality in the United States. Overall, economic studies have concluded that increased trade and trade deficits have contributed to widening the wage gap between less-educated workers and more-educated workers since 1980. (See Box 3.2 for a list of studies and their conclusions about the effect of trade and trade deficits have on relative wages.) These studies have led to a growing consensus among economists that rising trade openness is responsible for between 15 and 25 percent of the increase in wage inequality over the past two decades.[26] For example, Laura D'Andrea Tyson, a former chair of the White House Council of Economic Advisers and the National Economic Committee, writes:

> *Opinion is shifting toward the view that globalization has had a "moderate" effect–perhaps accounting for one-fourth to one-fifth of the nearly 20 percent rise in the wage differential between skilled and unskilled labor–and the estimate of this effect has been creeping up over time.*[27]

In another example of the growing consensus among international economists, Jeffrey Sachs, Director of the Center for International Development at Harvard University, states:

> *I believe that possibly about a third of the widening gap of around 15 to 20 per cent between skilled and unskilled labor is related to trade.*[28]

Similarly, in his recent book on trade and wage inequality, William Cline of the Institute for International Economics writes:

> *The contribution of trade and immigration to rising U.S. wage inequality has been somewhat larger than previously estimated in most of the literature.*[29]

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[26] Many of these studies have tested the factor price equalization from the Stolper-Samuelsson Theorem (see note 25 on p. 110), which examines the impact of third world wages on U.S. wages. However, the United States has also experienced factor price equalization from Europe and Japan, especially in the 1950s and 1960s. See Sachs and Shatz, "Trade and Jobs". A number of other studies have examined the impacts of growing trade deficits on wages, through the loss of good manufacturing jobs (See Scott, Lee, and Tyson).

[27] Laura D'Andrea Tyson, "Inequality amid Prosperity," Washington Post, July 8, 1997. Also see William Cline, Trade and Income Distribution (Washington, DC: Institute for International Economics, 1997). Cline's literature review shows studies clustered around the finding that trade is accountable for about 15 percent of the increase in the wage gap between less-skilled and high-skilled workers. Cline's own research, presented in his book, assigns about 25 percent of the increase in wage inequality to effects of changes in international trade for the United States.

[28] Jeffrey Sachs, Globalization and Employment, Public Lecture (International Institute for Labour Studies, International Labour Organization, Geneva, Switzerland, March 18, 1996). http://www.ilo.org/public/english/bureau/inst/papers/publecs/sachs/index.htm

[29] William Cline, Trade and Income Distribution, p. 274.

Box 3.2

Effects of International Trade on Relative Earnings: A Summary of Studies

Study	Effect of Trade	Detailed Explanation
Borjas, Freeman, and Katz (1992)	Substantial	Trade and immigration flows caused between 30 and 50 percent of the 10 percent decline in the relative weekly wage of high school dropouts, 1980-88. Trade deficit caused between 15 and 25 percent of the 11 percent rise of the earnings of college graduates relative to high school graduates, 1980-85.
Murphy and Welch (1991)	Substantial	Exact match exists between the signs of relative labor demand changes predicted by changes in international trade with both the observed changes in the distribution of employment between industries and relative wages.
Katz and Murphy (1992)	Small	Trade-induced changes in relative demand move in the correct direction to explain wage differentials, but are quite small in magnitude.
Bound and Johnson (1992)	Small or none	Effects of trade are negligible because estimates of total relative demand shifts are small.
Leamer (1992)	Substantial	Estimated changes in real earnings induced by low-wage foreign competition range from $3,000 to $30,000 increase for professional and technical workers, an increase of $7-$67 per $1,000 of capital, and a decline of $900 to $9,000 in the earnings of other workers
Krugman and Lawrence (1993)	Small	Compared the change in the ratio of white-collar to blue-collar wages with the change in their relative employment in U.S. manufacturing sectors from 1979 to 1989. They found that nearly all industries were employing more of the white-collar workers, and the shift in the mix of employment toward skill-intensive industries was not substantial.
Lawrence and Slaughter (1993)	None	Trade is dismissed as an explanation for changes in relative wages because international prices move in the opposite direction from that predicted by the Stolper-Samuelson theorem.
Baldwin and Cain (1994)	Small	Trade pressures explain at most 9 percent of growth in U.S. wage inequality from 1977 to 1987 and even less of the further increase in wage inequality after 1987 and none of the fall in wage inequality from 1967 to 1977. After 1987, unskilled labor augmenting technical change seems most important factor; for 1967-77, factor-supply growth seems most important factor.

Study	Effect of Trade	Detailed Explanation
Sachs and Shatz (1994)	Small	Using a special database detailing imports and exports of goods in 131 manufacturing industries and 150 trading partners, they estimated that the increase in net imports over the period 1978-90 was associated with a drop of 7.2 percent in production jobs in manufacturing. By themselves, these shifts could not have accounted for even as much as a 10 percent decrease in the wages of low-skilled workers relative to high-skill workers.
Leamer (1996)	Substantial	Using price, Total Factor Productivity growth, and initial factor share data for 450 4-digit SIC industries, he estimated that trade effects were responsible for 40 percent of the decline in the relative wages of less-skilled workers during the 80s.
Haveman (1993)	Substantial	Workers displaced from industries engaged in international trade had under 37 weeks of transitional unemployment, compared to 21-22 weeks for other displaced workers. Roughly 4 weeks of the 16-week difference are due to the trade designation of the industry, with the remaining 12 weeks associated with the personal characteristics of the workers. Two years after displacement, workers from industries engaged in trade and that have suffered declines in employment recover 5-9 percent less of their predisplacement wages than other displaced workers.
Kletzer (1994)	Small	The elasticity of an industry's displacement rate with respect to its import penetration ratio was 0.11 to–0.07 with respect to the ratio of exports to shipments. The negative estimated effect of the import penetration ratio on the probability of the worker reemployment could not be separated from the negative effects of worker characteristics. Import penetration ratios had no significant explanatory power in predicting earnings recovery.
Brauer and Hickok (1995)	Substantial	They examined the effects of the change in the import penetration ratio, the ratio of imports from developing countries to total domestic demand, on real average hourly earnings by industry over the 1979-89 period. They estimated that changes in trade accounted for about 15 percent of the explained portion of the widening wage gap between high school and college graduates.
Wood (1991, 1994, 1995)	Substantial	Uses the factor content approach to calculate the amount of skilled and unskilled labor used to produce exports in developed countries and imports in developing countries. He estimated that international trade reduced the demand for unskilled labor by 22 percent.
Bernard and Jensen (1997)	Substantial	Shifts between exporting and nonexporting plants (within the same industry) are associated with roughly half of the growth in U.S. employment and payroll shares of nonproduction relative to production workers over the 1980-87 period. Explicit measures of plant-level technological investment are associated with the same shifts between production and nonproduction workers over the 1980-87 period within a typical plant but not with the theoretically more important shifts between plants that export and those that do not.

Cline's literature review shows studies clustered around finding trade accountable for about 15 percent of the increase in the wage gap between less-skilled and high-skilled workers. However, his own research shows that almost 40 percent of the observed increase in wage inequality between 1973 and 1993 is due to the effects of changes in international trade for the United States.[30] Even economists who have been most dismissive of trade effects on U.S. wages have come to accept the evidence of a significant role for growing trade flows in depressing incomes and growing inequality. For example, in 1997, Paul Krugman dismissed the link between globalization and wage deterioration as "questionable in theory and flatly rejected by the data."[31] However, Krugman recently wrote in the New York Times:

> *Most conspicuously, competition from those newly productive third-world workers is one, though probably not the most important, of the reasons that real wages of many American workers have stagnated or even declined over the last 25 years.*[32]

There has been a tendency among some analysts to dismiss the impact of globalization as "small," because this factor explains only a "minor" (i.e., less than 50 percent) share of the total growth of inequality–it does not explain all of rising inequality and is not even the major factor. This type of thinking makes several wrong assumptions. One is that there is a "major" cause of wage inequality. In fact, there are a small number of important causal factors, none of which can explain all of the growth of inequality. Trade has had an impact on a par with that of other significant factors. Second, an implicit assumption is being made that a factor that explains a "small" share of the rise in inequality (though 15-25 percent is not "small") necessarily has a small economic impact. This is demonstrably untrue (see Box 3.3). A 15 percent or 25 percent share of an important phenomenon–the widening wage gap–can have quite a substantial economic impact. For instance, if globalization can explain just 15 percent of the rise in the college-high school wage premium, then globalization has lowered the high school wage by 6.1 percent among men and 5.4 percent among women. Similarly, a 15 percent share of the growth in the top/middle wage gap due to globalization is equivalent to reducing the wages of the median woman worker by 8.4 percent and those of the median male worker by 10.2 percent (see Box 3.4).

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[30] Ibid. p. 264. The other factors that Cline includes as having a role in widening the wage gap between 1973 and 1993 are immigration, the falling minimum wage, deunionization, and skill-based technological change. It should be noted that the weight that Cline gives to skill-based technological change in widening the gap between high-skilled and less-skilled worker wages has little empirical support; instead, Cline simply assigns half of the unexplained residual to this factor.

[31] Quoted in Alan Tonelson, The Race to the Bottom (Westview Press, 2000).

[32] Paul Krugman, "The Magic Mountain," Opinion Column, New York Times, January 23, 2000.

Box 3.3

A Balanced View of Globalization's Benefits and Costs

People who discuss the effects of globalization frequently point to the benefits of trade emphasizing, for example, the jobs created by exports. But this is a biased point of view. There are also costs associated with globalization and trade deficits. A balanced view requires that an analysis be made of both the costs and the benefits of trade and their net effect on well-being of workers and families across the income distribution and between and within regions of the country. Here are some of the factors that should be considered in this type of analysis as one balances the benefits and costs of trade.

- **Openness to international trade can lower the costs of goods and services in the U.S. market, but these lower costs come about by putting downward pressure on U.S. wages, displacing U.S. workers with lower-wage foreign labor, or decreasing profits for U.S. domestic producers**. The distributional effects of these trade-induced price changes–in particular increased wage inequality as workers in certain sectors see their wages stagnate or are displaced into lower-paying sectors–may outweigh the gains from lower price levels in the economy.

- **Openness to international trade can increase access to larger markets for U.S. businesses and workers–but the other side of the equation is, of course, that the U.S. market is open to foreign producers, who may displace U.S. industries and workers**. This is especially the case given the asymmetry in trade openness of the United States in relation to almost all of our trading partners, which has contributed to our large and persistent trade deficits in recent years.

- **The Republican Commissioners' viewpoint argues that countries with higher levels of trade openness experience higher economic growth, but the evidence does not exist to support this argument being made in the context of U.S. trade policy**. The viewpoint relies on the research of Jeffrey Sachs and Andrew Warner in a 1995 paper (Sachs and Warner, "Economic Reform and the Process of Global Integration," Brookings Papers on Economic Activity) to support the contention that countries open to trade have higher economic growth. However, Sachs and Warner have a very weak definition of "openness"–essentially countries that are not highly protected or state managed.

- By this definition, countries with moderate protection, activist industrial policies (á la East Asia), mercantilist export promotion, and generally less-than-free trade qualify as "open." All Sachs and Warner prove is that countries with extreme import substitution policies or former socialist countries did worse than countries that had at least partially liberalized. Sachs and Warner do NOT show that, say, moving from a 20 percent tariff to perfectly free trade would bring any economic gains. Even more strongly, their research does not suggest that a change in the degree of trade openness for the United States would affect economic growth one way or the other.

  - **Jobs supported by exports pay more than the national average – but increases in trade in recent years are not leading to higher wages for U.S. workers.** The reason is that industries with rapidly growing exports pay substantially less than industries facing rapidly growing imports (see Table 3.5 and associated text).

  - **Many economists assert that costs of trade openness are generally outweighed by the gains–but this conclusion has not been adequately supported by rigorous empirical research that weighs the costs and gains against each other.**

  - **There is virtually no research that quantifies the benefits of trade. Even more, there is virtually no research that quantifies the benefits of trade for various income groups.** It is known that the costs of globalization are primarily borne by the bottom three-fourths of the work force–non-college-educated workers. Thus, if the benefits of trade disproportionately accrue to owners of capital and high-end consumers, then it is possible that trade has no net benefit for the vast majority of Americans. Repeated assertions about the net benefits of trade, particularly for working families, are theoretical rather than factual.

  - **There is also no documentation that supports the claims that further global integration will have comparable benefits to prior stages of globalization**. There is already great mobility of international capital, technology, and goods and services. It may be that the greatest benefits of globalization have already been realized.

Trade and trade deficits are certainly not the only explanations offered for rising wage inequality and falling wages in the United States over the last two decades. Technological progress has often been pointed to as the culprit in driving inequality.[33] In simplified terms, technological advances over the last two decades have rewarded workers who work well with computers (especially those with a four-year college degree) and punished workers who do not (especially those with only a high school degree or less). Commissioner Thurow has pointed out, however, that

> *…a skill-intensive technical shift has been verified by no independent evidence. The only evidence for such a technical shift is the rising wage gap itself. Anyone arguing that technology is to blame has to be prepared to show direct evidence of the necessary technical changes if they are not to be caught making a meaningless tautological argument.*[34]

Researchers have also pointed to changes since the 1970s in key labor and product market institutions as other causes of the increase in wage inequality in the United States. These explanations of growing inequality have focused on unions, the federal minimum wage, the deregulation of major industries, the privatization of many state and local government activities, and the long-term shift in production and consumption away from manufactured goods and toward services.[35]

It is important to note, however, that trade may have played a role in bringing about many of the economic changes that lay behind these other explanations for rising inequality. For instance, the competitive pressure of import penetration in many industries has led producers to adopt new, labor-saving technologies that have displaced less-skilled workers. The threat effect of increased import competition and capital mobility discussed above has played a role in holding down unionization rates. Finally, the job losses from two decades of trade deficits have played a large role in the shift away from manufacturing employment and into the service sector for American workers. If these indirect effects of trade could be captured empirically, the size of the trade effect on wage inequality would likely be much higher than those yielded by the studies discussed above (and listed in Box 3.2).

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[33] Papers that find an important role for technology include David Autor, Lawrence Katz, and Alan B. Krueger, "Computing Inequality: Have Computers Changed the Labor Market?" Quarterly Journal of Economics, Vol.113(4), 1998; John Bound and George Johnson. "Changes in the Structure of Wages in the 1980's: An Evaluation of Alternative Explanations," American Economic Review, June 1992; Eli Berman, John Bound, and Zvi Griliches, "Changes in the Demand for Skilled Labor Within U.S. Manufacturing Industries: Evidence from the Annual Survey of Manufactures," Quarterly Journal of Economics (May 1994). For a critical view of this literature, see DiNardo and Pischke , "The Returns to Computer Use Revisited: Have Pencils Changed the Wage Structure Too?" Quarterly Journal of Economics, Vol. 112, No. 1 (1997); Lawrence Mishel, Jared Bernstein, and John Schmitt, The State of Working America 1998-1999, (Economic Policy Institute 1998); David Howell, "Collapsing Wages and Rising Inequality: Has Computerization Shifted Demand for Skills?" Challenge, Vol. 38 No.1 (January-February 1995).

[34] Thurow, "Wage Dispersion," p. 27.

[35] For the effect of changes in unionization rates, see David Card, "The Effect of Unions on the Distribution of Wages: Redistribution or Relabelling?", Working Paper No. 3826, 1991. For the effect of changes in minimum wage, see John DiNardo, Nicole Fortin, and Thomas Lemieux "Labor Market Institutions and the Distribution of Wages: A Semiparametric Approach," Econometrica, Vol. 64, No.5, (September 1996); Nicole Fortin and Thomas Lemieux, "Institutional Changes and Rising Wage Inequality: Is There a Linkage?", Journal of Economic Perspectives, Vol. 11 (Spring 1997); David Lee, "Wage Inequality in the United States During the 1980s: Rising Dispersion or Falling Minimum Wage?" Quarterly Journal of Economics, Vol. 114 (August 1999). For the effects of shifts from manufacturing to services, see Lawrence Mishel, Jared Bernstein, and John Schmitt, The State of Working America 1998-1999, Economic Policy Institute, (1998). For the effects of deregulation and privatization, see Fortin and Lemieux, "Institutional Changes and Rising Wage Inequality: Is There a Linkage?" Journal of Economic Perspectives, Vol. 11 (Spring 1997).

Box 3.4
What is Small?

Some observers concede that trade has had an effect in lowering the wages of U.S. workers but contend that these effects are "small" when weighed against other economic and policy considerations. A key question, then, is what is small? Wages for workers in the tenth percentile fell 15 percent in real terms between 1979 and 1997; wages for workers in the ninetieth percentile rose about 6 percent over the same time period. Assuming that trade accounts for 20 percent of the wage gap, eliminating the effect of trade in lowering wages for those at the bottom of the income distribution would mean a 4 percent increase in the real wage for these workers. Policymakers would be hard-pressed to point to any policy capable of raising the real wages of so many workers by such a magnitude. In particular, what yardstick does one use to measure whether the effect of globalization is small, medium, or large? One yardstick could be the actual effect on wages–how much has globalization lowered the wages of non-college-educated workers? This is useful, since a factor that explains 15 percent to 25 percent of a large phenomenon can have a sizable impact. To illustrate this, the following table presents the changes in two key wage differentials–the college premium and the high/middle wage gap. Each of these wage differentials grew remarkably over the 1979-99 period, with the college premium rising 36 to 40 percentage points and the high/middle wage gap growing by more than 50 percentage points. Any factor that explains 15 percent to 25 percent of the growth in wage inequality implies a sizable reduction in wages (relative to what they would have been) for middle-wage or high school-educated workers.

As the table below shows, a factor that explains "just" 15 percent of the rise in the college premium implies a 5 percent to 6 percent lower wage for high school women and men. If one focuses on the growth of total wage inequality (the top/middle gap), the losses at the middle are 8 percent to 10 percent for women and men. These loses would not seem to be "small" in any reasonable sense.

A second yardstick of small might be relative to what policy can reasonably do. By this standard, globalization's impact is quite substantial. For instance, a middle-class family in 1999 paid income taxes equal to 5.4 percent of its income to the federal government. Thus, a 5 percent to 6 percent loss of wages because of globalization is equivalent to eliminating the federal income taxes paid by middle-class families. This hardly seems small.

Growth in Wage Inequality

	College-High School Wage Differential*		Wage Gap Between High and Middle Wage Earners**	
Year	Men	Women	Men	Women
1979	35.9%	36.0%	115.7%	116.0%
1989	55.6%	56.8%	148.0%	144.0%
1999	76.3%	72.1%	183.4%	172.3%
Change 1979-99	40.4%	36.1%	67.7%	56.3%
If Globalization Explains:				
15%	6.1%	5.4%	10.2%	8.4%
25%	10.1%	9.0%	16.9%	14.1%

*Percent to which hourly wage of four-year college graduates exceeds that of a high school graduate.
**The wage gap between the ninety-fifth and fiftieth percentile.

Globalization and Inequality in Developing Countries. It is also important to note that the growth of income inequality linked to trade is not just a problem found in the United States and other developed countries. The rapid growth of trade and foreign direct investment is also increasing income inequality in many developing countries. In its 1997 Trade and Development Report, the United Nations Commission on Trade and Development (UNCTAD) reviewed some significant studies that showed that globalization has also been associated with rapidly growing income inequality in many developing countries. The UNCTAD report finds that countries that have engaged in rapid, unilateral reductions of barriers to imports have experienced a significant widening in income inequality. Latin America, in particular, has gone much further than East Asia in reducing trade barriers. The report reviews a number of studies of trade liberalization in Argentina, Chile, Colombia, Costa Rica, Mexico, and Uruguay, and found

> *almost unanimous evidence of rising rather than falling wage differentials. In most countries the wage gap widened while the real wages of unskilled workers actually fell and unemployment increased. ... [While] other factors... including those linked to macro economic adjustment and labour market reform ... may have contributed to increased wage inequality in some countries, it is explained primarily by trade liberalization.*[36]

VII. The trade deficit and the loss of competitiveness

Ongoing U.S. trade deficits have had a corrosive effect on America's long-term trade competitiveness, as shown in Chapter 2, especially in section II.D. Excessive trade deficits and surges of imports into the United States mean losses of market share for American industries that are likely to last long into the future. Once a U.S. industry loses a market to foreign competition, it is extremely difficult and costly to come back into business even if factors such as the exchange rate change to make the industry profitable again in the United States. For example, when the U.S. dollar and our trade deficit soared in the early 1980s, many domestic firms in sectors such as steel and semiconductors were decimated. Once closed, many plants in such industries failed to reopen, even after the dollar depreciated later in the 1980s.

The current steel crisis, which we discussed in Chapter 2, also threatens to eliminate a large section of the domestic steel industry this year and to wipe out thousands of jobs and undermine the economic base of the communities where those plants are located. Already, at least two domestic steel companies have filed for bankruptcy within the past year. The workers at Georgetown steel and Acme steel, whose companies are in bankruptcy, are in danger of losing their jobs, their health insurance, and their pensions. If these plants do close, and these workers are lucky enough to find new jobs, they are likely to suffer a severe loss of income and benefits in the future. Their unique skills in steelmaking will be of little value in these new jobs.

Another way in which chronic trade deficits have had a corrosive permanent effect on U.S. competitiveness is by holding down research and development by U.S. firms. America's chronic and

[36] United Nations Commission on Trade and Development, Trade and Development Report (New York: United Nations, 1997), p. 135.

large trade deficits have played a large role in the decline of the manufacturing sector in the United States over the last three decades—and it is manufacturing firms that are the source of most private research and development activity in the U.S. economy. In an important new study, Peter Morici of the Economic Strategy Institute has found that eliminating the trade deficit would increase U.S. spending on research and development by an estimated 3 percent. This would, in turn, increase productivity growth by about "0.5 to 0.6 percentage points per year."[37]

At the same time that America's chronic trade deficits are holding down private research and development, a recent report from the National Coalition for Advanced Manufacturing pointed out that federal spending for research and development has fallen in the 1990s as a share of national income. The report states:

> *Since 1991, federal basic and applied research expenditures have declined from 0.5 percent to 0.398 percent of GDP. This drop in federal support is most troubling because the government is the principal supplier of funds for research activities of a long-term and high-risk nature. Additionally, public investment in manufacturing R&D is less than 5 percent of all federal R&D and since the early 1980s, federal support for the fields most directly related to productivity improvement have fallen sharply while the economy expanded.*[38]

The National Coalition for Advanced Manufacturing also points out that most of the technologies being used today in new, high growth industries were developed twenty to thirty years ago, when federal research and development support was a much larger share of income than it was in 1991. We are, in effect, eating the seed corn of our high-tech economy, while enjoying the fruits of those investments from the 1960s and 1970s.

As pointed out in Chapter 2, manufacturing production of export- and import-competing goods will have to increase by nearly 30 percent in order to eliminate the trade deficit. This will require substantial investments in public and private research and development to achieve sustained reductions in our trade deficit and to maintain and increase productivity growth rates in the U.S. economy.

VIII. The trade deficit: A threat to the domestic economy?

The growing U.S. trade deficit also imposes at least two hidden costs on the U.S. economy. First, as the trade deficit grows, there is increasing risk that the United States will experience a currency crisis and, thus, a hard economic landing, as discussed in Chapter 2. Therefore, the deficit is a threat to the sustainability of the U.S. expansion and the prosperity of all Americans. If the United States is hit with a currency and/or a financial crisis in the near future, the economy could be pushed into a deep recession. That development would raise unemployment and reduce incomes for many workers. If U.S. trade and current account deficits continue to grow relative to the U.S. output (GDP), then the risk of such a collapse will expand, as the next chapter shows.

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[37] Morici, The Trade Deficit: Where Does it Come From and What Does it Do? (Economic Strategy Institute: Washington, DC, October 1997) p. 20.
[38] National Coalition for Advanced Manufacturing. Smart Prosperity, Synopsis (2000), p. 4.

The second economic threat comes from the growth in the U.S. net national indebtedness relative to GDP. As the U.S. debt increases, net interest and property income payments to the rest of the world will rise rapidly. As the next chapter shows, if this happens--as it surely will, unless the current account deficit begins to improve almost immediately-- there will be a progressive loss of U.S. income. An increasing share of the U.S. national output will have to be used to pay for the capital that the United States is borrowing from the rest of the world. This conclusion is based on the simple accounting fact that any current account deficit must be financed by borrowing capital from the rest of the world. Hence, until they are eliminated, current account deficits will add to the net national debt of the United States.

IX. Summary

This chapter has focused on the consequences of America's persistent and growing trade deficit on wages, the income distribution, and competitiveness. We conclude that trade deficits have eliminated millions of high-wage U.S. jobs and increased economic insecurity for American workers. Trade deficits have also put downward pressure on the wages of production workers, not only by eliminating good jobs but also by pushing down the prices of domestic products and by increasing the "threat effect" of plant closings in bargaining between employers and workers. Trade deficits have also been linked to the rise in earnings inequality in the 1980s and 1990s. Persistent trade deficits have reduced the long-term competitiveness of U.S. industries and lowered investment in research and development, thereby undermining productivity growth and contributing to the stagnation of incomes that has plagued our economy since the 1970s. Since the manufacturing sector is responsible for essentially the entire U.S. current account deficit, manufacturing output will have to increase by about 30 percent in order to eliminate trade deficits. The last, and potentially most important cost of the trade deficit, at least in the short run, is that it threatens to precipitate a major currency or financial crisis that could lead to a significant recession and a large increase in unemployment in the United States. We take up the threat of such a crisis, and the sustainability of the U.S. trade and current account deficits, in Chapter 4.