



“Summary of article by Robert Z. Lawrence and Matthew J. Slaughter: International Trade and American Wages in the 1980s: Giant Sucking Sound or Small Hiccup?” in Frontier Issues in Economic Thought, Volume 4: The Changing Nature of Work. Island Press: Washington DC, 1998. pp. 73-76

Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being

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In the 1980s, average wages in the U.S. (as conventionally measured) stopped growing and actually declined, while earnings inequalities related to skills and education increased dramatically. At the same time, the volume of international trade was expanding rapidly. It is scarcely surprising that many observers blamed wage stagnation and inequality on trade; in Ross Perot’s memorable phrase, under the North American Free Trade Agreement we would expect to hear “a giant sucking sound” of wages and jobs being siphoned off to Mexico. This study analyzes the data on the effects of international trade on American wages, finding that trade played only a relatively small role in the changes of the 1980s. More important, the authors find, were the slowdown of productivity growth in services and the patterns of technological change.

AVERAGE WAGES

Economic theory suggests that in a competitive labor market, workers’ compensation should grow at the same rate as output. However, from 1979 to 1991 output per worker grew by 10.5 percent, far faster than the reported growth in hourly earnings. Did trade pressure hold the growth of wages below productivity increases? There is little evidence for this; rather, it turns out that labor compensation, appropriately measured, actually did keep up with productivity.

Three different statistics can be used to measure average wages or labor compensation. The most common figure, average real hourly earnings of production workers, declined by almost 11 percent between 1979 and 1991. A second measure, average real hourly compensation in the business sector, increased by 1.5 percent in the same period. These two series differ because business sector compensation includes nonproduction workers and self-employed people, and it includes fringe benefits, while the common hourly earnings series covers only the wages of production workers. From the point of view of economic theory, it is total labor cost, or compensation, not wages alone, that should affect employers’ demand for labor.

The gap between output and compensation growth disappears if a third, less common measure of compensation is used. Both output and compensation are expressed in real (inflation-adjusted) terms, but different price indexes are typically used for the two adjustments. Output is deflated by an index of prices of goods produced in the U.S. business sector; compensation is deflated by the Consumer Price Index (CPI), measuring the price of goods consumed in the U.S. Since about 1980, producer prices have risen more slowly than consumer prices.

Wages deflated by the CPI measure workers' real purchasing power. However, compensation deflated by producer prices is a better measure of the cost of labor to employers. The latter is the figure that should grow at the same rate as productivity -- and roughly speaking, it does. Hourly compensation deflated by producer prices grew by 9.5 percent from 1979 to 1991, very close to the growth in output per worker.

Producer and consumer prices have differed for two principal reasons, of about equal importance. First, producer prices include the prices of investment goods, which have fallen relative to consumption goods. Second, consumer prices include the cost of owner-occupied housing, which rose faster than most other prices in the 1980s. A third conceptual difference between the two price indexes, namely that consumer prices include the prices of imported goods, played almost no role in practice. The terms of trade (the ratio of export to import prices) moved slightly in favor of the U.S. during the 1980s, meaning that, for the same amount of resources, the U.S. could buy slightly more from abroad at the end of the decade than at the beginning.

Since compensation grew at about the same rate as output per worker, the slowdown in wage growth can be traced to a corresponding slowdown in productivity growth. Between 1979 and 1990, real output per hour in manufacturing grew 30.7 percent, while nonmanufacturing output per hour grew only 4.5 percent. Thus it is the near-stagnation in nonmanufacturing productivity that ultimately limited wage growth -- not the more robust productivity growth in manufacturing, the sector most affected by international trade. Although there are many problems in the measurement of service sector productivity, it is noteworthy that before 1973, reported productivity growth was only slightly slower in services than in manufacturing.

RELATIVE WAGE PERFORMANCE

During the 1980s, average pay in manufacturing rose faster for nonproduction workers than for production workers, reversing the trend of the previous 25 years. At the same time, almost all of the decade's employment growth in manufacturing consisted of nonproduction workers, largely managers and professionals. Thus demand for nonproduction workers must have increased substantially. Could this have resulted from international trade?

The standard theory of international trade leads to the Stolper-Samuelson theorem: an increase in the price of a product raises the return to factors used relatively intensively in its production, and lowers the return to factors used relatively sparsely. If international trade leads the U.S. specializing in knowledge-intensive or high-technology industries, then the Stolper-Samuelson theorem would predict an increase in the relative wages of skilled, nonprofessional workers, a "factor" of production used heavily by those industries. However, the evidence for such specialization is not as obvious as it seems, since most U.S. manufactured imports come from developed countries with comparable levels of wages and technology.

If the Stolper-Samuelson mechanism is at work, then prices should have increased more rapidly in industries that make greater use of skilled, nonproduction labor; such price increases would then allow the corresponding increase in wages. However, data on price changes in the 1980s by disaggregated industries (two-digit and three-digit SIC categories) show that price changes were

nearly unrelated to the nonproduction-worker intensity of industry. If anything, there was a slight decline in the relative prices of nonproduction-labor-intensive goods.

On the other hand, technological progress was apparently concentrated in the skilled-labor-intensive industries. Again using disaggregated data, it can be shown that in the 1980s, productivity grew faster in these industries than in production-labor-intensive industries. This difference in productivity growth rates was much less pronounced in the 1960s and 1970s, suggesting that a new pattern of technological change emerged in the 1980s. It is possible, for example, that a new round of production-labor-saving technologies was introduced, or that the use of computers became an important source of productivity gains for the first time.

QUALIFICATIONS AND CONCLUSIONS

The simplest theories about the harmful effects of international trade on U.S. wages can be rejected. These theories would imply a noticeable improvement in the U.S. terms of trade (i.e., an increase in the ratio of U.S. export to import prices, due to cheap imports). In fact, the terms of trade barely rose in the 1980s, after declining in the 1970s.

More complex economic theories have examined the possibility of complete specialization of a country in one type of industry, combined with analysis of technological diffusion between countries. Such theories, while intricate, also lead to the wrong predictions for the 1980s. One such model, for example, predicts declining terms of trade, and labor compensation (deflated by producer prices) falling behind productivity growth, contrary to what actually happened.

Another hypothesis is that trade has been particularly harmful to unionized workers, by reducing either the number of unionized jobs or the wage premium earned by union members. However, the union/non-union pay differential barely changed in the 1980s, and the decline in unionized jobs explains very little of the increase in inequality during the decade.

Much more important is the slowdown in nonmanufacturing productivity growth, and the emergence of new patterns of technological change, during the 1980s. Since rapid productivity increases continued in manufacturing, the result was that goods production absorbed a smaller share of spending, relative to services, and accounted for a smaller share of total employment. This reduced the demand for production workers (since they remain a much larger share of the labor force in manufacturing than in other sectors), and thus contributed to their declining wages.

In conclusion, "trade has not been the major contributor to the performance of U.S. average and relative wages in the 1980s." (208) The near-constancy of the U.S. terms of trade, the fact that compensation (deflated by producer prices) has kept up with productivity, and the absence of the price patterns predicted by the Stolper-Samuelson theorem all argue against theories that make trade a principal cause of wage and employment changes. The differential patterns of technological change, both within manufacturing and between manufacturing and services, are much more important than trade effects. "Finally, those who focus on real wage behavior without paying attention to productivity growth outside manufacturing are writing *Hamlet* without the Prince." (209)