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Immigration, Trade, and Wage Differentials

During the 1980s, the wages and employment rates of less-skilled Americans, particularly young men, fell relative to those of more-skilled workers. The real (that is, post-inflation) earnings of 25-to-34-year-old male high school graduates and dropouts also declined.

According to the NBER Research Associates **George Borjas, Richard Freeman, and Lawrence Katz**, two of the reasons for these declines were: the rise in the U.S. trade deficit, notably the increase in imports in industries that hire low-skill workers; and the increased inflow of less-skilled immigrants, including illegal immigrants.

In **On the Labor Market Effects of Immigration and Trade** (*NBER Working Paper No. 3761*), the three authors estimate that 15 to 25 percent of the 11-percentage-point rise in the earnings of college graduates relative to high school graduates between 1980 and 1985 can be explained by the massive increase in the trade deficit over that period. Many of the increased imports substituted for, and competed with, the products of workers with only a high school diploma. As the trade imbalance declined in the late 1980s, its effect on the college/high school wage differential diminished.

In contrast, immigration had only a small effect on the supply of workers with a high school diploma relative to "college-equivalent workers." Consequently, immigration likely had only a small effect on the college/high school wage gap.

However, the large share of new immigrants with less than a high school education, and the concen-

tration of the trade deficit in industries that intensively employ high school dropouts, did affect the earnings and employment opportunities of high school dropouts. By 1988, the trade deficit, combined with continued immigration, was equivalent to an increase in the supply of high school dropouts of 28 percent for men and 31 percent for women. That increase explains between 30 and 50 percent of the approximately 10-percentage-point decline in the relative weekly wage of high school dropouts between 1980 and 1988, the three authors estimate. Therefore, immigration and the trade deficit had an effect approximately equal to that of the decline in unionization in the U.S. labor force during the 1980s.

"During the 1980s, the wages and employment rates of less-skilled Americans . . . fell relative to those of more-skilled workers [in part because] both trade and immigration augmented the nation's 'effective' supply of less-skilled workers . . ."

In reaching these conclusions, Borjas, Freeman, and Katz note that the U.S. economy became more connected to the rest of the world in the 1970s and 1980s. The ratio of the sum of U.S. exports and imports to national output increased from 16 percent

in 1970 to 25 percent in 1990. The balance of trade turned substantially negative in the mid-1980s, with a trade deficit reaching some 3 percent of gross national product. At the same time, immigration flows increased, as upwards of 700,000 to 800,000 legal and illegal immigrants entered the country annually. The authors estimate that the annual increase in the implicit labor supply caused by the trade deficit in manufactures in the mid- and late 1980s was on the order of 1.5 percent for the economy as a whole and 6 percent for the manufacturing sector.

These shifts in labor supply exceed the percentage increase in labor supply caused by the annual flow of immigrants. Immigrants increased the labor supply by only about 0.3 percent last year. However, immigration permanently increases the nation's work force as long as the immigrants remain in the work force. The 1980s' immigrant flow boosted the share of the U.S. work force that is foreign-born from 6.9 percent in 1980 to 9.3 percent in 1988.

Borjas, Freeman, and Katz also find that both trade and immigration augmented the nation's "effective" supply of less-skilled workers (either actual immigrants or substitutes for such workers in the case of imports) by more than they increased the effective supply of more-skilled workers. The 1985 trade deficit raised the relative supply of high school dropouts to college graduates by 5 to 12 percent among men and 10 to 17 percent among women. The increasing numbers of immigrants with less than a high school diploma, and the declining numbers of native high school dropouts, meant that over 20 percent of the total high school dropout work force was foreign-born by 1988. In effect, the many immigrants who had not completed high school substituted for the declining number of less-skilled native workers.

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A Common European Currency: Lessons from America

Under a system of flexible exchange rates, a country can try to adjust to an adverse economic shock by devaluing its currency. For instance, if demand for its exports should fall, a country can try to maintain a level of output by lowering its exchange rate. In effect, this will reduce the price of its goods on

world markets and may result in less domestic unemployment and loss of output than would occur if its exchange rate were kept steady. But as the countries that make up the European Community (EC) move toward a common currency, they may have to find new ways to respond to shocks in oil prices and other factors that affect each of them differently.

"The creation of a unified European currency without some type of EC-wide tax-transfer scheme could result in very serious strains."

In **Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the United States** (*NBER Working Paper No. 3855*), **Jeffrey Sachs** and **Xavier Sala-i-Martin** analyze how another "community" composed of several economically diverse regions—the United States—has managed to maintain its common currency for so many years. They suggest that the U.S. system of taxes and transfers has been crucial in helping the different regions adjust to economic shocks.

Sachs and Sala-i-Martin use data from nine U.S. regions from 1970–88 to estimate the effect of a one dollar reduction in a region's per capita personal income. They find that a one dollar decline will trigger a decrease in federal taxes paid by the region of about 34 cents and an increase in federal transfers to the region of about 6 cents. Thus, the federal government absorbs about 40 percent of the initial shock, and the region suffers an income loss of only 60 percent of the shock.

By contrast, Sachs and Sala-i-Martin estimate, taxes and transfers among EC member states cushion the impact of an adverse shock by only 0.5 percent. They suggest that the creation of a unified European currency without some type of EC-wide tax-transfer scheme could result in very serious strains.

What Moves the Stock and Bond Markets?

According to a new NBER study by **John Campbell** and **John Ammer**, short-term "excess" returns on stocks (returns higher than those earned on risk-

less assets, such as U.S. Treasury bills) are driven largely by “news” about future returns on stocks, while excess returns on 10-year bonds are caused mostly by news about future inflation.

In **What Moves the Stock and Bond Markets? A Variance Decomposition for Long-Term Asset Returns** (*NBER Working Paper No. 3760*), Campbell and Ammer deploy the latest techniques in finance to break down post-World War II movements of stock and bond prices into their components: changes in expectations of future stock dividends, inflation, short-term real interest rates, and excess returns. The conclusion that excess stock returns are related to news about future returns confirms earlier work by Campbell and others, which suggested that volatility in the stock market cannot be explained by changing expectations about future dividends—the explanation implicit in the traditional efficient-markets model. This study finds that stock returns have a standard deviation two or three times greater than the standard deviation of news about future dividend growth.

“Rising long-term inflation expectations tend to cause bond prices to fall and stock prices to rise.”

The conclusion that the variance of excess returns on long-term nominal bonds is explained primarily by news about future inflation challenges some of the theoretical finance literature, which applies pricing models for real bonds to data on nominal bonds as though the price of inflation risk were negligible. Campbell and Ammer also conclude that changes in long-horizon forecasts of real interest rates seem to have little impact on changes either in stock market or bond market returns.

The results of this study help to solve an old puzzle: why bonds and stock returns are practically uncorrelated in postwar U.S. data, despite the intuitively appealing notion that what’s good for stocks—over the long term—ought to be good for bonds as well. One reason is that the only factor directly affecting both assets is news about real interest rates, which was found to have little variability and thus to have a weak effect on the covariance between the two types of assets. And, while there is a positive covariance between news about future excess returns on bonds and stocks, this covariance is not large. However, news about future inflation—the major component in the bond return—does tend to affect stock and bond returns differently: rising long-term inflation expectations tend to cause bond prices to fall and stock prices to rise.

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Small Firms Are Hurt More by Monetary Tightening

When the Federal Reserve Board tightens monetary policy, the sales growth of small manufacturing firms slows more than that of large firms, according to a new NBER study by **Mark Gertler** and **Simon Gilchrist**. That slowdown is caused directly by the Fed’s policies, and indirectly by their effect in slowing overall economic activity. On average, for a 2½-year period following the Fed’s decision to tighten monetary policy to fight inflation, the annual growth rate of small manufacturing firms is more than four percentage points lower than the growth rate of large manufacturing firms.

In **Monetary Policy, Business Cycles, and the Behavior of Small Manufacturing Firms** (*NBER Working Paper No. 3892*), Gertler and Gilchrist compare quarterly sales data for manufacturing firms with assets under and over \$25 million during 1959–90. They find that sales growth is more volatile for small firms than for large firms, although this difference may have narrowed somewhat during the 1980s. They also find that small firms’ sales are more sensitive than large firms’ sales to changes in real GNP and changes in interest rates.

According to the authors, this sensitivity of small firms is caused by credit market imperfections: they magnify the impact of a rise in interest rates, or a decline in earnings flows, by adversely affecting the terms at which small firms can obtain loans. Thus, when the Fed tightens monetary policy, small firms’ borrowing costs rise more than the risk-free interest rate. As a result, the decline in bank lending to small firms is exacerbated, and the decline in their sales ultimately worsens. Indeed, the authors show that bank lending to small firms declines in the wake of tight money, but bank lending to large firms actually rises.

“When the Federal Reserve Board tightens monetary policy, the sales growth of small manufacturing firms slows more than that of large firms.”

Gertler and Gilchrist further report that changing financial conditions affect small and large firms in different ways. For example, they find that after ad-

justing for the effects of GNP growth and inflation, changes in the money supply and the ratio of bank lending to outstanding commercial paper predict small firms' sales, but not large firms' sales. In contrast, the spread between the interest rate on commercial paper and on Treasury bills is highly correlated with large firms' sales. Thus, small firms' sales growth appears to be explained better by financial aggregates that measure the performance of banking, while large firms' sales growth is explained best by a rate spread, which measures conditions in the commercial paper market.

Gertler and Gilchrist also discover that the sales

of small firms were hurt more than the sales of large firms not only during major monetary contractions, such as that of 1979, but also in the more moderate contractions of 1968 and 1978. Prior to the recession that began in July 1990, gradual monetary tightening cut the growth rate of small firms substantially more than the growth rate of large firms' sales.

Although the Fed appears to have begun loosening monetary policy around the beginning of 1990, Gertler and Gilchrist note, the poor health of the banking system may have caused bank lending and the growth of small firms not to respond to easier money as in the past.



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