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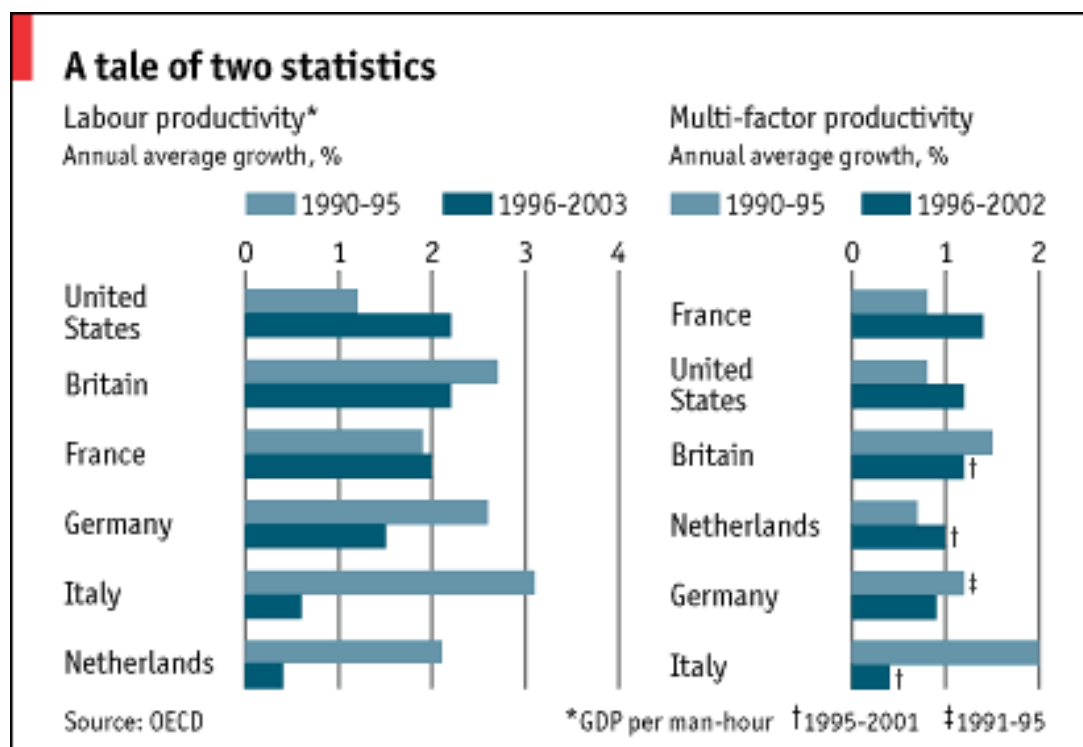
ECONOMICS FOCUS

Economics focus

A productivity primer

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The most common way to measure economic efficiency is not the best

PRODUCTIVITY growth is probably the single most important indicator of an economy's health: it drives real incomes, inflation, interest rates, profits and share prices. Investors' belief that America's "productivity miracle" will continue helps to underpin higher share-price valuations there than in Europe and to support the financing of the country's huge current-account deficit. European economies, in contrast, are thought to be much less productive, thanks to their rigid labour markets (see [article](#)).

Economic commentators toss around the term “productivity growth” as if there were one widely agreed definition. There isn't. America's favourite measure is output per man-hour in the non-farm business sector. Since 1996, this has increased at an annual average rate of 3%, double the pace of the first half of the 1990s. Growth in GDP per man-hour across the whole economy has been more modest: 2.2% a year on average since 1996, roughly the same pace as in France and Britain but faster than in Germany and Italy. Still, it remains true that the growth in GDP per man-hour quickened in America after 1996, while it slowed in most European economies.

Yet all this reflects only labour productivity. A better measure is multi-factor productivity (also called total factor productivity) which tries to capture the efficiency with which inputs of capital as well as labour are used. If workers are given better machines and equipment, this will automatically boost output per man-hour, even if there is no gain in overall economic efficiency once the extra capital spending is taken into account. David Owen, an economist at Dresdner Kleinwort Wasserstein, argues that investors should look at multi-factor productivity instead of labour productivity, because it is a better proxy for an economy's return on capital. If faster labour productivity growth is entirely the result of heavy capital spending by companies, it may not deliver good financial returns.

The snag is that multi-factor productivity is a lot harder to measure. It is much easier to add up the number of hours being worked than to value the capital stock. The best comparable figures are published by the OECD. By this gauge America's productivity gains in recent years look somewhat less miraculous: average annual growth in multi-factor productivity has increased only to 1.2% since 1996, from an average of 0.8% in the first half of the 1990s. Indeed, multi-factor productivity growth has been faster in France since 1996, at 1.4% a year (see chart). Britain's growth has been identical to America's. Even Germany's (0.9%) has not lagged by much. America's gains in multi-factor productivity are less impressive than those in labour productivity in large part because of “capital deepening”—increases in the amount of capital, in particular IT equipment, per worker. This has accounted for a large chunk of its labour productivity growth in recent years.

One virtue of multi-factor productivity over labour productivity is that comparisons between countries may be less distorted by national differences in the way real output is measured. For example, many economists suspect that the growth in America's GDP, and hence its labour productivity, is overstated relative to Europe's because American statisticians make a much bigger adjustment for improvements in the quality of goods, notably computers. In addition, American statisticians count firms' spending on software as investment, but in much of Europe it counts as a business expense, and so is excluded from final output. Thus the surge in software spending since the mid-1990s inflated America's GDP growth relative to elsewhere. But because American statistics overstate the growth in capital spending as an input as well as an output, comparisons of multi-factor productivity growth are likely to be less distorted than those of labour productivity.

The big part played by capital deepening in America's faster labour productivity growth raises questions about its sustainability. The growth rate for labour productivity fell in the second quarter, and data due on November 4th (after *The Economist* had gone to press)

were expected to show a further slackening. A slowdown at this stage of the economic cycle is normal, but Bill Dudley, an economist at Goldman Sachs, worries that the boost to productivity from IT may be weakening. The rate of decline in the prices of IT equipment has slowed, suggesting that productivity growth in the IT sector has fallen. In addition, after surging in the late 1990s, capital spending has weakened, implying lower labour productivity growth in future.

Meeting half-way

America's growth in labour productivity is thus likely to slow, even though it should remain faster than in the decade before 1996. In contrast, there is a good chance that Europe could deliver some pleasant surprises, with faster growth in labour productivity as current structural reforms—led as much by companies' response to international competition as by governments—bear fruit. For example, some big German firms have won agreement from unions to work longer hours to reduce costs.

Olivier Blanchard, an economist at the Massachusetts Institute of Technology, points to several industry-level studies which show that European labour productivity growth has already picked up. Labour productivity in the French car industry rose from 55% of American levels in 1990 to 75% in 2000, thanks to increased competition and better management. The equivalent figure for road freight increased from 61% to 85%.

So why do economy-wide statistics suggest a productivity slowdown in much of Europe? Part of the answer is that job reforms, such as lower payroll taxes, have cut the cost of labour relative to that of capital. This has encouraged companies to hire previously unemployed low-skilled workers, which in turn tends to pull down measured productivity growth. Yet such policies should be welcomed if they boost the productivity of capital and reduce unemployment. All the more reason to track multi-factor productivity rather than labour productivity.