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How Fast Can the New Economy Grow?

Glenn D. Rudebusch

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The growth rate of the potential supply of output—“potential output” for short—determines the long-run sustainable pace of economic expansion and is thus an important consideration for monetary policymakers. For example, as noted in the Federal Reserve press release following the most recent meeting of the Federal Open Market Committee: “The Committee remains concerned that over time increases in demand will continue to exceed the growth in potential supply, even after taking account of the pronounced rise in productivity growth. Such trends could foster inflationary imbalances that would undermine the economy’s record economic expansion.”

Unfortunately, policymakers have never been very sure of their estimates of the level or growth rate of potential output, and this uncertainty has important consequences for the conduct of monetary policy (see Rudebusch 1999a, b). In particular, during the past few years, most economists have increased their estimates of the growth of potential supply. Just four years ago, the prevailing range of estimates for how fast the economy could grow each year without additional excess demand was 2% to 2-1/2%. However, since then, real output has grown at a much faster pace with no increase in underlying core price inflation. This performance raises the possibility of the advent of a “New Economy” that can grow much faster on a sustainable basis than in the past. Indeed, estimates in this *Economic Letter* suggest that potential output may currently be growing at a 3-1/2% annual rate or even slightly faster. However, not all of the upward revision of this estimate from previous ones reflects a recent acceleration of potential output; instead, as described below, some of the revision also reflects changes in the measurement of real GDP.

A simple estimate of the growth rate of potential

Arthur Okun (1962) described a simple method for estimating the growth rate of potential output that still underlies many estimates today (e.g., Braun 1990, and Congressional Budget Office 1995). According to Okun’s Law, as it is known, there is a proportional relationship between real output growth and changes in the rate of unemployment. Specifically, Okun’s Law states that the cyclical change in the unemployment rate, that is, its change minus any change in the natural rate of unemployment, is proportional to the difference between the growth rates of potential and actual output. The intuition behind this relationship is clear. Ignoring changes in the natural rate, Okun’s Law implies that actual output growth will equal potential output growth when the unemployment rate is stable. If instead, for example, the unemployment rate were decreasing—an unsustainable situation in the long run as the pool of available workers dries up eventually—output must have been growing faster than potential. Over an extended period of time, actual output cannot grow faster than potential output without an increase in inflation. In this way, the growth rate of potential output determines how fast the economy can expand in a sustainable fashion and is thus an important speed limit for the economy that policy should respect.

It is possible that fluctuations in such things as labor productivity, the average workweek, and labor force participation could disrupt the synchronization of output and unemployment in Okun's Law. However, as an empirical matter, fluctuations in these other series are well correlated with movements in the unemployment rate. For example, the average workweek tends to fall as unemployment rises (perhaps because firms try to hoard employees through downturns by reducing hours worked instead of firing workers).

Figure 1 applies Okun's Law to recent data. The horizontal axis measures the fourth-quarter to fourth-quarter percent change in real GDP. The vertical axis measures the fourth-quarter to fourth-quarter change in the quarterly average unemployment rate. This unemployment rate is adjusted for changes over time in the demographic composition of the labor force by fixing the shares of various demographic groups. Such a demographically adjusted unemployment rate measures cyclical changes better than the published unemployment rate (see Katz and Krueger 1999), although very similar results to those below are obtained with the published series.

In the figure, regression lines are fitted to two samples: 1980-1995 and 1996-1999. The latter sample is often described as belonging to the New Economy. The estimated slopes of the lines, which are constrained to be equal across each sample, are about one-half. This value is consistent with the usual rule of thumb that if output grows one percentage point faster than potential output for one year, the unemployment rate falls by about one-half of a percentage point.

The regression lines cross the horizontal zero axis at two different values. These points of intercept give the estimates of the average growth rate of potential output for their respective samples. If the unemployment rate does not change, actual output must be growing at the same pace as potential output; therefore, at points below (above) the horizontal axis, unemployment is falling (rising), and the economy is growing faster (slower) than potential. The solid line for the 1980-1995 sample indicates that potential output grew at an average annual rate of 2.85% during this period. The dotted line for the 1996-1999 sample indicates that potential output grew at an annual rate of 3.52%. This evidence is consistent with the notion that an important acceleration in the potential output of the economy occurred in the middle of the 1990s.

As noted above, there is, of course, always a large amount of uncertainty about estimates of the growth rate of potential output. Indeed, based on a strict statistical interpretation of Figure 1, there is a one in five chance that there has been no change in the growth rate of potential output in the 1990s. On the other hand, one can obtain stronger evidence and even higher point estimates of the recent growth rate of potential output with quite reasonable alternative assumptions about the natural rate of unemployment. Figure 1 corrects for demographic shifts in unemployment, but there are many other changes in the labor market—such as the increased use of temporary workers—that are thought to have lowered the natural rate recently (see Katz and Krueger 1999). If plausible estimates of the variation in the natural rate are included in the Okun's Law analysis, it is possible to obtain a point estimate as large as 3.75% for the average annual growth rate of potential output during the 1996-1999 period.

Comparison to other estimates

The results from Figure 1 can be usefully compared to other estimates. [Table 1](#) provides estimates of the average annual growth rate of potential output during the 1980-1995 and 1996-1999 samples that were made by the Congressional Budget Office (CBO) at three different points in time: 1996, 1999, and 2000. For example, in 1996, the CBO calculated that the potential supply of (chain-weighted) real output had risen 2.37% annually from 1980 to 1995, and they anticipated that potential output would *decelerate* thereafter, growing only 2.24% in the latter half of the decade. Such a pessimistic projection was quite common at the time (see, e.g., Kahn 1995). By early 1999, the CBO's view of the latter sample was more optimistic, and potential output was estimated to have grown at a 2.78% annual rate during 1996-1999 (second line of Table 1). Finally, in January of this year, the CBO revised its estimate of the average growth rate of potential during 1996-1999 to 3.17%. Again, this latest estimate is very much in the mainstream; for example, the median estimate from a recent survey of business economists of the underlying trend rate of economic growth was 3.2%.

However, the nearly one percentage point upward revision to the CBO's estimates for the 1996-1999 period cannot all be attributed to the New Economy. As shown in the first column of Table 1, there has also been a one-half percentage point revision to the CBO estimates of the average annual rate of potential output

growth from 1980 to 1995. These revisions clearly do not reflect a newfound belief in an older New Economy; instead, they largely reflect conceptual changes to the measurement of GDP. Most notably, last year's re-benchmarking of the National Income and Product Accounts, which incorporated better consumer price measurement formulas and a reclassification of software spending as a final good, raised the average annual growth of real GDP by about 0.4 of a percentage point in *both* of the past two decades (Seskin 1999). This upward revision is reflected in the latest change in the CBO estimates of potential output.

Conclusion

The pessimistic view—common only a few years ago—that the economy could grow only 2 to 2½% each year on a sustainable basis has disappeared. It has vanished in part because of a conceptual redefinition of real GDP, which has provided a substantially faster pace of growth during the past two decades. On this new basis, even the old economy seems to have been able to grow at a 2½ to 3% rate without boosting inflation. Still, during the past few years, it does appear that the sustainable pace of economic expansion may have increased by at least several tenths of a percentage point—according to the CBO—and perhaps by much more—as implied by the simple application of Okun's Law.

Glenn D. Rudebusch

Senior Research Officer

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