

IS THE FED SLAVE TO A DEFUNCT ECONOMIST?

JOHAN MAYNARD KEYNES once stated that policymakers are “usually the slaves of some defunct economist.” Well, according to a wide range of commentators, recently it’s been Keynes himself who has held policymakers enthralled.¹ These commentators complain that the Fed has tried to “fine-tune” real activity—and that, in doing so, the Fed has imposed an artificial speed limit on the economy and kept the unemployment rate unnecessarily high. More specifically, Federal Reserve officials are accused of having relied too heavily on an analytical tool called the Phillips curve when deciding whether to raise the federal funds rate.

This article provides some historical perspective on the critics’ complaints and evaluates the merits of their arguments. I argue that Fed policymakers would deserve censure if they behaved as the critics claim. However, the critics’ accusations are largely without merit, and their own policy prescriptions are flawed.

Current Rates of Output Growth Are Not Sustainable

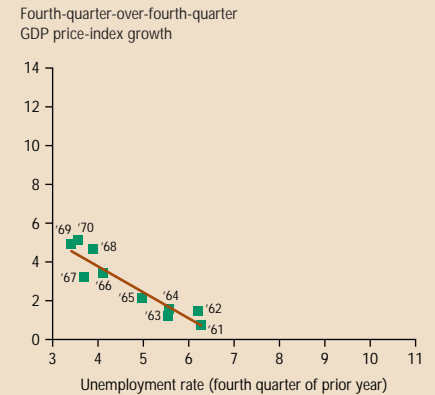
Over the past three years (1994:1–97:1), real GDP has grown at a 2.9 percent average annual rate. Over the past four quarters (1996:1–97:1), it has grown at a whopping 4 percent annual rate. The idea that growth at these rates can continue indefinitely is appealing but unrealistic. Chart 1 shows the relationship between real GDP growth and the change in the unemployment rate since the mid-1980s. For example, the point plotted in the extreme lower right-hand corner shows that real GDP rose by 7 percent in 1984, while the unemployment rate fell by 2 percentage points. More generally, the chart shows that the unemployment rate has tended

to fall whenever GDP growth has much exceeded 2 percent. Indeed, the unemployment rate has declined in fully nine of ten years in which growth has exceeded 2 percent (the exception being 1992). In two of three years in which growth has fallen short of 2 percent, the unemployment rate has risen. In the exceptional year (1995), GDP growth fell below 2 percent by only 1 one-hundredth of a percentage point.

The implication is that GDP growth at recent rates must eventually drive unemployment to zero, unless productivity or the labor force begins to increase at a substantially faster clip than we have seen so far during this expansion.² Something is going to have to give, and that something is likely to be the growth rate of real GDP.

This conclusion leaves open the possibility that noninflationary growth of 2.5 percent or more is feasible over the next year or two. It’s on the issue of whether strong growth can be sustained for another few years that reasonable people may disagree, depending on their beliefs about the nature of the short-term output–inflation trade-off.

Chart 2
The Phillips Curve



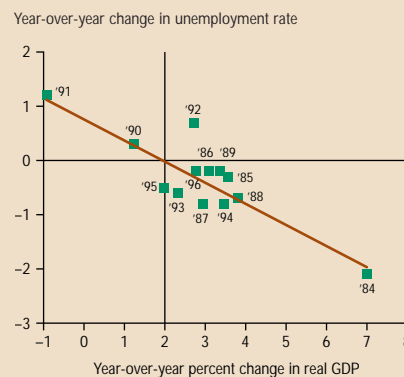
SOURCES: U.S. Department of Labor; U.S. Department of Commerce; author’s calculations.

The Phillips Curve

The downward sloping line shown in Chart 2, fitted to U.S. unemployment and inflation data from the 1960s, is called a Phillips curve. The Phillips curve is named after New Zealand-born economist Alban W. Phillips, who used British data to demonstrate that wage inflation tends to be high when the unemployment rate is low. Phillips’ rationalization of this relationship was simple: the price of a good increases when the good is in high demand. Low unemployment rates are a symptom of high demand for labor, so low unemployment rates are associated with rapid increases in the price of labor. Economists often plot Phillips curves using product price inflation in place of wage inflation, because the two types of inflation tend to move together.

From 1958, when Phillips originally published his research, through the end of the 1960s, many economists believed that policymakers could choose any point along the Phillips curve and hold the economy there indefinitely. However, the 1970s forced people to rethink

Chart 1
Rapid Output Is Not Sustainable



SOURCES: U.S. Department of Labor; U.S. Department of Commerce; author’s calculations.

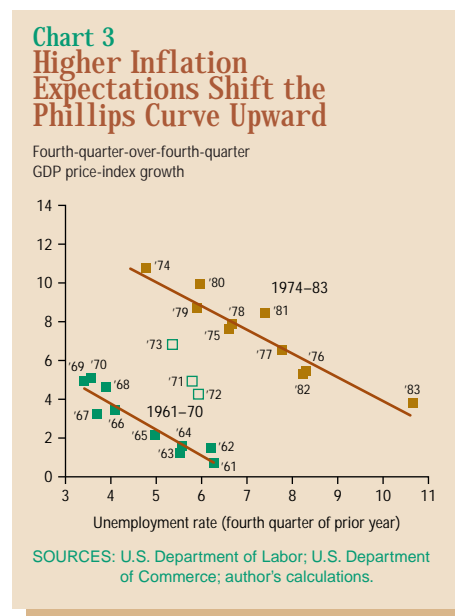
the Phillips curve. This reevaluation had two components, which I will discuss in turn.

Lesson 1: Changes in Inflation Expectations Shift the Phillips Curve

First, events of the 1970s increased appreciation for the importance of inflation expectations.³ Milton Friedman and Edmund Phelps led the charge, arguing that monetary policy is like a drug for which the economy can build up a tolerance: larger and larger doses are required to achieve a given effect. Initially, an acceleration in money growth puts more real purchasing power in people's pockets. Increased sales mean more jobs, and unemployment falls. Consequently, the economy follows a path that looks a lot like the Phillips curve of the 1960s. However, as the rapid money growth continues, the economy begins to adapt to it. Eventually, wages and prices catch up to the money supply, and the stimulus to output and employment fades away. Only higher inflation remains. In Chart 3 (an updated version of Chart 2) we see a move to the right as we follow the economy from 1970 to 1971 and 1972. At first, Nixon's wage and price controls kept inflation down to 4 percent, but in 1973 inflation broke loose and a new round of stimulus began. By 1974 inflation was above 10 percent. Over the next 10 years—from 1974 through 1983—the economy stayed on a new, higher Phillips curve, representing a less favorable short-run trade-off between unemployment and inflation.

The reason for the shift in the Phillips curve was an increase in inflation expectations. In the 1960s, people thought that inflation would eventually stabilize at an annual rate of about 2 percent. From the mid-1970s to the mid-1980s, they acted as if inflation would eventually stabilize at an 8 or 9 percent annual rate. The increase in inflation expectations stemmed from policymakers' attempts to keep the unemployment rate artificially low.

The lowest unemployment rate that is consistent, over the long term, with *stable* inflation is called the nonacceler-



ating inflation rate of unemployment, or NAIRU. A typical NAIRU estimate is 6 percent. At unemployment rates below the NAIRU, there is a tendency for inflation expectations to rise. (Such was the experience of the early 1970s.) At unemployment rates above the NAIRU, there is a tendency for inflation expectations to fall.⁴

Unfortunately, you can't look up the value of the NAIRU in an encyclopedia, and it's not published in the *Wall Street Journal*. The NAIRU has to be estimated. A big part of the debate between those who believe that the Phillips curve remains a useful guide to policy and those who do not has to do with how good a handle we have on the NAIRU at any given moment.⁵ That brings us to the second important lesson that economists learned during the 1970s.

Lesson 2 The NAIRU Varies Over Time—Not Always Predictably

The sharp oil price increases of the 1970s made it obvious to everyone that supply-side shocks can temporarily change the NAIRU and have an important impact on inflation. A supply shock is any disturbance that alters the amount of output that can be produced from given quantities of land,

machinery and human effort. Supply-side shocks are also sometimes called productivity shocks. Aside from oil-price increases, the supply shocks that have received the most attention from macroeconomists are probably crop failures because of drought or flooding.

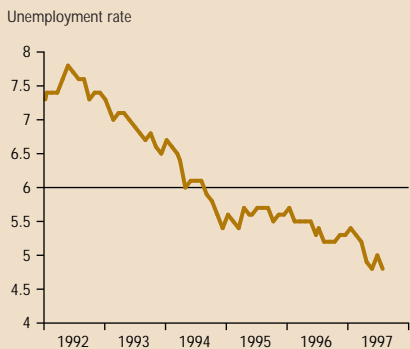
Just how important *are* supply shocks? That's the \$64,000 question. Keynesians tend to view such shocks as infrequent and easily accounted for. It's this belief that drives their policy prescriptions. For if supply shocks don't shift the NAIRU around too much, so that its value can be pinned down, then the appropriate policy is obvious: get the unemployment rate to the NAIRU and keep it there. As a practical matter, the Keynesian prescription is for an unemployment rate of about 6 percent and GDP growth of about 2 percent.

Unfortunately for the Keynesians, more and more analysts are coming around to the view that supply-side shocks are so pervasive as to seriously limit the usefulness of the NAIRU as a policy guide. Even after accounting for food and energy shocks, NAIRU estimates vary substantially from year to year. Moreover, in any given year, the exact value of the NAIRU is not known with any confidence. Recent estimates suggest that the NAIRU is probably around 6 percent but could easily be as low as 4.5 percent or as high as 7.5 percent (Staiger, Stock and Watson 1997). Increasingly, analysts regard the NAIRU estimate *du jour* as a yellow caution sign rather than a red stoplight.

Has the Fed Been a Slave to the Keynesian View of the Phillips Curve?

If, as its critics assert, the Fed has been trying to hold the unemployment rate above some preconceived NAIRU, then it has bungled the job. As shown in Chart 4, the unemployment rate has fallen, more or less steadily, from a high of 7.7 percent in June 1992 to a low of 4.8 percent in July 1997. The unemployment rate was last above 6 percent three years ago (in July 1994) despite the fact that, for most of this period, 6 percent was the generally accepted estimate of the NAIRU. Clearly, the Fed

Chart 4 The Fed Has Not Been a Slave to the Phillips Curve



SOURCE: U.S. Department of Labor.

has not been slamming on the brakes. At most, the Fed has been occasionally tapping the brakes to slow the unemployment rate's descent.

It's revealing to look at the unemployment rate in combination with the inflation rate, rather than in isolation. As Chart 5 clearly shows, the short-run Phillips curve shifted down a notch during the mid-1980s in response to the persistently tough anti-inflation stance of the Volker Fed. Then, over the 10-year period from 1985 through 1994, unemployment and inflation varied pretty much as though people believed that inflation would eventually stabilize at around 4 percent. Since 1993, despite a falling unemployment rate, inflation has held steady. (Look at the points marked as stars.) It's beginning to look as though the Phillips curve has shifted yet again and that we're back in the 1960s, with expected inflation down around 2 percent. The challenge for policymakers is to ensure that we don't replay the *entire* 1960s inflation experience.

Why Has Inflation Been So Tame?

Three factors have contributed to the economy's strong inflation performance in recent years. First, we've benefited from a series of favorable supply shocks. These shocks have included innovations in health-care management that have held down medical cost inflation; the spread of cheaper, increasingly powerful computers and telecommuni-

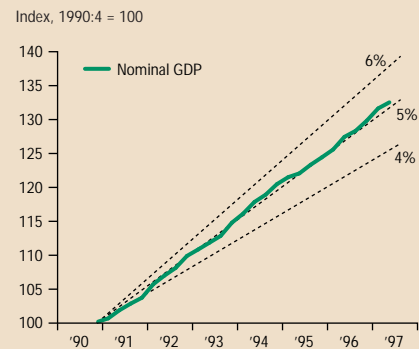
cations devices; and increased competition because of deregulation and freer global trade. Second, a more uncertain and more flexible labor market may mean that the unemployment rate has become less useful as a measure of slack in the economy.⁶ Finally, the Federal Reserve has conducted policy in a way that has convinced people that it is serious about preventing any significant resurgence of inflation.

How has Fed policy accomplished this task? Fed Chairman Alan Greenspan may have revealed the answer recently in a speech defending March's quarter-point hike in the federal funds rate. Greenspan said that "persisting—indeed increasing—strength in nominal demand for goods and services suggested to us that monetary policy might not be positioned appropriately to avoid a buildup in inflation pressures" (CitiCorp 1997). Note that Greenspan's statement focuses on the strength of the *nominal* demand for goods and services, not the real demand.

As shown in Chart 6, Federal Reserve policies have kept the level of nominal spending on a fairly steady 5 percent growth track over the past six years. Modest, steady spending growth is an attractive strategy to pursue in the face of uncertainty about the output-inflation trade-off. It is a strategy especially popular among economists trained in the monetarist tradition.

What's so great about a policy of steady spending growth? Since spend-

Chart 6 Nominal Spending on a 5 Percent Growth Path



SOURCE: U.S. Department of Commerce.

ing growth is the sum of real growth and inflation, a policy of steady spending growth does not preclude strong real growth, *provided* strong real growth is accompanied by low inflation. Turning this statement around, there is little danger that inflation will substantially accelerate under a policy of steady spending growth, for inflation can rise only to the extent that the economy's capacity for real growth falls.⁷

Survey results indicate that Federal Reserve policies during the 1990s have resulted in a gradual reduction in long-term inflation expectations. This reduction in expectations has undoubtedly contributed to the benign behavior of actual inflation in recent years.

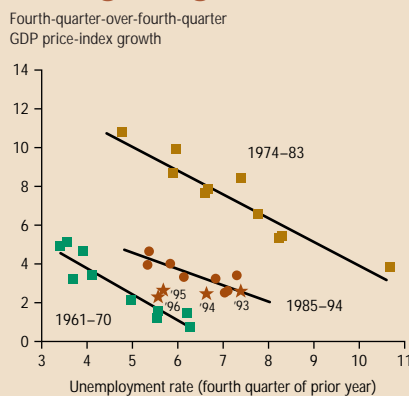
Why Not Target Inflation Directly?

Many of the analysts who have been critical of the Fed seem to feel that the hallmark of a successful monetary policy is not stable output growth (the Keynesian view) and not low and stable spending growth (the monetarist view) but a stable inflation rate.⁸ These commentators apparently believe that the Fed should allow output and employment to fluctuate arbitrarily, as long as inflation remains constant.

One problem with this approach is that inflation bounces around so much that a change in trend is often not apparent for six months to a year after it has begun.

Another problem is that the lags between the Fed's policy actions and their

Chart 5 Is the Phillips Curve Shifting Yet Again?



SOURCES: U.S. Department of Labor; U.S. Department of Commerce; author's calculations.



Robert D. McTeer, Jr.
President and Chief Executive Officer

Helen E. Holcomb
First Vice President and Chief Operating Officer

Harvey Rosenblum
Senior Vice President and Director of Research

W. Michael Cox
Vice President and Economic Advisor

Senior Economists and
Assistant Vice Presidents
Stephen P. A. Brown, John Duca,
Robert W. Gilmer, Evan F. Koenig

Director, Center for Latin American
Economics, and Assistant Vice President
William C. Gruben

Senior Economist and Research Officer
Mine K. Yücel

Economists

Robert Formaini	Jason L. Saving
David M. Gould	Fiona D. Sigalla
Joseph H. Haslag	Lori L. Taylor
Keith R. Phillips	Lucinda Vargas
Stephen D. Prowse	Mark A. Wynne
Marci Rossell	Carlos E. Zarazaga

Research Associates
Professors Nathan S. Balke,
Thomas B. Fomby,
Gregory W. Huffman,
Southern Methodist University;

Professor Finn E. Kydland,
Carnegie Mellon University;

Professor Roy J. Ruffin,
University of Houston

Executive Editor
Harvey Rosenblum

Editors
W. Michael Cox, Mine K. Yücel

Publications Director
Kay Champagne

Copy Editors
Anne L. Coursey, Monica Reeves

Design & Production
Laura J. Bell

Southwest Economy is published six times annually by the Federal Reserve Bank of Dallas.

The views expressed are those of the authors and should not be attributed to the Federal Reserve Bank of Dallas or the Federal Reserve System.

Articles may be reprinted on the condition that the source is credited and a copy is provided to the Research Department of the Federal Reserve Bank of Dallas.

Southwest Economy is available free of charge by writing the Public Affairs Department, Federal Reserve Bank of Dallas, P.O. Box 655906, Dallas, TX 75265-5906, or by telephoning (214) 922-5257.

effects on inflation are considerable—most estimates put them at a year or more. When you add the time it takes for policy to change inflation to the time it takes to recognize that a change in policy is needed, trying to target the inflation rate is a little like trying to drive down a highway at 60 miles per hour in heavy fog, and—just to make things interesting—there's a five-second delay between when you apply the brakes and when the brakes are activated.

It's easy to call for inflation-rate targeting in a period when constant inflation is consistent with a booming economy. One has to wonder whether advocates of inflation-rate targeting will be equally vocal the next time we're hit with a major drought or a run-up in the price of oil, when holding inflation constant might require a recession.

The Fed and Its Critics

In summary, some commentators have accused the Federal Reserve of pursuing a Keynesian strategy. They claim that, in a mistaken effort to fine-tune real economic activity, the Fed has stifled output and employment gains that have their origins on the supply side.

The critics advocate an alternative policy—one that would allow output and employment to range freely, as long as inflation holds steady. Since they believe that supply-side shocks make the Phillips curve all but useless as a policy tool, the critics say the Fed should look to indicators of inflation expectations and to sensitive commodity prices for signs that inflation is about to accelerate.

In fact, the Fed has pursued a middle course. It has taken an eclectic approach to evaluating strain in the labor and product markets, neither rigidly enforcing a speed limit on real GDP growth nor panicking as the unemployment rate has fallen below 6 percent. It has allowed positive supply shocks to be reflected in higher output and employment but has restrained growth in nominal spending.

—Evan F. Koenig

Notes

- ¹ See, for example, Galbraith (1997) and Yardeni (1997a,b).
- ² For an elaboration of this argument, see Krugman (1996).
- ³ The analysis that follows is developed more fully in Koenig and Wynne (1994).
- ⁴ Just how quickly inflation expectations adjust and what information they respond to remain the subject of debate. In empirical work, most economists assume that expected inflation is just a weighted average of past actual inflation rates. Historically, this approximation does well, but in macroeconomics, as in personal investing, "past performance is no guarantee of future results." The success of the standard approach may simply reflect the fact that to date we have seen no policy regime changes important enough to have had a major impact on Fed credibility.
- ⁵ For a defense of the Phillips curve as a policy guide, see Meyer (1997a,b).
- ⁶ For an elaboration, see Duca (1997) and Meyer (1997a).
- ⁷ Thus, a policy of stabilizing nominal spending is a compromise between an output-stabilization policy and a price-level or inflation-stabilization policy. See Koenig (1995).
- ⁸ Analysts expressing such views include Yardeni (1997a,b) and Kudlow (1997).

References

- CitiCorp (1997), "Fed: Reaffirming the Move to a Tighter Stance," *Economic Week* 25 (May 19): 1.
- Duca, John V. (1997), "A Tale of Three Supply Shocks, National Inflation and the Region's Economy," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 2, 1–4.
- Galbraith, James K. (1997), "Time to Ditch the NAIRU," *Journal of Economic Perspectives* 11 (Winter): 93–108.
- Koenig, Evan F., and Mark A. Wynne (1994), "Is There an Output–Inflation Trade-Off?" Federal Reserve Bank of Dallas *Southwest Economy*, Issue 3, 1–4.
- Koenig, Evan F. (1995), "Optimal Monetary Policy in an Economy with Sticky Nominal Wages," Federal Reserve Bank of Dallas *Economic Review*, Second Quarter, 24–31.
- Krugman, Paul (1996), "Stable Prices and Fast Growth: Just Say No," *Economist*, August 31, 19–22.
- Kudlow, Lawrence (1997), "In Search of an Enduring Standard," *Washington Times*, March 3, A12.
- Meyer, Laurence H. (1997a), "The Economic Outlook and Challenges for Monetary Policy" (Remarks presented at the Charlotte Economics Club, Charlotte, North Carolina, January 16).
- (1997b), "The Economic Outlook and Challenges Facing Monetary Policy" (Remarks presented at the Forecasters Club of New York, New York, April 24).
- Staiger, Douglas, James H. Stock and Mark W. Watson (1997), "The NAIRU, Unemployment and Monetary Policy," *Journal of Economic Perspectives* 11 (Winter): 33–49.
- Yardeni, Edward (1997a), "The Growth-Is-Good Case for Bonds," *Deutsche Morgan Grenfell Weekly Economic Analysis*, May 5, 1–5.
- (1997b), "Deep Blue vs. Greenspan," *Deutsche Morgan Grenfell Weekly Economic Analysis*, May 19, 1–4.