

# Five Things We Know for Sure

***Malthus versus Ricardo, Friedman versus Keynes—for more than 150 years the study of economic growth has been a field of battle. John B. Taylor argues that the smoke has finally begun to clear.***

## THE LONG-RUN GROWTH RATE

Macroeconomics—the part of economics that focuses on economic growth and economic fluctuations—has always been an area of great controversy and debate. More than 150 years ago David Ricardo argued with Thomas Malthus over the importance of supply versus demand in growth and fluctuations, much as real-business-cycle economists have argued with monetarists and Keynesians in recent years. The Keynesian revolution of the 1930s and the rational-expectations revolution of the 1970s, both questioning macroeconomic ideas of the time, were two of the most contentious episodes in the history of economic thought. Some view recent macroeconomic debates as so intense that macroeconomics amounts to nothing more than competing camps of economists with no common set of core principles.

Yet, in my view, there is a set of key principles—a core—of macroeconomics about which there is wide agreement. This core is the outgrowth of the many recent debates about Keynesianism, monetarism, neoclassical growth theory, real-business-cycle theory, and rational expectations. The core is practical in the sense that it is having a beneficial effect on macroeconomic policy, especially monetary policy, and has resulted in improvements in policy over the past fifteen years. In fact, new econometric models recently put in operation at the Fed largely reflect this core. This core is increasingly evident in undergraduate economics texts and graduate training.

Although there are different ways to characterize this core, I would list five key principles, beginning with the most basic and least controversial one, which

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focuses on long-term economic growth and the supply side of the economy. Over the long term, growth in the productivity of labor depends on the growth of capital per hour of work and on the growth of technology. If one adds to this growth in the productivity of labor an estimate of growth in the labor force itself, one gets an estimate of the long-run growth rate of real GDP, or what is typically referred to as potential GDP growth. This principle, the essence of neoclassical growth theory, provides a way to estimate and discuss the sources of long-term economic growth.

Is this first principle practical? Yes. Economists regularly use this approach to get estimates of potential GDP growth. Most now estimate this growth to be about 2–2.5 percent a year. Of course there are debates about how to apply this principle: Are there diminishing returns to information capital? How much would fundamental tax reform raise the capital-labor ratio? How much does a reduction in marginal tax rates increase labor supply? But these are more quantitative issues, concerning the size of elasticities, rather than matters of principle.

#### **INFLATION AND UNEMPLOYMENT IN THE LONG TERM**

There is no long-term trade-off between the rate of inflation and the rate of unemployment. That is, a shift by the central bank to a higher rate of money growth will simply result in more inflation in the long run, with the unemployment rate remaining unchanged. Although controversial at one time, empirical and theoretical research provides strong support. In the 1960s inflation was low, and unemployment was between 5 and 6 percent; in the 1970s inflation was high, and unemployment was no lower; and in the 1990s inflation is low again, and unemployment has not increased.

This second principle has already had a major practical impact on policy. It implies that central banks should pick a long-run target range for inflation and stick with it. Many central banks around the world are doing just that, either explicitly, as with New Zealand and the United Kingdom, or implicitly, as with the United States and Germany.

#### **INFLATION AND UNEMPLOYMENT IN THE SHORT TERM**

There is a short-run trade-off between inflation and unemployment, with debates over the reason for it. Despite these debates, the existence of a short-run trade-off has agreed-on practical implications for policy: Monetary policy should keep

the growth of aggregate demand stable to prevent fluctuations in real output and inflation. In fact, the improvements of monetary policy during the past fifteen years have led to much more stable macroeconomic conditions. The United States is now experiencing, back to back, the two longest peacetime expansions (1982–1990 and 1991–1998) in U.S. history, separated by one of the mildest recessions (1990–1991) in U.S. history. A greater stability of monetary policy is largely responsible for this record-breaking macroeconomic stability. Every recession since the 1950s has been preceded by a run-up of inflation; by keeping inflation from rising in the first place, the chances of such recessions are diminished.

#### **EXPECTATIONS MATTER**

People's expectations are highly responsive to policy, and, thus, expectations matter for assessing the impact of monetary and fiscal policy. The most feasible empirical way to model this principle is the rational-expectations approach. By introducing rational expectations into fully estimated econometric models and then simulating the models for different policies, the response of expectations to changes in policy can be reasonably approximated.

Is this fourth principle having an impact on practice? Yes. For example, macroeconomic models with rational expectations now in use at the Fed are able to estimate the effects on interest rates of a multiyear plan to reduce the future budget deficit. These models can help guide monetary decisions about interest rates when a plan for budget deficit reduction (like those in 1990 or 1993 in the United States) is being considered. Additional evidence for the practical relevance of this principle is the great emphasis placed on credibility by central banks today. According to rational-expectations models, there are advantages to credibility in both monetary policy and fiscal policy. For example, a disinflation will have lower short-run costs if policy is credible. Similarly, a plan to reduce the budget deficit will have a smaller short-run contractionary effect if it is credible.

#### **MAKE POLICY RULES—AND STICK TO THEM**

Policymakers should make changes gradually, following clear rules, not administer onetime jolts. This fifth principle follows from the other principles. To be sure, there is debate about the form of the policy rules: Should the interest rate or the money supply be the instruments in the rule? Should the instrument react to the exchange rate or solely to inflation and real output? How large should the reac-

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tion of policy be to inflation? Is the rule a guideline or should it be legislated and used to add accountability to policymaking?

Recently there has been increased practical interest in policy rules. For example, in recent speeches, Federal Reserve Board governors Laurence Meyer and Janet Yellen have described in detail how policy rules can be helpful in the formulation of monetary policy. Speaking about her practical experience on the Federal Reserve Board, Yellen states that “rules proved a simple useful benchmark to assess the setting of monetary policy in a very complex and uncertain economic environment.”

The Federal Reserve Board staff now uses stochastic simulation of alternative policy rules on a regular basis. And many private-sector business economists have noted the similarity between the actions of the Fed and many other central banks to the outcomes implied by certain policy rules.

This characterization of a core of practical macroeconomics is not meant to imply that everything is settled in macroeconomics. On the contrary, there are still great debates going on over the size of elasticities, the role of credit in the monetary transmission mechanism, the empirical relevance of “endogenous” growth models, whether staggered price-setting models with rational expectations fit satisfactorily the dynamic correlations that characterize the process of inflation in the United States, and many other issues.

Yet the five principles I have set out represent a solid core of macroeconomic thought that is useful in practical policy work and has already improved macroeconomic policymaking in the United States and abroad. □

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