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Is There A Core of Practical Macroeconomics That We Should All Believe?

By ALAN S. BLINDER*

With emphasis on the adjective "practical" and the normative verb "should," my answer to the question of this session is a resounding yes. Indeed, I spent a good deal of time between January 1993 and January 1996 acting on the belief that there is such a core macro model; so I certainly hope it exists.[1] This believable core model falls well short of perfection, leaves many questions unanswered, and is subject to substantial stochastic errors. Nonetheless, it is both useful and extensively used in policy analysis, where contact with reality is a necessity, and you cannot beat something with nothing. It also closely resembles, but does not quite match, the way macroeconomics is taught to beginning and intermediate (but not to graduate) students.

In this short presentation, I will describe briefly the main *practical* elements that I think we *should* agree on, without worrying too much about their theoretical underpinnings. Then I will turn to two critical failings of the standard macro model which cry out for theoretical and empirical repair. My organizing principle is the textbook exposition that has been standard, though not universal, in teaching intermediate macroeconomics for years. The question is: how does it differ from the "core model" used in policy analysis?

The IS Curve.—The *IS* curve is a functional relationship between real output and the *real* interest rate derived from the behavioral determinants of total spending, such as income, wealth, interest rates, the government budget, and so on. Here, however, we immediately encounter a bit of an embarrassment. A variety of theories, some of which have seemingly sturdy microeconomic foundations, point to business fixed investment as the principal source of the interest elasticity of spending. But the empirical evidence on the sensitivity of investment to interest rates is, at best, equivocal.

Nonetheless, historical observations and at least some empirical research support the notion that higher real interest rates lead to lower spending. And I can assure you that a negatively sloped *IS* curve is central to the Federal Reserve's thinking about how monetary policy works. Thus one has a paradox: while the interest sensitivity of business investment spending is subject to doubt, the *IS* relationship between aggregate demand and interest rates appears to be there. This paradox is a major motivation for the outpouring of research on the so-called credit channel for monetary policy. In practice, however, I suspect that the slope of the *IS* curve may have more to do with homebuilding and consumer durables (especially automobiles) than with business investment. In a word, 30 years after Hicks, the *IS* curve still needs work.

The LM Curve.—Textbook descriptions normally pair the downward-sloping *IS* curve with an upward-sloping *LM* curve relating real output to the *nominal* interest rate. Unfortunately, there is by now a strong professional consensus that the once-reliable *LM* curve fell prey years ago to ferocious instabilities in both money demand and money supply, themselves the product of rapid and ongoing financial innovation. Hence the *LM* curve no longer plays any role in serious policy analysis, having been supplanted by the assumption that the central bank controls the short-term nominal interest rate. It is high time we changed our teaching in this way, too.

Notice however that, while the central bank controls the nominal short-term interest rate, it is the real long-term rate that presumably matters most for spending. The distinctions between long and short rates and between real and nominal rates are crucial both in principle and in practice; I will return to them shortly.

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[1] During that time, I was first a member of the Council of Economic Advisers and then Vice-Chairman of the Board of Governors of the Federal Reserve System.

Aggregate Demand and Aggregate Supply.—Ignoring these distinctions for the moment, specifying the rate of interest as a policy instrument turns the *IS* curve into an aggregate demand curve. Many textbook expositions then add an aggregate supply curve (e.g., based on sticky nominal wages) to the picture and portray short-run macroeconomic equilibrium as the intersection of the two. In this picture, the price level is presumed to adjust rapidly to equate aggregate demand and supply, while wages are rigid.

This sharp dichotomy between rapid price adjustment and sluggish wage adjustment has no basis in empirical reality. Instead, both prices *and* wages appear to be extremely sticky. Furthermore, practical models used for short-run policy analysis do not have an upward-sloping aggregate supply function and do not solve for a market-clearing price level. Instead, both wages and prices are viewed as largely predetermined in the short run, and dynamic adjustment equations ("Phillips curves") describe their evolution over time. Output, in turn, is determined by plugging the predetermined price and (if relevant) wage levels into the aggregate demand equation.

This set of "core beliefs," of course, begs one of the central questions of macroeconomic theory: *why* are wages and prices so sticky? I will not attempt to answer this question here but will simply observe that no answer seems currently to be part of the agreed-upon core.[2] It is a big gap—make that a *yawning* gap.

The Phillips Curve.—I have just mentioned the Phillips curve, which relates wage or price inflation to the level of resource utilization. While the *LM* curve has collapsed in recent years, and key aspects of the *IS* curve are still in dispute, the empirical Phillips curve has worked amazingly well for decades in—and, by the way, only in—the United States (Robert Gordon, 1997). I call this fact the "clean little secret" of macroeconometrics. This reliable Phillips curve displays a high degree of inertia (empirically, long lags) and has the natural-rate property: it is vertical in the long run.[3] Because it works so well empirically, it merits a prominent place in the core model.

Okun's Law.—The other truly sturdy empirical regularity, Okun's Law, is even more atheoretical, if not indeed antitheoretical. This simple linear relationship between the percentage change in output and the absolute change in the unemployment rate presumably embodies productivity, labor-force participation, and production-function considerations. On the surface, it seems to contradict the concavity of the latter. Nonetheless, it closes the loop between real output growth and changes in unemployment with stunning reliability.

Thus my candidate core model of the macroeconomy has four main components. First, prices and wages are largely predetermined in the short run and evolve according to Phillips-type equations. Second, output is demand-determined in the short run. Third, aggregate demand responds directly to fiscal policy and is interest-sensitive, and thus responsive to monetary policy, which sets short-term interest rates. Fourth, Okun's law links output growth to changes in the unemployment rate.

From here on, however, it is mostly downhill. The core set of beliefs starts to look like precisely that—a set of *beliefs* rather than well-established empirical regularities. I will conclude this short paper by discussing briefly the two elements needed in order to bridge the gap between the nominal short-term interest rate set by monetary policy and the real long rates that presumably influence aggregate demand. In each case, I will argue that something may have been included in the core model that deserves to be evicted.

The Term Structure of Interest Rates.—The expectations theory of the term structure links short rates to long rates in an elegant and intuitively appealing way. According to this

[2] Blinder et al. (1997) is a book-length attempt to appraise a dozen theories of price stickiness by interviewing actual decision-makers.

[3] Empirically, "in the long run" means after all the lags have worked themselves out. Thomas Sargent (1971) established long ago that a unit sum of the coefficients on lagged inflation is neither necessary nor sufficient for the natural-rate property to hold. Nonetheless, U.S. Phillips curves generally have this property.

theory, any long-term interest rate is the appropriate weighted average of current and expected future short-term interest rates, plus a term premium. Unfortunately, the model miserably fails a variety of empirical tests (see John Campbell, 1995). Economists are thus in desperate need of a better model of the term structure. More than academic completeness is at stake here, for the absence of a usable empirical model of the term structure severely handicaps the conduct of monetary policy, which works its will on the economy through short-term rates of interest.

Modeling Expectations.—Expectations are ubiquitous in economic behavior, as the rational-expectations revolutionaries of the 1970's reminded us. In the bad old days, economic theory treated expectations in one of two highly unsatisfactory ways: either as exogenous or as evolving according to some ad hoc formula like adaptive expectations. The former was plainly absurd; the latter often implied that forecasts were biased and inefficient.

The rational-expectations revolution was supposed to fix all that and to provide economists with a theoretically grounded model of expectations. That it may or may not have done. But its empirical success has been meager. Where expectations can be measured directly, they do not appear to be "rational," as economists use that term (see Michael Lovell, 1986). And at least some empirical relationships, including the term structure, seem to work better with adaptive than with rational expectations (Gregory Chow, 1989).

The skeletal macro model that I have dealt with in this short paper allowed for only one expectational variable: expected inflation, which appears on the right-hand side of the expectational Phillips curve and is the difference between nominal and real interest rates.[4] But expectations are relevant elsewhere as well. I conclude with one final example that has assumed great practical importance in recent years: the effects of expected future government budget deficits.

A positive fiscal multiplier has long been part of macroeconomists' core beliefs. Yet nowadays the opposite presumption seems to have taken hold in policy circles from Washington to Brussels. Deficit reduction, we are told, promotes economic growth in the short-run. How can that be?

I can think of two coherent lines of reasoning that lead to the unconventional conclusion that a *credible* change in fiscal policy that promises lower *future* budget deficits can stimulate the economy by producing lower long-term real interest rates today. The first is a (Keynesian) flow-equilibrium argument: promises of future fiscal contraction create rational *expectations* of lower real short rates in the future which, via the term structure, lead to lower long-term interest rates today (see Stephen Turnovsky and Marcus Miller, 1984). The second is an argument involving long-run stock equilibrium: expectations of lower future public government debt lead to lower long rates today.

Three points need to be made about these arguments. First, they are only theoretical possibilities, not logical necessities or established empirical findings. Until I saw it happen—or at least *think* I saw it happen—in 1993, I knew of no evidence that what worked in principle would actually work in practice. Note that the validity of the theoretical arguments hinge sensitively on all three italicized words in the preceding paragraph (credible, future, and expectations), none of which is directly observable. Second, the arguments make essential use of a theory of the term structure that is known to be wrong. Third, the first argument presumes that expected future short-term interest rates fall because spending is expected to be weaker in the future. It is more about intertemporal shifting of demand than about fiscal stimulus.

Yet the notion that what used to be called "contractionary" fiscal policies may in fact be expansionary is fast becoming part of the conventional policy wisdom, mostly on the basis of a single observation: the success of the Clinton budget plan in 1993.[5] Need I point

[4] Actually, this difference is expected inflation plus an inflation-risk premium. On the latter, see John Campbell and Robert Shiller (1996).

[5] A companion, though somewhat contradictory, idea is also gaining adherents: that lower budget deficits boost a country's exchange rate!

out that the answer to the question of how deficit reduction can stimulate the economy is not "just academic"? It potentially affects the well-being of hundreds of millions of people around the globe. An answer would be a welcome addition to the "core of practical macroeconomics that we should all believe."

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