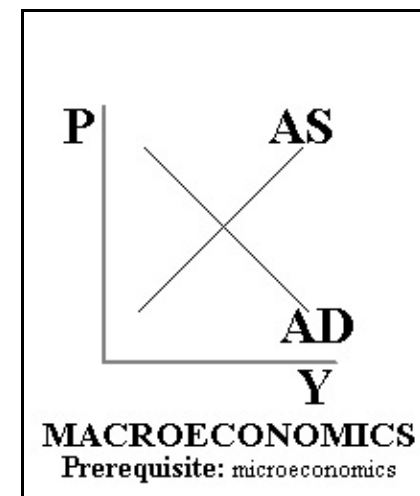


ASAD: A SAD DEVELOPMENT IN MACROECONOMIC PEDAGOGY

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ASAD has conquered the textbook market as completely as the Holy Inquisition conquered Spain. With this observation, I paraphrase Maynard Keynes (*General Theory*, p. 32), who wrote that Ricardo conquered England that completely. Keynes, though, was making specific reference to the Ricardian "idea that we can safely neglect the aggregate demand function." Whether teaching microeconomics or macroeconomics, we cannot safely neglect either side of the market. But neither can we safely present macroeconomics as if it were nothing but microeconomics writ large. In the final analysis, ASAD is a dramatic demonstration of the dangers of pedagogy for the sake of pedagogy: Students who have survived a principles-level course in microeconomics can be taught macroeconomics on the cheap.

The lowercase p and q that mark the axes of a conventional supply and demand diagram of the market for peanut butter can be converted to uppercase P and Y; the S and D can each be prefaced with an aggregating "A"; and—Voilà!—we have ASAD macroeconomics.

The temptation to ease students from the settled issues of microeconomics to the thorny issues of macroeconomics in this way is virtually irresistible. And the zeal for exploiting to the fullest the superficial similarity between the supply and demand that govern individual markets and ASAD, which is to represent the whole economy, seems to have blunted the critical senses. Yet, in truth, any professor who tells his sophomores on the first day of class that aggregate supply and aggregate demand are in some sense just like ordinary supply and demand should, if any

academic respectability is to be maintained, spend the rest of the semester explaining all the senses in which they are *not* alike.

The most fundamental case against presenting macroeconomics in an ASAD framework is that the framework itself involves some major (and many minor) misrepresentations and inconsistencies. The least of these problems is the fact that AS is not a supply curve and AD is not a demand curve. At best, both curves are market equilibrium curves, each deriving from considerations of both supply and demand. AD, for instance, reflects the supply of loanable funds and the supply of money; AS reflects (explicitly) the demand for labor and (implicitly) the demands for other factors of production. Although the term "market equilibrium curves" is more suitable than AS and AD for describing

this analytical apparatus, the "equilibrium" defined by the intersection of the two curves involves heavy doses of extra-market influences, market malfunctions, and chronic disequilibrium.

More damaging to the ASAD framework is the fact that the separate sets of assumptions that underlie these two market equilibrium curves are mutually contradictory. Why, for that matter, are there *two* market equilibrium curves? The answer to this question is that the two curves reflect two different (and conflicting) views about just how the economy works. This is the internal conflict identified by David Colander in "The Stories We Tell: A Reconsideration of AS/AD Analysis" (*Journal of Economic Perspectives*, Summer 1995). The AD curve is based upon a Keynesian view of supply (Demand creates its own

supply); the AS curve is based upon a classical view of supply (Scarcity is a binding constraint). While each of these views has its own merits and application, the representation of the two views as two (somehow interacting) curves on the same set of axes is neither theoretically nor pedagogically sound. At best, the classical relationships can be employed to locate a tick mark on the income axis to designate the domain of applicability of the AD curve. The mischief begins when this tick mark is converted into a vertical line and called aggregate supply. The vision conjured up by AS and AD suggests that at any price level other than the one that clears the markets for goods and for labor, there will be an adjustment mechanism whose strength is gauged by the horizontal distance between AS and AD. But a macroeconomic story that parallels the microeconomic story about shortages and surpluses is one that defies a coherent telling.

If it were possible to overlook these fundamental problems with the ASAD framework, still other problems would reveal themselves in application, particularly if the analysis allows for an upward-sloping short-run AS curve. The conventional presentation has the intersection between SRAS and AD determining an equilibrium price level while the SRAS curve itself gets its upward slope from a lingering disequilibrium, namely, the lagging of the wage rate behind the price level. A short-run *disequilibrium* real wage rate somehow gets translated into a short-run

equilibrium price level. While seasoned macroeconomists may see this problem as a clash in semantics rather than in substance, they may fail to deal with—or even to see—the pedagogical difficulty that the clash entails. Worse, the lagging wage rate, which is the essential distinction between the short-run and long-run AS curves, is simply assumed away for purposes of deriving the AD curve. For consistency, the lag would have to be taken into account on the Keynesian side, too. The temporarily low real wage would increase investment demand, which would make the AD curve more inelastic than it would be if there were no wage-rate lag. The eventual metamorphosis of the upward-sloping SRAS into a vertical LRAS would have to be accompanied by a simultaneous shifting and rotating of the AD curve. But, of course, with both curves on the move, the dynamics of income and the price level, which is the whole focus of SRAS/LRAS analysis, becomes wholly indeterminate.

And finally, while the idea of a lagging wage rate is logically consistent with theoretical constructions in which new money is *spent* into existence (such as in monetarist and new classical models), it is not logically consistent with theoretical constructions in which new money is *lent* into existence (such as in Austrian, Swedish, and other pre-Keynesian models). Given the fact that new money actually comes into the economy through credit markets, and hence has its first-round effects in factor

markets rather than in product markets, it is not surprising that postwar time series data do not confirm the existence of this wage-rate lag that is so critical to the standard application of ASAD analysis.

Apart from there being substantive problems with ASAD, the presentation of this framework to undergraduates involves an unusual and curious sequencing. The AD curve makes its appearance late in the typical upper-level course and early in the typical principles-level course. In upper-level macroeconomics, students learn the circular-flow model and identify the market forces that bring income and expenditures into balance. They learn to separate the real and monetary sectors of the economy, and then learn that the relationship between saving and investment defines an IS curve, while the relationship between the demand for liquidity and the supply of money defines an LM curve. After the fixed-price ISLM model is put through its paces, the assumption of a fixed price level is relaxed, and the real-cash-balance effect is introduced. With this modification, the students learn to trace out an AD curve and to superimpose it on an AS curve, which was derived from the neoclassical production relationships.

In a principles-level course, ASAD is served up in the second chapter as if it needed no derivation. Sophomores have to learn to manipulate these curves in conformity with the stories about unemployment and inflation and have to wait for the flashback in the upper-level

course to find out just where those curves come from. In contrast the microeconomics sequence, where the Law of Demand can be applied at a principles level and then derived at a higher level, the macroeconomics sequence cannot be defended on the basis of some primordial Law of AD. This market-equilibrium curve cannot be a foundational concept. The current pedagogy seems to involve either a premature introduction of ASAD or a superfluous explanation of it.

Premature or not, the detaching of AD from ISLM analysis has become an increasingly popular approach among textbook authors. A downward-sloping AD curve is simply posited and offered to the student along with a reason or two for its downward slope. Reflecting on the reason(s), however, suggests that some framework other than ASAD may be more appropriate. Issues involving real money demand, international trade, and the labor/leisure tradeoff may be brought into play here. The downward slope is supposedly based on considerations involving one or more of these disparate issues. The simplest construction entails the positing of AD for a closed economy with flexible wages and prices. The story of this AD curve becomes a story about real money demand. The lower the (hypothetical) price level, the fewer dollars it takes to satisfy a given real money demand and hence the greater the spending on output.

Note here that AD in this guise is conceived as a genuine demand curve

and not a market-equilibrium curve. The permissibility of conceiving of AD in this way follows from our understanding of Walrasian general-equilibrium theory. If we divide an n -good economy into two sectors such that one sector contains one good while the other sector contains $n-1$ goods, we should be able to arrive at the same conclusions about the economy no matter which sector we choose as the actual focus of our analysis. If the demand for the one good is money demand and the demand for the $n-1$ goods is AD, then the choice of focusing on AD rather than on money is a choice of form rather than of substance. And if the relevant price of money is $1/P$, then a downward-sloping demand for money translates, purely as a matter of construction, into a downward-sloping AD curve. Though logically permissible, this conception of AD is not pedagogically defensible. So conceived, ADAS analysis is nothing but a back-door way of analyzing the supply and demand for money. But "back door" suggests bad form, bad pedagogy. Why not focus the analysis directly on that critical n^{th} good? Compounding their

pedagogical problems, many textbook authors introduce AD in the form of a genuine demand curve, making the concept seem as simple and noncontroversial as the demand for peanut butter, and then, in a digression, derive AD as a market-equilibrium curve—but without bothering to mention the quantum leap that slipping from the one construction to the other entails.

Most textbook authors offer multiple reasons for the downward slope of the AD curve. But any reason beyond the one from monetary theory involves complications in the model itself in one direction or another. If a decrease in the (domestic) price level increases the demand for exportable goods, then this aspect of the explanation of AD's downward slope hinges on relative price-level changes among goods produced in different economies. If a change in the price level is to affect the labor-leisure tradeoff, then the price of output is assumed to change relative to the price of input—or, at least, relative to the price of labor. If these considerations are added to the construction and offered as reasons for the AD curve's downward

slope, then any movement of the economy along its AD curve will involve a combination of consequences in which the effects of money demand, trade flows, and labor supply are entangled. But each component effect, of course, has its own elasticities and lag structure. It seems obvious that superior pedagogy lies precisely in the direction of *disentangling* these separate considerations. ADAS in this context masks more than it reveals.

Some textbook authors offer still other reasons to believe that there is a negative relationship between the price level and income as traced out by the AD curve. One author suggests that this curve's downward slope is attributable, in part, to a relationship between the price level and the level of investment demand: "All other determinants of investment unchanged, investment will rise if the interest rate falls and fall if the interest rate rises. A lower price level tends to reduce the interest rate, a higher price level to increase it. There is therefore a relationship between the price level and the level of investment" (Timothy Tregarthen, *Economics*, New York:

Worth Publishers, Inc., 1996, pp. 560-61). This juxtaposition of declarative statements, which involves at least a half dozen errors, ambiguities, and/or irrelevancies, is not conducive to rational reconstruction. Just what is going on here, anyway? Are textbook authors competing with one another on the basis of the number of reasons for the AD curve's downward slope? Or does each author subconsciously believe that it may take a lot of bad reasons to compensate for the lack of one good one?

There is good reason for contrasting the performance of an economy that has a well-functioning price system with the performance of an economy in which the price system is not functioning at all or is malfunctioning in some particular way. But ASAD analysis gives us a hybrid perspective; it is a half-way house that jumbles the concepts and misses the contrast.

Macroeconomics at all levels of instruction and research could well make do without it.