The Economist November 3, 1990

Paradigm Lost

Our new series looks at ten modem classics of economics-the academic articles of recent years that have done most to shape the way economists now think. Starting next week, each brief will explore one article. This introduction to the series sets the scene

FOR roughly 25 years after 1950, despite all the cliches about economists never agreeing, it was fair to talk of a broad academic consensus on the big economic questions. Almost all economists were believers in what they called the "neoclassical synthesis". In the mid-1970s, thanks to a mixture of theoretical argument and unhelpful economic events, this consensus broke down. Economists have been trying to repair it ever since, but with little success.

The neoclassical synthesis was so named because it claimed to unite what was valuable in classical economics with the Keynesian theories that had set out to refute classicism. In this blending of schools, the classical tradition supplied the underpinnings and the methodology-notably, (a) the idea that economic agents firms, workers, consumers) are rational; and (b) the technique of describing an economy as a series of markets (for goods, labour, money) in which prices adjust to maintain a balance of supply and demand.

The trouble was that classical economics was notoriously bad at accounting for a particular sort of excess supply-that of labour, otherwise called unemployment. Rational agents and unfettered markets ought, it seemed, to keep an economy fully employed. jobless workers would force wages down, thus spurring the demand for labour. In the classical tradition it follows that the persistently unemployed are out of work by choice; the jobless simply prefer not to work at the offered wage.

That was unconvincing, especially after the Great Depression of the 1930s. The Keynesian revolution obliged the classical apparatus to confront a variety of questions, but "What causes unemployment?" was the most important. Then came a paradox. While challenging, often ridiculing, the classical orthodoxy, Maynard Keynes and his followers supplied the insights that the neoclassical synthesis would use to rescue the classical approach. Of these, the most crucial was the notion of sticky prices-the idea that prices (and especially wages, the price of labour) move sluggishly.

Agents were still in rational pursuit of self-interest; markets were still a good way to carve up an economy for inspection. In these respects, the Keynesian macro-economy was still classical". But slow-changing prices make a big difference to the way an economy behaves, especially in the short run.

Suppose that firms for some reason reduce their demand for labour. In the classical model, wages would quickly fall; that would restore "full employment" partly because at the new, lower wage, firms would demand more labour and partly because some workers would decide to drop out of the labour force (ie, they would become unemployed by choice).

If wages are sticky, however, more workers will want jobs than firms are willing to hire. There will be an excess supply of labour-unemployment-at least for a time. Gradually, even in a Keynesian world, excess supply in the labour market will drive wages down, which in turn will restore full employment. So in the long term (when "we are all dead") the economy will look classical. In the short term it will be plagued-just as in real life by spells of unemployment.

Classic Keynes

The neoclassical synthesis thus combined a Keynesian short run and a classical long run. It also combined, in effect, a demand side and a supply side. The demand side was developed in great detail thanks to Sir John Hicks at Oxford and, later,

Harvard's Mr Alvin Hansen. They designed the model that is familiar to anybody who has studied economics in the past 40 years: IS-LM analysis. Many others, led by luminaries such as Mr Paul Samuelson of miT and Mr James Tobin of Yale, built towers of sophisticated analysis on the Hicks-Hansen foundation.

The neoclassical synthesis ruled for so long because of the expositional brilliance of the IS-LM approach. This reduced six crucial economic relationships to a simple diagram of two crossing lines, plotted with interest rates on one axis and output (aggregate demand, to be accurate) on the other.

The simplest is line embodies: an equation explaining consumption (the consumption function); another explaining investment; and the rule that, in equilibrium, savings equals investment. The simplest Lm line embodies: an equation explaining the "transactions" demand for money; another explaining the "speculative" demand for money; and a second equilibrium rule, which says that the demand for money must equal the supply of money (itself fixed by government, and thus determined outside the system).

The IS line looks at the market for goods and says that, as interest rates fall, aggregate demand increases (thanks to more investment and consumption); it therefore slopes downwards. The LM line looks at the market for money and says that, as aggregate demand increases, interest rates rise (because higher aggregate demand also raises the demand for money); the LM line therefore slopes upwards. The economy is in equilibrium only where the lines cross. At every other point, one or more of the six relationships underlying the diagram will be out of kilter.

The neoclassical synthesis explained supply by looking at the labour market. The idea was to account for the level of employment; via another equation (the production function"), the amount of labour employed would then determine the economy's output. This is where sticky wages come in. If wages in money terms are fixed (Keynes's assumption), then a rise in the overall price level will temporarily reduce wages in real terms, stimulate the demand for labour and raise output and employment. A fall in prices will raise the real wage, depress the demand for labour and lead to lower output and employment.

The sticky-wage description of the labour market was married to the is-Lm framework to produce an integrated model of aggregate demand and supply. This was the engine-room of the big computerised forecasting models that began to be built in the 1960ss-the heyday of economics as a quantitative science for making the world more prosperous. For years it was also the starting. point for almost all macroeconomic research.

The downfall of the neoclassical synthesis was its account of inflation. Early versions of the IS-LM approach were easy to reconcile with the Phillips curve. First described by Mr William Phillips in a paper in 1958, the Phillips curve was not a theory, but a statistical observation. It said that low unemployment went hand in hand with high inflation, and vice versa. Recall, the IS-LM approach had said that a one-off rise in prices could lower real wages, temporarily boosting output and employment. Perhaps persistently rising prices-inflation-could buoy output and employment for longer, as the Phillips curve said.

Meltdown Friedman

It all seemed to fit. Economists were soon talking about the trade-off between inflation and unemployment. Governments were told that aiming for price stability, desirable in its own right, would mean throwing people out of work. The question was how to exploit the output-inflation trade-off.

In 1968 separate papers by Messrs. Milton Friedman of the University of Chicago and Edmund Phelps of the University of Pennsylvania left this theory in shreds. Their work looked at the microeconomic underpinnings. Suppose, as the neoclassical synthesis said, inflation depresses the real wage and thus increases the demand for labour. What about the supply of labour? If workers are unwilling to supply as much labour as before, the increased demand for labour may not cause employment to rise.

True, if workers are mistaken about real wages-if they do not understand that higher prices have cut them-a stronger demand for labour will boost employment. But for the Phillips curve to be true in this way, workers would have to keep making the same mistake. The annual inflation rate might have been 10% for years, but workers would need to keep on expecting prices to be stable next year; otherwise they would make good their real-wage cut by demanding higher money wages.

This is a ridiculous assumption. Persistent inflation cannot keep coming as a surprise. Ever rising inflation might; in that case there would be a trade-off between output and the rate at which inflation accelerates. But even this would be temporary. People would learn to anticipate rising inflation just as they learn to anticipate stable inflation.

The upshot of the Friedman-Phelps attack was the expectations, augmented Phillips curve. This says that if inflation is fully expected, there is no trade-off between inflation and employment. A Phillips curve only appears, and then briefly, when the economy's expectations are upset by a surprise.

With hindsight, the Friedman-Phelps attack was all the more impressive because it was launched when facts, as opposed to theory, still seemed in tune with the old Phillips curve. (Historical episodes of hyperinflation alongside massive unemployment could be dismissed as special cases.) Messrs. Friedman and Phelps insisted that the Phillips curve would break down.

It did. The 1970s brought stagflation-high inflation and high unemployment, which the old Phillips curve had said did not happen. Messrs Friedman and Phelps were vindicated, the neoclassical synthesis was refuted, and the consensus of 25 years fell apart.

Interesting times

For the past 15 years, economists have been searching for a new paradigm to replace the neoclassical synthesis. One group is led by Messrs. Robert Lucas of the University of Chicago and Thomas Sargent of Stanford. In the spirit of the Friedman-Phelps attack, their New Classical school works on the presumption that markets clear. Another loose coalition, the New Keynesians, challenges that presumption; but, again learning from Messrs. Phelps and Friedman, its adherents are careful to explore the microeconomic causes of market failure.

The neoclassical synthesis continues to exert a powerful influence on economic thinking. is, LM analysis is still the way most students first learn their macroeconomics, and much research in recent years can be understood as modifying or refining the old model. An IS-LM system is still the core of most econometric models. However, macroeconomic forecasting, for reasons to be explained in the next brief, has lost its academic respectability. Few of today's leading theorists find it fruitful to cast their ideas in terms of the old framework. This is the biggest reason why, in the modern debate among and within the different schools, economists talk past each other.

The breakdown of the neoclassical synthesis has affected not just macroeconomics, but other branches of economics, too. The new stress on microeconomic foundations, and on the difficult mathematical techniques that are needed to explore them (see box), is altering the character of the whole subject. In some ways, as a result, economics has become more inward-looking than ever before. But economics is also learning to tackle entirely new questions of practical importance. The coming briefs in this series will show that no new synthesis is yet in sight – but that economics is livelier and more interesting than for many years.
