

Macroeconomics

Lecture Note 14

Classicals and Keynesians

In the 1930s John Maynard Keynes recommended a program of public works to stimulate demand as the economy of the United Kingdom fell deeper into depression. As he wrote in *The General Theory of Employment, Interest and Money*, Keynes wrote:

[...] public works even of doubtful utility may pay for themselves over and over again at a time of severe unemployment, if only from the diminished cost of relief expenditure, provided that we can assume that a smaller proportion of income is saved when unemployment is greater; but they may become a more doubtful proposition as a state of full employment is approached.

Keynes' argument was that when demand is insufficient to achieve full employment the government can add to effective demand without adding to inflation or subtracting from private sector demand. The UK Treasury (finance ministry) responded in a way that was consistent with the classical economic theory of the time. Given a fixed money supply, additional government borrowing and expenditure would replace private spending. Therefore, the extra government borrowing and spending would have no effect on total output. The proposal was rejected.

Fast forward eighty years. The United States is in the grips of a deep recession. The government enacted a stimulus program to increase aggregate demand, following the course recommended by Keynes in the UK in the 1930s. However, many New Classical economists are critical of the stimulus, claiming that the additional government spending will not increase output because it will "crowd out" new private spending. Here the case is made explicit by Glen Whitman, a professor at California State University:

[T]he basic flaw of Keynesianism is this: you have to ask where the government's money comes from in the first place. It can either tax, borrow, or print money. If the government taxes, then that's less money in people's pockets, so every dollar that the government spends is balanced by a dollar not spent somewhere else.

Today we will talk about two competing approaches to macroeconomics. These approaches make different assumptions about the world and build theories based on these assumptions. For the most part, these assumptions cannot be proven true or false on the basis of the evidence. They are based on competing interpretations of the evidence. But the two theories have very different implications for macroeconomic policy. As a student of macroeconomics, and as a policy maker, you need to be aware of these different approaches so that you can understand the theoretical foundations of policy recommendations made by professional economists.

We will call these two theories Classical or “New Classical” and Keynesian. Classicals (before Keynes) and New Classicals (who revived Classical economics in the 1970s) believe that the economy is essentially self-correcting, and that money and finance are neutral in that they are simply means through which real economy transactions are made. Keynesians believe that the economy can get stuck at a level below potential GDP for a long period of time precisely because money and finance are not neutral. The dynamics of the financial system generate periods of boom and bust with the result that aggregate supply and demand do not naturally tend towards equilibrium, at least in the short period.

There are actually many more than two school of thought: the neoclassical synthesis (the mixture of Keynesian and Classical economics taught in most introductory textbooks); New Keynesian macroeconomics (New Classical economics with short term rigidities in the labor market); monetarism (now out of fashion but influential in the 1970s); and Post-Keynesians (who emphasize the impact of financial instability on the real economy). But to describe all of these theories would require an entire course all on its own. For our purposes, it is most important to understand that macroeconomic theories are *contested* and that policy recommendations flow from the assumptions underlying the theories.

We will only have time today to discuss the first four assumptions on our list. Later in the term we will discuss the others when we consider the global economic crisis of 2008. Let’s begin with the most important assumption: our ability to predict future events. Economics before Keynes assumed that prices would adjust in the long run to bring demand and supply into balance. The adjustment process might take some time, but policy could help speed it up. During the 1930s, most American economists believed that the Great Depression had been caused by the “get rich quick” culture of the 1920s. The depression was a necessary adjustment to bring investment in line with savings and wages in line with productivity. This approach was summed up by Andrew Mellon, the US Secretary of the Treasury, who, at the beginning of the Great Depression in 1929 said that the US should “liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate.” Far from seeing mass bankruptcy as a bad thing, he thought that it would restore the market to equilibrium and restore public faith in the value of hard work and saving. “It will purge the rottenness out of the system. High

costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people."

Classical economics did not put forward an explicit theory about our ability to guess at the direction of future events other to say that in the long run prices and wages will adjust to clear the market. Economic trends were governed by mechanical laws that applied everywhere and at all times. The process of adjustment might take some time, but the theory was not concerned with the short run.

Keynes regarded this disinterest in the short run as a fundamental weakness of Classical economic theory. He said:

The long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is past the ocean is flat again.

For Keynes, economics was not limited to describing mechanical laws of the market that apply during normal times. Economics has an unavoidable psychological element. Economic decisions that we make today are based on our subjective assessments of economic conditions in the future. In normal times, we make informed guesses about the future based on conditions in the present, or based on conventions or habits. But in times of great upheaval, we do not assume that conditions will quickly return to normal. We do not know if our investments will pay off in the future, or if asset prices will rise or fall. We are faced with *irreducible uncertainty* about future events. Uncertainty is irreducible because we cannot attach probabilities to different outcomes. The future is unknown and unknowable.

If uncertainty is irreducible the economy is not self-regulating. Full employment is no longer the normal "equilibrium" position of the economy. The performance of the economy depends on the what Keynes called the "animal spirits" of investors, but which we now refer to by the much less colorful term "business confidence." If businesses lack confidence they will not invest and the economy will underperform. Therefore our expectations regarding future events have a large effect on economic performance in the present.

New Classical Economics did not return to the classical view that the short run does not matter. But they did reject the proposition that we cannot attach probabilities to future events. A new theory known as "rational expectations" was put forward to explain why the economy would find its equilibrium.¹ Moreover, the theory held that

¹ Robert E. Lucas (1972) "Expectations and the Neutrality of Money," *Journal of Economic Theory*, 4:103-124.

the government does more harm than good when it tries to strengthen business confidence by spending more to increase aggregate demand.

The rational expectations hypothesis is based on the idea that everyone—consumers, businesses, employers and workers—makes efficient use of the information that they have about the past, present and future. They learn lessons from past events to predict what will happen in the future. This does not mean that everyone guesses correctly about the future, but rather that our errors are not correlated. In other words, there is no reason to expect that the *average* of everyone's guesses about the future, when taken together, would not be correct. We adjust these expectations about the future seamlessly and instantaneously with changes in economic conditions.

The main policy implication of rational expectations theory is that government intervention is counter-productive.² Let's say that the government increases spending during a period of high unemployment. According to Keynes, this would increase effective demand and therefore convince businesses and households that it is safe to invest and to consume. By way of contrast, rational expectations theorists believe that the additional government spending would have no effect on the level of income because people would immediately start saving more money to pay for future tax rises or inflation resulting from increased government spending in the present. The net effect on aggregate demand would be zero.

The second assumption emerges directly from one's beliefs about our knowledge of the future. Classical economics assumed that the economy will operate at capacity unless some disturbance (for example, government intervention) prevents prices from adjusting to equate supply and demand. This assumption is known as Say's Law, which is usually summed up as "supply creates its own demand." The idea behind Say's Law is that the size of the economy can never be limited by a shortfall in consumption. Since everything that is produced is consumed, the only thing that can limit production is production itself. People have to work to earn money to eat, so there is no unemployment. Since everyone is working, it is only the productivity of their labor that determines the level of output. Therefore, classical economic theory was concerned mainly with the efficient allocation of resources among alternative uses. Poor economic performance was a result of bad economic decisions. The causes of economic crises could be traced to too much borrowing and speculation and not enough saving and investment in productivity-enhancing enterprises.

Keynes did not believe that there was always enough demand in the economy, or that the economy could be described as a self-regulating system. Why would people produce things that would not be consumed? Starting with a simplified circular flow

² Thomas Sargent and Neil Wallace (1975) "Rational Expectations, the Optimal Monetary Instrument and the Optimal Money Supply Rule," *Journal of Political Economy*, 83:2, 241-254.

diagram (ignoring imports, exports and government), we see that households consume most of their income but save a part of it. If the amount saved is more than the amount that businesses plan to invest, aggregate demand will not be sufficient to absorb supply. GDP will fall below potential.

Why would households save too much or businesses invest too little? Faced with irreducible uncertainty about the future, investors and consumers might decide to hold money instead of investing and consuming. Demand can therefore leak out of the real economy and into money. This is Keynes' "paradox of thrift." In classical economic theory, saving is always good: saving finances investment, which increases the productive capacity of the economy. But Keynes argued that saving does not always equal investment. Money is not just a medium of exchange; it is also a store of value. For Keynes, money "is above all a subtle device for linking the present to the future." When everyone is saving cash, aggregate demand falls. Households hold cash and do not spend it because they are trying to pay down debt or they are afraid that their incomes will fall in the future. Businesses hold cash because they are afraid that there is insufficient demand in the market to sell their goods, so there is no need to invest to produce even more goods. Businesses postpone investment because households postpone consumption. The economy is not a set of scales that always returns to balance: it is more like a leaky balloon that will continue to lose air until something is done to stop the leak and reverse the process. Demand would continue to leak out of the system until the government boosts effective demand and restores the confidence of businesses and households. In other words, what is rational for individuals (paying down debt) prevents the system from achieving full employment. Rational individual decisions do not add up to a full-employment economy. We call this the *fallacy of composition*. Just because everyone is acting rationally doesn't mean that the system as a whole behaves rationally or optimally.

Under rational expectations the paradox of thrift is impossible. Prices will adjust to ensure that investment and saving are equal. The interest rate will fall, making investment more profitable and discouraging saving. Yet if this is the case then we need to ask why corporations continue to hoard cash four years after the onset of the global financial crisis? According to the Economist, firms in the S&P 500 held about \$900 billion in cash at the end of June 2012, which is 40 percent higher than four years ago. Cash held by Japanese companies is up 75 percent since 2007. New Classical economists say that the reason that corporations are not investing this money is that government regulations have made it unprofitable to do so. Keynesians counter that holding cash is safer than investing in productive assets when expectations of demand growth are still pessimistic.

This brings us to the third assumption, which relates to the role of interest rates in macroeconomic adjustment. Classical and New Classical economists share a belief that the economy will self-adjust. During a recession prices and wages fall, lowering

costs of production and output. Reduced consumption means higher saving, which forces down interest rates. Lower interest rates stimulate investment and consumption. As long as prices are fully flexible, the economy will return to its full employment equilibrium.

Keynes did not believe that interest rates equate saving and investment. His “liquidity preference” view holds that the interest rate is the price of illiquidity: in other words, the price that people have to be paid to get out of cash and into assets. Money functions as a store of value as well as a means to carry out transactions. When risk levels rise, holders of cash have to be paid more to convert their cash into assets, if they are willing to invest at all. At the peak of a financial crisis, interest rates can rise sharply as debtors scramble for cash as lenders hoard cash. The central bank has to act quickly to flood the market with liquidity to prevent a situation in which everyone flees into the safety of cash and there are no willing lenders.

In the last lecture we discussed the “liquidity trap,” in which there are no willing borrowers even at low interest rates. The liquidity trap may appear at times of deflation because we cannot have negative interest rates (banks will not pay people to borrow!). But the liquidity trap may even appear when interest rates are positive when debtors are trying to deleverage (pay down debt) and therefore have no interest in new loans. As we can see from the figure, loan growth in the US business and household sectors slowed during the global crisis even as interest rates fell near-zero levels. For Keynesians this is evidence of weak business confidence. New Classicals would counter that businesses and households are unwilling to invest and consume because they are anticipating higher tax bills in the future because of the government’s large fiscal deficit.

This brings us to the final assumption, which again relates back to Say’s Law. Keynes put forward the idea of the marginal propensity to consume, which is the share of additional income that households or individuals spend on everyday needs or durable goods. The marginal propensity to consume is the extra amount that an individual will spend if you give him or her one additional dollar or dong. It is represented by the slope of the consumption function. The marginal propensity to consume is important because it affects the *cumulative* impact of additional spending by government or on investment. For example, when the government increases spending (on transfers or public investment), this additional spending becomes additional disposable income, which is consumed. That additional consumption is also transformed into additional disposable income in a second round. With each successive round the impact on demand decreases, but the total effect is much greater than the first round of spending.

Keynes referred to this cumulative effect of additional spending as the *multiplier*, an idea that was central to his conclusion that an increase in government spending during a recession could move the economy towards full employment. Successive

rounds of consumption mean that the impact of a fiscal stimulus is much greater than that of the stimulus itself. It is probably not five times greater because of leakages into imports and taxes, but Keynes believed that it was larger than one. He argued that the multiplier is likely to be larger when unemployment is high, in other words when the economy is producing well below potential output. This was a reversal of the Classical position, which assumed that a fiscal stimulus would not succeed because given a fixed money supply (under the gold standard) any additional spending by government would have to be borrowed from the public, therefore reducing private consumption. If the government printed money to finance the stimulus, the additional consumption would be eliminated by the effects of inflation.

New Classical economists reject the multiplier based on the belief that changes in disposable income in the short run have little or no effect on consumption. This idea, known as the *permanent income hypothesis*, was proposed by Milton Friedman in the 1950s and subsequently developed by New Classical economists over the following decades. If people do not increase spending in response to periodic changes in disposable income, then the multiplier will be one or less than one. Any attempt by the government to move the economy closer to potential output through deficit spending would fail.

The basic idea of the permanent income hypothesis is that people plan their consumption over the course of their lives to maximize their utility. When we are young adults, perhaps when we are studying at university, our incomes are small and we often find that we have to borrow money to meet our consumption requirements. Later on when we are working and earning a better salary our consumption can increase, but we also have to save money for our retirement. Assuming that we have perfect foresight of future income, we maximize consumption over these various periods subject to an intertemporal budget constraint, which sets the maximum level of consumption over all periods.

This implies that the response to an increase in short term income is not to consume it all, or 80 percent of it, but to divide consumption over the various periods of our lives. The extra spending in the current period may thus be very small indeed. Consumption in the current period only changes in response to permanent, not temporary, income shocks. In addition, New Classical economists argue that given perfect foresight, consumers will respond to large government deficits by anticipating higher taxes and/or inflation in the future, and hence lower disposable income. The response of consumers to a fiscal stimulus will be to save money in the current period to avoid reduced consumption in the future.

These debates may sound highly theoretical, but they have practical policy implications. Many governments around the world ran large fiscal deficits in response to the demand contraction resulting from the global financial crisis. The debt burden

ins some countries, particularly in Europe, is very high. In order to avoid a solvency crisis, some of these governments have imposed heavy cuts on government spending. Some economists—inspired by New Classical theory—have argued that these cuts will not have a large impact on economic output because the fiscal multiplier is small. Consumers will not reduce spending in response to reductions in government spending because they are foresighted and will view small deficits today as a signal that taxes will be lower in the future.

A recent publication of the International Monetary Fund recently examined the relationship between growth forecast errors and fiscal consolidation for 28 economies.³ Assuming perfect foresight of the future, there should be no relationship between the growth forecast errors and budget cuts (in other words, the forecasts may be wrong, but these errors should have no systematic relationship to the extent of budget cuts). It turns out the relationship was strong. Countries had systematically underestimated the impact of budget cuts on growth because they had assumed that the multiplier is about 0.5. However, it turns out that the multiplier was between 0.9 and 1.7.

This finding was controversial and sparked heated debates in the newspapers and economic blogs. Keynesians view the report as evidence that some governments have cut budgets too far too fast (for example, Martin Wolf of the *Financial Times*). New Classical economists counter that growth rates are lower than expected because of other factors, for example the Euro crisis, or because the cuts have not been deep enough. The important lesson for policy makers is that whenever you get advice from an economist you should first ask them what they think about Keynes. The answer they give you will help you understand their policy recommendations.

³ International Monetary Fund (2012) *World Economic Outlook*, Washington, D.C., October, p. 41-43.