Macro Lecture 6 Texts

Welcome to The Power of Macroeconomics. >> Hi, I'm Peter Navarro and you may not have been expecting your professor to pop up here, but I thought that since we are now midway through our Power of Macroeconomics course, it might be good to have a quick halftime meeting. >> You may remember that in our last lecture we left off with our history of macroeconomics in the year 1990. >> President George Herbert Walker Bush was facing a deepening recession, but his new classical advisers refused to rely on any short run Keynesian stimulus to fix the problem. >> You'll now see in this lecture that while President Bush's Keynesian restraint may have cost him his re-election, his policies arguably set up the most prosperous decade in American history, the booming 1990s, under the administration of Bill Clinton. >> But in this lecture, you'll also see how it went so very wrong after the turn of the century. >> Beginning first with the recession of 2001 and not so very much later, the great recession of 2007. >> So why would the American economy, and many other economies around the globe, have such a difficult time in the twenty-first century? >> In this pivotal lecture you will find at least some answers to that question as we complete our history of the warring schools of macroeconomics.

The so-called new classical school is rooted in the Classical Economic tradition. It is important not just because of the strong influence it has had on recent macroeconomic theory. But also because New Classical economists played a pivotol role in the 1992 defeat of George Bush by Bill Clinton. New Classical economics is based on the controversial theory of rational expectations. This theory was developed by Nobel laureate Robert Lucas of The University of Chicago along with Thomas Sargent of Stanford and Robert Barrow of Harvard. It provides a sharp contrast to the notion of adaptive expectations we previously introduced in our lesson on inflation and unemployment. You may recall from that lesson with Adaptive Expectations people tend to assume that inflation will continue to be what it already is. For example, if inflation was 3% last year Adaptive Expectations will lead you to predict that inflation will be 3% next year. In contrast, if you form your expectations rationally you will take into account all available information including the future effects of activist fiscal and monetary policies. The idea behind rational expectations is that such activist policies might be able to fool people for a while. However, after a while, people will learn from their experiences, and then you can't fool them at all. The central policy implication of this idea is, of course, profound. Rational expectations render activist fiscal and monetary policies completely ineffective. So, they should be abandoned. And let me show you waht I mean. Suppose the federal reserve undertakes expansionary monetary policy to close a recessionary gap. Repeated experiences with such activist policy have taught people that increases in the money supply fuel inflation. To protect themselves in a world of rational expectations, businesses will immediately respond to the Fed's expansion by raising prices. Workers will demand higher wages and the attempted stimulus will be completely offset by the contractionary effects of inflation. Alternatively, suppose the government undertakes expansionary fiscal policy to stimulate the economy. People with rational expectations will respond by increasing their savings and reducing consumption, and thereby, likewise offset any expansionary effect. They will do this because they know that a larger budget deficit now means higher taxes later. So, they prepare for this future burden by saving more. Or, so the new classical argument goes. To illustrate this Rational Expectations dynamic, let's look at the aggregate supply, aggregate demand framework in this figure, and let's contrast the adjustment process of the economy with Adaptive versus Rational Expectations. In the figure, the general price level is on the vertical axis. Real output is on the horizontal access. The vertical line represents the long run aggregate supply curve at that natural rate of unemployment and the economy is in both the short and long run equilibrium at full employment output Y sub one and price piece of one. This is where the short-run aggregate supply and aggregate demand curves cross at point A. Suppose, then, we first assume adaptive expectations, and the government undertakes expansionary policy to increase output above the full employment rate. This expansion shifts the aggregate demand curve out to AD sub one and the economy temporarily reaches a new equilibrium output at point B. Here, output is Y sub two, at a new price level of P sub two. Note however, that once businesses and workers realise that inflation is higher, they add these

inflationary expectations into their calculations of prices and wages. This shifts the aggregate supply curve inwards to AS two and the economy falls back to point C. The end result is a short run spurt of growth above full employment output, followed by a return to the natural rate, albeit at a higher price level of p sub three. Now, what the new classical school says is that rather than travel from point A to point B and back to point C. The economy will enjoy no short run growth spurt at point B. Instead, the economy will move instantaneously from point A to point C. And the only result of the government's activist policy will be higher inflation. This is because, as we explained above, people with rational expectations anticipate the future impacts of current government policy decisions and react immediately. Now there are several things to say about Rational Expectations Theory, from both and economic and political perspective. Economically, critics of Rational Expectation say that most people are not as sophisticated in their economic thinking As the theory requires. And therefore, adjustments will not take place with anywhere near the speed they're supposed to. However, this criticism should not detract from the central point of rational expectations, namely that people's behavior may partially, or perhaps, completely counteract goals of activist fiscal monetary policy. Politically however, as George Bush painfully learned, relying on new classical economic thinking can be hazardous to one's health. Indeed, Presidents Bush's new classical advisers flatly rejected any Keynesian quick fix to Bush's deepening recession. Instead, in their economic report to the President, they called for more stable and systematic policies based on long term goals, rather than a continued reliance on short sighted discretionary reactions. Well, Bush took the new classical advice. The economy limped into the 1992 presidential election and like Richard Nixon in 1960, Bush lost to a Democrat promising to get the economy moving agian. What is prheaps most intersting about this transistion of power, is that Bill Clinton actually did very little to stimulate the economy. The mere fact, however, that Clinton promised a more activist approach helped restore business and consumer confidence. At the same time, congressional passage of Clinton's deficit reduction legislation in 1993, sent Wall Street a clear signal that his administration was serious about budget balance. Together, these factors helped accelerate a recovery that had already begun by the end of Bush's term and set the stage for Clinton's remarkably easy reelection in 1996. [SOUND] The roaring 1990s would truly be a macroeconomist's dream. A technology boom would usher in the age of the internet and this digital revolution helped robustly push the aggregate supply curve out. This shift of the AS curve significantly increased potential output, while dropping the natural rate and actual rate of unemployment. In this Goldilocks economy, not too hot, not too cold. Real GDP growth averaged close to 4% a year. A resultant surge in tax revenues and drop in welfare payments helped balance the US budget at the end of the Clinton Administration for the first time in decades. But, of course, all good things must end. Just two months after newly elected George W Bush took office. The March 2001 recession in the United States would start what would be more than a decade of slow growth and trouble for much of the world. Consider that in the five and half decades prior to 2001 the real Gross Domestic Product of the United States grew at a rate of roughly 3.5%. However, over the next decade that growth would fall to around 1.5%. So how many jobs do think were lost due to slow growth during the stagnant 2000s? The rule of thumb is that one percentage point of GDP growth lost is equal to one million new jobs not created. So a difference of 3.5% growth versus 1.6% growth in the 2000s is about two GDP points a year or two million jobs lost per year. So over a decade, that's about 20 million jobs not created because of slow growth below potential output. Not coincidentally, that was about the same amount America needed to bring it's unemployment rate back down to it's natural rate. It wasn't just slow GDP growth plaguing the economy. Wage growth would fall dramatically as well. In fact, average median household income. The best measure of income growth. Plunged to roughly zero during the 2000s, after growing close to 2% a year in the previous two decades. Of course, the worst part of the 2000s was the great recession of 2007. This was the steepest economic downturn since the great depression. It was an era characterized by massive bailouts, not just to private corporations like General Motors and AIG, but also public corporations like housing agencies, Fannie Mae and Freddie Mac. In the slow growth years following the great recession, the outgoing Bush administration, and the new Obama administration, would team up to execute the largest fiscal stimulus in world history. At the same time, central bankers from Washington and Ban to Tokyo and Seoul, would print vast sums of money in their Keynesian struggle to restart their respective economies. The US

Federal Reserve alone added trillions in liabilities to its balance sheet while printing money. Moreover, in an effort to stimulate the US economy in an era of nearly zero short-term interest rates, Fed Chairman Ben Bernanke would inaugurate a new Keynesian monetary policy tool known as quantitative easing. Or QE. QE involves the massive purchase of long-term government bonds by the Fed to drive up bond process and thereby drive down yields and interest rates. Of course the Fed's goal in lowering long-term interest rates was to stimulate both domestic investment and US exports. Domestic investment benefits from low, fixed long-term rates because most investment requires longer term financing. At the same time, lower long-term interest rates, and a flood of easy money, would help depress the value of the U.S. dollar, giving U.S. exports a boost. Despite all these Keynesian fiscal and monetary policy stimuli, unemployment in both the US and Europe would soar to double digits. Our next question is why, just as in the 1970s, was Keynesian economics so inadequate at bringing about a full and robust global economic recovery?

The relative failure of Keynesian's policies in the wake of the great recession, to stimulate the U.S. and global economies back to their full potential, may be traced to the failure of macroeconomists in the White House and elsewhere. >To recognize the underlying structural, rather than ciprocal nature of the slow growth problem. To understand the nature of this structural problem, it useful to refresh our memories as to how all economies grow, as well as reintroduce ourselves to the business cycle, and learn how it is measured, plotted, and forecast. This figure illustrates the typical business cycle. The percentage change in real GDP is plotted on the vertical axis, and time is plotted on the horizontal axis. And we can see how as real GDP rises and falls over time, the business cycle goes through expansionary peaks and recessionary troughs. We can also see that these short term oscillations occur, around an upward sloping secular or long term growth trend line. During the slow down of the 2000s, this secular long term growth trend line would actually flatten, for the US, Europe, and many other economies around the world. Indicating a structural, rather than ciprocal shift to lower growth. Of course, to draw this business cycle, we have to be able to plot real GDP over time. And knowing this, we can see the basic approach most economic forecasters take. Specifically, most forecasters look at the four major drivers of growth as illustrated in this Keynesian aggregate demand equation. These four drivers of GDP growth include consumption, investment, government spending, and net exports. Where net exports represent the difference between the exports of a nation, and its imports. And if imports exceed exports, a country is running a trade deficit. You can also see in this figure, just a few of the so called leading economic indicators, that forecasters use to try and predict movements in a business cycle. For example, to track consumption forecasters may watch consumer confidence closely. The idea is that a more confident consumer will spend more, and therefore GDP growth will increase. Hence, consumer confidence is considered to be a leading economic indicator of future growth. Similarily to track investment, a forecaster may watch a leading economic indicator, like the ISM Manufacturing Index. This is a broad and quite accurate measure of the health of the manufacturing sector, and a healthy ISM index with the value above 50, likely means an expanding economy. You can also see in this figure, that forecaster's pay very close attention to inflation indicator's, like consumer price index or CPI. If this index shows inflation rising, the Federal Reserve might raise the interest rates, and thereby, slow down GDP growth. If you are manufacturing business getting ready to up your production, this is a very good forecasting information to have. Now here in this figure, is illustrated the generic structural problem, faced by both the US and European economies. As well as other major economies like that of Japan and South Korea, as the world emerged from recession in the 2010s. Note in the figure that by simple math, if a country like the US runs a trade deficit, this directly subtract's from its GDP growth. And from that observation, you can see what the two main structure drags on growth, for many developed nations like the US have been. The first has been the direct drag of the large trade deficits. The second has been the indirect drag of lower domestic investment growth, as multi-national companies like Caterpillar and General Electric and General Motors, have built more plants in other countries and few plants in the US. Just where has most of the off-shoring of productions gone? The answer for the most part has been China. Not coincidentally at the start of the America's new era of slow growth in 2001, China joined the World Trade Organization or WTO, and was given full access to American markets. >>

Contrary to the rules of the WTO, China began to immediately flood the US with cheap, often illegally subsidized exports, and over the next decade, the US would see the loss of over 50,000 factories, and more than 5,000,000 manufacturing jobs. >> During this time the economies of Europe, India, Brazil, among others, would likewise begin to large growth-sapping trade deficits with China. And this would reduce global growth, below what it would otherwise be. The result, would be the structural emergence of a growth-sapping global trade imbalance, as illustrated in the following set of figures. Here, we see chronic annual trade deficits on the order of 200 to 300 billion dollar annually, with the heavily exported China. By the year 2012, these deficits would help slow growth dramatically in both Europe and the US. And China's two biggest customers would thereby, be too weak to sustain China's export dependent growth. In a ripple effect, slow growth in China, in turn, would lead to slower growth in so called commodity countries. Like Australia, Brazil and Canada, whose economies depend heavily on the sale of natural resources like coal, iron ore and soybeans to China. Most broadly, these structural trade relationships would lead to a new type of butterfly effect the world had not yet seen. Here, we see that weak demand for Chinese exports from Europe and the U.S., in turn leads to weak import demand from China for commodities and other natural resources. In this way, chronic trade imbalances between China and other countries around the world would, make it very difficult for a robust, global economic recovery. From this butterfly effect, you can see why expansionary, Keynesian fiscal and monetary stimulus in the US and Europe, did not have the full effects anticipated. Indeed, this short-run Keynesian approach, did nothing to address the underlying, chronic, long-term structural trade imbalances, acting as a drag on both the U.S. and European economies. And by extension, much of the rest of the world. We'll talk more about the effects of trade on growth, in subsequent lectures. For now let's finish this lecture, with a broad discussion of the strengths and weaknesses, in the warring school of macroeconomics.

There are three important questions we have to ask to fully evaluate the warring schools of macroeconomics. Number one, what causes instability in the economy so that it deviates from its full employment output? Two, is the economy self correcting, and if so, what is the speed of the adjustment back to full employment output? And three, should the government adhere to a set of hard and fast rules, or rather use discretion in setting fiscal and monetary policy? So let's start with the first question. What can drive an economy away from its full employment output? The main stream view is Keynesian based. It holds that instability in the economy arises from two sources. The first, most common problem is significant changes in investment spending. And to a lesser extent consumption spending, both of which change aggregate demand. The second more occasional problem is adverse supply side shocks which change aggregate supply. Now in contrast to the Keynesian view, the Monetarists hold that it is inappropriate government policies that are the major cause of macroeconomic instability. In fact, modern monetarism is a classically based perspective. This is because, like classical economics, monetarism argues that the price and wage flexibility provided by competitive markets cause fluctuations in aggregate demand to alter product and resource prices, rather than output and employment. The problem, as Monetarists see it, is that wages can't adjust freely downward because of government policies, ranging from minimum wage and pro-union legislation, to guaranteeing prices for farm products, pro-business monopoly protections, and so on. Even more importantly, the Monetarists also blame the government's clumsy and often misguided attempts to achieve greater stability to activists monetary policies. This problem of a misguided government is rooted in the Monetarists view of the economy through the lens of the Equation of Exchange and quantity theory of money, which we examined in lecture four. You may recall from that lecture that if the velocity of money v is stable, and real output q is independent of the price level, changes in the money supply m can only lead to changes in inflation. Of course it is a matter of some debate as to whether the velocity of money is stable. And in fact Keynesians take the view that velocity is actually unstable. From the perspective of supply side economics, supply siders agree with the Keynesians that macroeconomic instability can result from supply side shocks. However, in this regard supply siders at least partly share the classical and monetarist view that it is often the government, not just droughts and oil price hikes, that is to blame for causing the shocks. Of particular concern to the supply siders are high tax rates and regulations that reduce supply incentives. Let's turn now to our second

area of controversy, the question of whether the economy self corrects. In this debate, it not just a question of whether an economy corrects itself when instability does occur, economists also disagree as to the length of time it will take for any such self correction to happen. In this regard, both the monetarists and the new classical economists take the view that when the economy occasionally diverges from its full employment output, internal mechanisms within the economy automatically move it back to that output. This perspective is associated with the theories of adaptive and rational expectations that we have already discussed. This figure relates the new classical view of self correction. Here, an unanticipated increase in aggregate demand from AD1 to AD2 moves the economy from point A to point B. This causes the price level to rise from P1 to P2, as real output increases from Q1 to Q2. Now, in a new classical world, what do you think happens next to bring the economy back to Q1? And what do you think will happen to the price level. In the long run, nominal wages will rise to restore the real wages that have been eroded by inflation. This causes per unit production cost to rise, and eventually the short run aggregate supply curve shifts leftward and inward, from AS1 to AS2. As the economy moves from point b to point c, the price level rises from P2 to P3, and the economy returns to the full employment level of Q1. Now what about the speed of adjustment issue? Well here there is much controversy, even within the various schools of macroeconomics. For example, classically orientated monetarists usually hold the adaptive expectations view that people form their expectations on present realities, and only gradually change their expectations as experience unfolds. This implies that the shifts in the short run aggregate supply curves that we have just illustrated, may not occur for two or three years or even longer. On the other hand, the new classical economists accept the rational expectations assumption that workers anticipate some future outcomes before they even occur. This suggests that when price level changes are fully anticipated, the adjustments in our figures occur very quickly, indeed even instantaneously. So what do the Keynesians think about all this? Well, almost all economists today acknowledge that new classical economics has taught us some important lessons about the theory of aggregate supply. None the less, most mainstream economists strongly disagree with new classical rational expectations theory on the question of downward price and wage flexibility. In this regard, while the stock market, foreign exchange market and certain commodity markets experience day to day or even minute to minute price changes, including price declines. This is not true in many product markets, and in most labor markets. Indeed, there appears to be ample evidence, say mainstream economists, that many prices and wages are inflexible downward for long periods. As a result, it may take years for an economy to move from recession back to full employment output, unless it gets help from fiscal and monetary policy.

Now, let's turn to a third major area of disagreement among the varying schools of macroeconomics. The use of policy rules or discretion. This discussion follows naturally from the debates over the causes of macroeconomic instability. Whether such instability is self-correcting and how long it takes for the self-correction to take place. Here is how the debate is often framed. The Monetarist and New Classical perspective, should the government adhere to policy rule that prohibit it from causing instability in an economy that would otherwise be stable? The Keynesian view, should the government use discretionary fiscal and monetary policy when needed to stabilize a sometimes unstable economy. And from the supply side view, should the government pursue discretionary policies to increase aggregate supply as a way of increasing output and reducing inflationary pressures. Let's start with the monetarist and new classical arguments in support of policy rules for the conduct of monetary policy and balancing the budget. The purpose of such rules is to prevent government from trying to manage aggregate demand. In this view, such management is misguided and thus likely to cause more instability than it cures. For the monetarist, the enactment of a monetary rule makes the most sense. This is because monetarists believe inappropriate monetary policy is the major source of macroeconomic instability. Such a rule would direct the federal reserve to expand the money supply each year at the same annual rate as the typical growth of the economy's production capacity. The Feds sole monetary rule would then be to use tools; such as, open market operations, changes in the reserve requirement, and discount rate changes to ensure that the nation's money supply grows steadily by say 3 to 5% a year. Or into the father of monetarism, Milton Friedman, such a rule would eliminate the major cause of instability in

the economy. A capricious and unpredictable impact of counter cyclical monetary policy. This figure helps illustrate the rationale for a monetary rule: here we assume that the economy is operating at a full employment real output of Q 1. We also assume that the nation's long run aggregate supply curve shifts rightward each year, as from AS LR1, to AS LR2. This shift depicts the average annual potential increase in real output. Now the monetarist monetary rule would tie increases in the money supply to the typical rightward shift of long run aggregate supply. In view of the direct link between changes in the money supply and aggregate demand, this would ensure that the AD curve shifts rightward as from AD1 to AD2 each year. As a result, real GDP would rise from Q1 to Q2 and the price level would remain constant at P1. In this view, a monetary rule would promote steady growth of real output along with price stability. Generally New Classical rational expectations economists also support a monetary rule. They conclude that an easy or tight money policy will alter the rate of inflation but not real output. For example, suppose the Federal Reserve implements an easy money policy to reduce interest rates, expand investment spending and boost real GDP. On the basis of past experience and economic knowledge, the public will anticipate that this policy is inflationary and take self protective action. Workers will press for higher wages, firms will increase product prices, and lenders will raise their nominal interest rates. While these responses are designed to prevent inflation from having adverse effects on real income of workers, businesses, and lenders, the collective impact is to immediate raise wage and price levels. This offsets the increase in aggregate demand brought about by easy money so real output and employment do not expand, but wages and prices do. A second rule that is often debated is that of a balanced budget rule. In this regard, Monetarists and New Classical economists question the effectiveness of fiscal policy. And at the extreme, a few of these economists favor a Constitutional amendment to require the Federal government to annually balance its budget. Still others simply suggest that the government be passive in its fiscal policy, meaning that it should not intentionally create budget deficits or surpluses. This is because in this view, deficits and surpluses caused by recession or inflationary expansion will eventually correct themselves as the economy self-corrects to its full-employment output. So do Keynesian based mainstream economists respond to the calls by monetarists and new classical economists for a monetary rule, and a balanced budget requirement? In supporting discretionary monetary policy, Keynesian based economists argue that the rationale for a monetary rule is flawed. While there is indeed a close relationship between the money supply and nominal GDP over long periods, in shorter periods, this relationship breaks down. This argument goes back to our earlier argument about the stability of the velocity of money alleged by the monitorists. Arguing that velocity is variable, both cyclically, and over time. The Keynesian based economists contend that a constant annual rate of increase in the money supply need not eliminate fluctuations in aggregate demand. In terms of the equation of exchange, a steady rise in M does not guarantee a steady expansion of aggregate demand, because the velocity V can change. As for the use of discretionary fiscal policy, the major area of debate revolves around one of the most important concepts in macroeconomics, the so called crowding out of private sector investment by expansionary fiscal policy. Crowding out is the offsetting effect on private expenditures caused by the government sale of bonds to finance expansionary fiscal policy. Here's how it may happen. When the Federal government borrows money to finance a budget deficit, the U.S. treasury sells IOU's in the form of bonds or treasury bills directly to the private capital markets. And uses the proceeds of the sales to finance the deficit. Note that in this case, the Federal Reserve is out of the loop. Note also that the U.S. Treasury is competing directly in the capital markets with private corporations, which may also be seeking to sell bonds and stocks in order to raise capital to invest in new plant and equipment. In order to compete for these scarce investment dollars, the treasury typically must raise the interest rate it is offering in order to attract enough funds. This is because, in this case, running a deficit is largely a zero sum game. The money used to finance the deficit is money that would otherwise have been borrowed and spent by corporations and businesses on private investment. In this case, deficit spending by the government is said to crowd out private investment. This crowding out effect is illustrated by these two figures. On the lefthand figure, an increase in investment demand by the government shifts the investment demand curve from id one to id two. This raises the interest rate and reduces private investment as is made clear by the right-hand figure. Note that in this figure, if the economy starts at point a and moves to point

b, crowding out will be equal to h one minus h two. But if the economy starts at point C in a recession and moves to point B, crowding out need not occur. Now, what is perhaps most interesting about the crowding out effect within the context of our warring schools of macroeconomics is this. Monetarists believe that substantial crowding out is associated with discretionary expansionary fiscal policy. And therefore conclude, it shouldn't be used because it is ineffective. On the other hand, while Keynesian based economist recognized the possibility of crowding out, they do not think it is a major problem when business borrowing is depressed, as is usually the case in a recession. Therefore, activist expansionary fiscal policy is appropriate. As for a balanced budget rule, Keynesian based mainstream economists are likewise opposed. They argue the tax revenues fall sharply during recessions, and rise briskly during periods of demand-pull inflation. Therefore, a law or constitutional amendment mandating an annually-balanced budget would require the government to increase tax rates and reduce government spending during recession, and reduce tax rates and increase government spending during economic booms. Clearly, the first set of actions would worsen recession. While the second set would fuel inflation. Now let's turn to the supply side perspective, on the issue of rules versus discretion. Supply siders argue that marginal tax rates and government regulations, must be reduced in order to get more output, without added inflation. Thus, supply siders favor discretionary policy actions much like Keynesians do. However, very often, the focus of such actions is classically oriented, in that the actions advocated seek to reduce or undo the negative effects of earlier government regulations or tax policies. From our discussion so far, we have seen that there are fundamental areas of disagreement between the warring schools of macroeconomics. Nonetheless, despite these many areas of disagreement, there are areas when their thoughts have converged. For example, most Keynesian based economists now agree with the monetarists that, money matters. And that excessive growth of the money supply is the major cause of long-lasting rapid inflation. Keynesian based economists also agree with the rational expectations proponents, that expectations are, indeed, important. In this regard, if government can create expectations of price stability, full employment, and economic growth, households and firms will tend to act in ways to make that happen. Finally, Keynesians concur with the supply siders that government needs to focus on policies to increase economic growth. Bottom line is that thanks to ongoing challenges to the conventional macroeconomics wisdom, macroeconomics continues to be an evolving policy science. In the next lecture, we return to a more narrow focus as we examine the important issue of economic growth. In the mean time, please remember that economics is not something to be memorized,

but rather something to conceptualize. As you study it, think about it too. Your job and your business might just depend on it.