

Keynesian stimulus versus classical austerity

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Keynesians know that if US austerity advocates had received just a few more votes in the November 2008 election, there would have been no fiscal stimulus or financial rescue in 2009 and the Great Recession would have turned into a second great depression. ‘Keynesian’ means recognizing the crucial role of aggregate demand, grasping the paradox of saving, advocating fiscal stimulus (tax cuts as well as government spending) in a recession despite the temporary increase in debt that it generates, and recognizing that monetary stimulus alone is inadequate in a severe recession. Contrary to the claims of austerity advocates, fiscal stimulus in general (and tax cuts in particular) did not fail during the Great Recession, but on the contrary helped avert a depression. The Keynesian multiplier is much larger in recession than in prosperity, but empirical studies often estimate its value in prosperity instead of recession. Keynesians should support austerity in prosperity and stimulus in recession. Unless a second Keynesian revolution is launched and succeeds in persuading both the economics profession and the public, the next severe recession may become a depression.

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Keynesians know that on election day in November 2008, as the US financial and economic crisis deepened, the United States tottered on the brink of a second great depression. Who would control the US government for the next two years: advocates of stimulus or advocates of austerity? In this article ‘austerity’ means no fiscal stimulus, no financial rescues, and immediate cuts in government spending. If advocates of austerity had won either a simple majority of the House of Representatives, or more than 40 percent of the US Senate (enough to defeat any legislation by filibustering), or the US Presidency (which would enable the veto of any legislation), then in 2009 the fiscal stimulus package would not have been enacted, no financial rescues would have occurred, and government spending would have been cut – not only federal, but also state and local, because there would have been no federal emergency relief to these governments.

Using a Keynesian macro-econometric model, Blinder and Zandi (2010) estimate that if there had been no fiscal stimulus, no financial rescues, and no monetary stimulus, the US unemployment rate would have peaked at 16 percent instead of the 10 percent peak that actually occurred. They estimate that, with only monetary stimulus, the unemployment rate would have peaked at over 12 percent. But 12 percent is surely an underestimate because it doesn’t include the psychological impact on the public of more financial failures like Lehman Brothers and an unemployment rate exceeding 12 percent.

In a very close vote in November 2008, austerity advocates failed to win either a majority in the House of Representatives, or more than 40 percent of the Senate, or the presidency. Stimulus advocates were therefore able to enact fiscal stimulus in 2009. However, because austerity advocates constituted nearly 40 percent of the Senate, stimulus advocates were forced to reduce the size of the fiscal stimulus package in order to get the 60 votes needed for passage in the Senate, so the stimulus was large enough to avert a depression but too small to generate a strong recovery. In November 2010, austerity advocates succeeded in winning a majority in the House of Representatives and more than 40 percent of the US Senate, so there has been no significant fiscal stimulus since 2010.

Most Americans, in contrast to Keynesians, do not realize how close the US came to another great depression in 2009. Among the American public, support for stimulus and support for austerity are closely balanced. Unfortunately, this reflects the close balance within the economics profession between advocates of Keynesian stimulus and advocates of classical austerity. In the 3 decades following Keynes's path-breaking 1936 book, the Keynesian revolution gradually won over a large majority of professional economists. But since the 1970s, a classical counter-revolution has gradually made an astonishing comeback within the economics profession. Unless a second Keynesian revolution is launched and succeeds, the next severe recession will once again threaten to become a great depression.

Each section of this article addresses an aspect of Keynesian economics that is controversial today with either professional economists, or economic policymakers, or the general public. The sections have these headings: (1) 'Keynesian' means recognizing the crucial role of aggregate demand; (2) A Keynesian diagram 'worth a thousand words'; (3) 'Keynesian' means grasping the paradox of saving; (4) 'Keynesian' means advocating fiscal stimulus in a recession; (5) 'Keynesian fiscal stimulus' means tax cuts as well as government spending; (6) 'Keynesian' means recognizing that monetary stimulus alone is inadequate; (7) Did fiscal stimulus fail during the Great Recession?; (8) Did tax cuts fail during the Great Recession?; (9) A common mistake in estimating the Keynesian multiplier; (10) Keynesians should advocate austerity in prosperity; (11) Preventing classical austerity in a recession.

1 'KEYNESIAN' MEANS RECOGNIZING THE CRUCIAL ROLE OF AGGREGATE DEMAND

Galvanized by the searing reality of the Great Depression, John Maynard Keynes launched a revolution in economics, initially with a series of policy recommendations and articles in the early 1930s, eventually culminating in his *General Theory of Employment, Interest, and Money* (1936). Keynes revived, crystalized, and clearly articulated the concept of aggregate demand – 'The Principal of Effective Demand' as he called it in the title to his chapter 3 – and brought it out of the historical shadows into the central spotlight of economics. Yet the new classical counter-revolution that has taken place since the 1970s has ushered in a new Dark Ages in which a new young generation of macroeconomists has grown up without any knowledge of what Keynes wrote and prescribed.

At the beginning of his *General Theory*, Keynes argued that the fundamental flaw in classical economics was its assumption that supply automatically creates its own demand so that sufficient demand could be taken for granted. Keynes's attack on this classical assumption, which he termed 'Say's Law,' seemed devastating. In the

aftermath of his *General Theory*, it seemed inconceivable that economists would ever again ignore the crucial role of variations in aggregate demand for goods and services.

The inconceivable happened. In the 1970s, a classical resurgence was launched and led by Lucas, Sargent, Barro, Prescott, and followed by many other young economists. These new classical economists rarely mentioned 'aggregate demand.' They ignored the possibility that a plunge in aggregate demand could generate a recession, or that the cure for a recession would require raising aggregate demand.

It is chilling today, in light of this new classical counter-revolution, to read Keynes's brilliant and eloquent closing section of his chapter on effective demand (1936, pp. 32–34):

The idea that we can safely neglect the aggregate demand function is fundamental to the Ricardian economics, which underlie what we have been taught for more than a century. Malthus, indeed, had vehemently opposed Ricardo's doctrine that it was impossible for effective demand to be deficient; but vainly ... and Ricardo conquered England as completely as the Holy Inquisition conquered Spain. Not only was his theory accepted by the city, by statesmen and by the academic world. But controversy ceased; the other point of view completely disappeared; it ceased to be discussed. The great puzzle of Effective Demand with which Malthus had wrestled vanished from the economic literature...

The completeness of the Ricardian victory is something of a curiosity and a mystery. It must have been due to a complex of suitabilities in the doctrine to the environment into which it was projected. That it reached conclusions quite different from what the ordinary uninstructed person would expect, added, I suppose, to its intellectual prestige. That its teaching, translated into practice, was austere and often unpalatable, lent it virtue. That it was adapted to carry a vast and consistent logical superstructure, gave it beauty. That it could explain much social injustice and apparent cruelty as an inevitable incident in the scheme of progress, and the attempt to change such things as likely on the whole to do more harm than good, commended it to authority. That it afforded a measure of justification to the free activities of the individual capitalist, attracted to it the support of the dominant social force behind authority.

But although the doctrine itself has remained unquestioned by orthodox economists up to a late date, its signal failure for purposes of scientific prediction has greatly impaired, in the course of time, the prestige of its practitioners. For professional economists, after Malthus, were apparently unmoved by the lack of correspondence between the results of their theory and the facts of observation;— a discrepancy which the ordinary man has not failed to observe, with the result of his growing unwillingness to accord to economists that measure of respect which he gives to other groups of scientists whose theoretical results are confirmed by observation when they are applied to the facts.

The celebrated *optimism* of traditional economic theory, which has led to economists being looked upon as Cándides, who, having left this world for the cultivation of their gardens, teach that all is for the best in the best of all possible worlds provided we will let well enough alone, is also to be traced, I think, to their having neglected to take account of the drag on prosperity which can be exercised by an insufficiency of effective demand. For there would obviously be a natural tendency towards the optimum employment of resources in a Society which was functioning after the manner of the classical postulates. It may well be that classical theory represents the way in which we should like our Economy to behave. But to assume that it actually does so is to assume our difficulties away.

These words were written in 1936 but they could have been written in 2012. Surely, in the searing reality of the Great Recession, the time has at last come for a second Keynesian revolution.

2 A KEYNESIAN DIAGRAM WORTH A THOUSAND WORDS

In 1948, Paul Samuelson explained the core Keynesian idea with a simple 45-degree-line diagram in the first edition of his introductory economics textbook (shown in Figure 1). The diagram was worth a thousand words and during the 1950s and 1960s became the key tool for teaching the crucial role of aggregate demand to economics professors and students in most colleges.

At each level of output (Y), which was plotted horizontally, there would be a level of demand (D), which was plotted vertically, that would be forthcoming from consumers, business firms investing in plant and equipment, and government purchasing goods or services (so $D = C + I + G$). D was a straight line with a positive slope but flatter (as shown) than the slope of the 45-degree line from the origin for the following reason: if output Y increased \$100, people would earn an additional \$100 of income but would save \$20 (for example) and consume \$80 so D would increase \$80 when Y increased \$100 – hence, the slope of the D line would be 0.8, less than the slope of 1.0 of the 45-degree line.

With a D line of D_0 , the economy would move to output Y_0 where the aggregate demand line intersected the 45-degree line, because if output Y was initially less than Y_0 – for example, Y_1 – the height of the D_0 line at Y_1 would be greater than the height of the 45 line (which equaled output Y_1) so producers would raise production and output would increase from Y_1 to Y_0 . If the aggregate demand (D) line shifted down from D_0 to D_1 – for example, because consumers and businesses became anxious in response to a stock market or housing market plunge or a financial crisis – the economy would move from Y_0 to a lower output Y_1 . Hence, a shift down of the aggregate demand line from D_0 to D_1 would cause a recession – a fall in output from Y_0 to Y_1 .

A glance at the 45-degree diagram made the cure for recession straightforward. The government needed to shift the aggregate demand line back up from D_1 to D_0 . Congress could do this by sufficiently cutting taxes or giving cash transfers to consumers so they would raise C , which in turn would induce business firms to raise I so they could produce enough to meet the new consumer demand; and/or by raising government purchases G . The 45-degree diagram, with $D = C + I + G$, showed clearly how fiscal stimulus would raise D : raising G would raise D , and cutting taxes or increasing government transfers to households would raise C (and this increase in C would likely induce business managers to raise I). The 45-degree diagram therefore led directly to fiscal stimulus as the key policy for combating a recession.

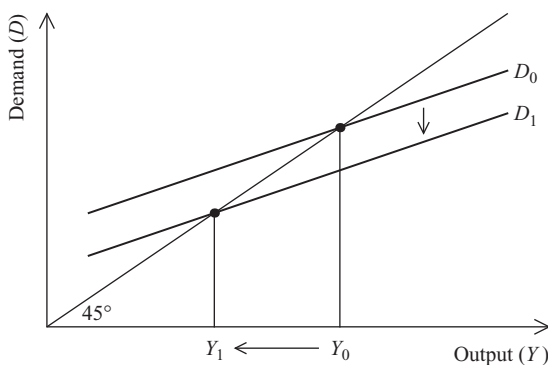


Figure 1 45-degree diagram

Moreover, the 45-degree diagram replaced the simple ‘quantity theory of money’ equation $MV = PY$ (where V is ‘the velocity’ of money, *assumed* to be constant despite overwhelming contrary empirical evidence, and P is the price level) as the key tool for teaching how Y is determined. The quantity theory of money equation clearly focused attention on the money supply M , and seemed to imply that the most important determinant of Y is the quantity of money M in the economy, which in turn was held to be under the control of the central bank. The equation seemed to imply that to prevent a fall in Y , the central bank had simply to prevent a fall in M ; and if somehow Y had fallen, the central bank could simply raise M to restore Y to normal. The quantity theory of money equation completely ignored fiscal policy. Thus, replacing the money equation with the 45-degree diagram as the key tool of analysis turned attention from monetary policy to fiscal policy.

Since the launching of the classical counter-revolution in the 1970s, most textbooks have given less attention to the 45-degree diagram and to the use of fiscal stimulus to combat a recession. Many economics PhD programs ignored the possible role of Keynesian fiscal stimulus in combating a recession. Emerging from these PhD programs, young economics professors naturally either ignored or commented negatively on the use of fiscal stimulus to combat a recession in their undergraduate economics courses. Undergraduates emerging from these college economics courses had a much more negative view of the use of fiscal stimulus to combat a recession than students who emerged from most college economics courses in the mid-1960s.

3 ‘KEYNESIAN’ MEANS GRASPING THE PARADOX OF SAVING

Classical economists contend that it doesn’t matter for employment whether households try to save more and consume less. They reason that if households try to save more, they will in fact succeed in saving more, and the additional funds they save will be borrowed by business firms to buy additional machines. So more workers will be employed making machines – investment goods – and fewer will be employed making consumer goods, but total employment will be unaffected. But here is how Keynes began his chapter 16 (1936, p. 210):

An act of individual saving means – so to speak – a decision not to have dinner today. But it does *not* necessitate a decision to have dinner or to buy a pair of boots a week hence or a year hence or to consume any specified thing at any specified date. Thus it depresses the business of preparing today’s dinner without stimulating the business of making ready for some future act of consumption. It is not a substitution of future consumption-demand for present consumption-demand – it is a net diminution of such demand...

Keynes’s paradox of saving received great emphasis in the Keynesian textbooks written in the three decades following Keynes’s *General Theory*. In his textbook, Samuelson (1948) emphasized the paradox of saving in his discussion of the 45-degree diagram: if households tried to save more and consume less, the aggregate demand line ($C + I + G$) would shift down, reducing output.

Did the new classical economists of the 1970s offer a refutation of Keynes’s paradox? Not at all. They simply ignored it. The leaders of the new classical counter-revolution were certainly aware of Keynes’s paradox of saving, having surely seen it in their college textbooks. But the younger economists they taught, mentored, recruited, and persuaded were never confronted with it. The new classical leaders simply omitted any reference to aggregate demand or the paradox of saving, and their students apparently never thought of it themselves.

4 'KEYNESIAN' MEANS ADVOCATING FISCAL STIMULUS IN A RECESSION

By their policies ye shall know them. 'Keynesian' means advocating a temporary fiscal stimulus (temporary government spending and/or temporary tax cuts) to raise aggregate demand to combat a recession even though this entails government deficits and debt (Seidman 2001; 2003; 2010; 2011; and Seidman and Lewis 2009). A Keynesian also advocates monetary stimulus as a complement to, but not as a substitute for, fiscal stimulus, because a Keynesian doubts that monetary stimulus alone has the power to cure a severe recession. A Keynesian also recognizes that it may be necessary for the government – the Treasury and/or the Federal Reserve – to implement financial rescues if a private sector financial crisis freezes credit markets. From observation of the economic history of capitalist economies, a Keynesian understands that the private sector is capable of getting itself into a financial crisis by generating an exuberant financial boom that eventually crashes.

'Classical' means opposing a temporary fiscal stimulus to combat a recession, and instead advocating 'austerity' – specifically, cutting government spending to reduce government deficits and debt during a recession. A Classical believes temporary fiscal stimulus won't mitigate a recession but will do harm by raising government debt. A Classical believes either that the economy itself automatically cures a recession or that monetary stimulus alone is sufficient.

Advocates of Keynesian fiscal stimulus emphasize that it should be reinforced by monetary stimulus. Keynesian fiscal stimulus either temporarily reduces taxes or increases government spending, thereby requiring additional federal borrowing, so the Treasury must sell additional bonds to the public. Keynesians call upon the Federal Reserve to buy additional Treasury bonds from the public through its open market operations so that the fiscal expansion is reinforced by a monetary expansion that keeps interest rates from rising. The magnitude of the combined fiscal/monetary stimulus should be set large enough to raise aggregate demand back to normal.

'Keynesian' means placing a higher priority on combating a recession than on balancing the budget or preventing an increase in debt during the recession. Keynesian fiscal stimulus involves a temporary increase in government borrowing and government debt. Keynes's practical policy message was that in a severe recession, stimulating aggregate demand is more important than preventing a rise in government debt.

Keynes was passionate about using fiscal stimulus to combat the Great Depression. Several years before he worked out and presented his new macroeconomic theory in 1936, he wrote articles advocating fiscal stimulus – government spending financed by borrowing – to counter the Depression. Keynes would surely object to an economist identifying himself as a 'new Keynesian' who did not support fiscal stimulus to combat a severe recession.

5 'KEYNESIAN FISCAL STIMULUS' MEANS TAX CUTS AS WELL AS GOVERNMENT SPENDING

Keynesian fiscal stimulus is the use of temporary increases in government spending (transfers or purchases) or temporary tax cuts to increase aggregate demand for goods and services during a recession when aggregate demand is insufficient. Perhaps the most influential early exposition of Keynesian macroeconomics to a broad

audience, Paul Samuelson's first edition (1948) of his introductory economics textbook, contained this passage (pp. 413–414):

In addition to public-works expenditures and welfare expenditure, countercyclical compensatory fiscal policy can also rely on cyclically timed tax policies... Even without Congress changing any laws, it turns out that governmental tax collections fall off when national income falls off... This is a powerful factor stabilizing the whole economy and moderating the business cycle... Even this is not all. Congress can also change tax rates... Those who believe in countercyclical compensatory fiscal policy argue that the time to reduce tax rates is in depression, when over-all purchasing power is too low.

The Kennedy Administration in the early 1960s experienced an internal debate between two Keynesian advisers, Walter Heller and John Kenneth Galbraith. Heller and Galbraith agreed that a tax cut and a government spending increase were each Keynesian fiscal stimuli that would raise aggregate demand and generate more output and employment when unemployment was high. Heller argued for a tax cut and Galbraith for a spending increase. Of course, today supply-side anti-Keynesian conservatives (for example, the editorial writers of the *Wall Street Journal*) claim the Kennedy tax cut worked because it induced more supply of labor and capital, not because it stimulated aggregate demand. But Heller's argument for the tax cut was Keynesian: it would lift aggregate demand.

Although tax cuts are Keynesian – they increase aggregate demand – they have come to be associated with conservative 'supply-side' motivations. Presidential candidate Ronald Reagan in 1980 and George W. Bush in 2000 each proposed a permanent 'across-the-board' tax rate cut with the purpose of reducing the size of government, providing supply-side incentives, and cutting income taxes for the wealthy far more than for the non-wealthy. Ironically, both the tax cuts of 1981 and 2001 turned out to have the Keynesian effect of raising aggregate demand during a recession – Reagan's in 1982, Bush's in 2002 – which helped mitigate the severity of each recession.

Tax cuts do *not* have to favor the wealthy over the non-wealthy. In contrast to the Reagan and Bush tax cuts, taxes can be cut in a way that limits the dollars given to high-income households – in fact, several such tax cuts were enacted to combat the 2008 recession. The tax rebate of 2008, the income tax withholding cut of 2009 that implemented President Obama's Making Work Pay Tax Credit (which constituted nearly a third of the dollars in the February 2009 \$800 billion fiscal stimulus package enacted by Congress), and the 2-percentage-point (from 6.2 percent to 4.2 percent) employee payroll tax cut in 2011 and 2012, each limited the dollars that went to high-income households.

The debate over Keynesian fiscal stimulus, therefore, should not be framed as 'government spending versus tax cuts.' Both are Keynesian fiscal stimuli aimed at raising aggregate demand during a recession.

6 'KEYNESIAN' MEANS RECOGNIZING THAT MONETARY STIMULUS ALONE IS INADEQUATE

Many economists who recognize that recessions are caused by a fall in demand nevertheless favor monetary stimulus because they doubt that fiscal stimulus would be implemented competently by Congress. They judge that Congressional politics would generate delays, fill any stimulus package with projects distorted by special interests, and continue the stimulus after the recession.

However, the Great Recession revealed the impotence of monetary stimulus alone to overcome a severe recession. The Federal Reserve cut the federal funds rate from about 5 percent in mid-2007 to nearly 0 percent in late 2008, yet the economy continued to suffer from inadequate aggregate demand for goods and services, evidenced by the huge 6 percent gap in 2009 between actual and normal GDP (the GDP that would be generated if the unemployment rate were normal).

Money enters the economy, not through a helicopter drop or the mailing of checks to households, but through the Federal Reserve's open market operations in which the Fed buys US Treasury bonds and pays with new money, and sellers of these bonds deposit their Fed checks in their banks, thereby increasing bank reserves. It is true that, as a consequence, banks experience an increase in idle reserves that they would prefer to lend out at interest. But in a severe recession a pessimistic private sector is unwilling to borrow and spend, even if banks have offered very low interest rates. This is now called the 'zero-bound problem,' confronting monetary policy in a recession.

Keynes emphatically rejected the quantity theory of money ($MV = PY$ with V assumed constant) as a tool for understanding why output Y falls in a recession and how it can be raised back to normal. He rejected the assumption that V is constant, and, therefore, that there was a reliable relationship between M and Y . In particular, he asserted that the central bank alone was unable to cure a severe recession because money expansion alone would not raise aggregate demand enough.

In his 1948 first edition (and subsequent editions) Samuelson said it well (pp. 353–354):

In terms of the quantity theory of money, we may say that the velocity of circulation of money does not remain constant. 'You can lead a horse to water, but you can't make him drink.' You can force money on the system in exchange for government bonds... but you can't make the money circulate against new goods and new jobs... You can tempt businessmen with cheap rates of borrowing, but you can't make them borrow and spend on new investment goods.

Monetary policy relies on stimulating loans. But every potential borrower knows that a loan is supposed to be paid back. If business firms forecast weak demand for their products, then even a 0 percent long-term interest rate won't induce much borrowing by firms. If consumers are worried about their own job security and debt, even a 0 percent interest rate won't induce much consumer borrowing.

Thus, there is a fundamental difference between fiscal stimulus in the form of tax cuts or cash transfers, and monetary stimulus. A recipient of a Federal tax cut or a federal cash transfer correctly takes it for granted that the money does not have to be paid back. Thus, the recipient generally spends some of it, uses some of it to pay down debt, and saves the rest. By contrast, any potential borrower takes it for granted that any borrowing must be repaid. Monetary stimulus can lower interest rates, but if potential borrowers fear they won't be able to repay a loan, they won't borrow and there will be no additional spending. A crucial difference, therefore, between fiscal and monetary stimulus is whether the money must be paid back.

Classical economists like Robert Barro insist that tax cuts and transfers will have to be paid back when future taxes are increased to repay the government debt, and that 'rational' individuals will recognize this and will therefore entirely save any tax cut or transfer to prepare for a future tax payment. But, reply Keynesians, there is absolutely no empirical evidence that people actually think: 'I'd better entirely save this tax cut or transfer in order to be ready to make a future tax payment.' There is lots of empirical evidence that people (other than classical economists) don't think this way. Just ask

them and listen to what they say. Much of the economics profession has let classical economists like Barro get away with this key assumption in the face of overwhelming empirical evidence that the assumption is false.

7 DID FISCAL STIMULUS FAIL DURING THE GREAT RECESSION?

In January 2009, the US unemployment rate was 7.8 percent. In February 2009, a fiscal stimulus package was enacted. But in January 2010 the unemployment rate was 9.7 percent. Does this prove that fiscal stimulus failed? Without fiscal stimulus, the unemployment rate in January 2010 might have been 11.7 percent. If so, then fiscal stimulus succeeded in making the unemployment rate 2.0 percent lower than it otherwise would have been in January 2010 (9.7 percent instead of 11.7 percent). Of course, without fiscal stimulus the unemployment rate in January 2010 might have been 9.7 percent. If so, then fiscal stimulus failed because the unemployment rate with the stimulus was the same as it would have been without the stimulus (9.7 percent). No one can be *certain* what the unemployment rate *would have been* in January 2010 if no fiscal stimulus package had been enacted.

This example illustrates the widespread *after-versus-before fallacy* for evaluating the impact of a policy action. The correct comparison is *after-with-versus-after-without*: what happened after the policy was implemented compared with what *would have* happened had the policy not been implemented. It is remarkable how many committed the after-versus-before fallacy, asserting that the rise in the unemployment rate from 7.8 percent in January 2009 to 9.7 percent in January 2010 proved that the fiscal stimulus package enacted in February 2009 ‘didn’t work.’

8 DID TAX CUTS FAIL DURING THE GREAT RECESSION?

During the Great Recession three tax cuts were enacted to stimulate consumer demand: the tax rebate of 2008, the income tax withholding cut of 2009 that implemented President Obama’s Making Work Pay Tax Credit (which constituted nearly a third of the dollars in the February 2009 \$800 billion fiscal stimulus package enacted by Congress), and the 2-percentage-point (from 6.2 percent to 4.2 percent) employee payroll tax cut in 2011 and 2012. This section focuses solely on studies of the tax rebate of 2008, but the conclusions are likely to apply to the other two tax cuts as well.

Two influential economists, Martin Feldstein and John Taylor, have claimed that looking at US data before and after a particular fiscal stimulus during the Great Recession proves that that fiscal stimulus ‘didn’t work.’ This section is based on Lewis and Seidman (2011) which provides a detailed critique of Feldstein’s and Taylor’s influential 2008 op ed articles in the *Wall Street Journal* and their 2009 *AER Papers and Proceedings* articles. In their *WSJ* op ed and *AER* articles, Feldstein and Taylor each addressed the question: ‘Did the 2008 rebate fail to stimulate consumer spending?’ Each asserted that aggregate time series data from the US Bureau of Economic Analysis’s (BEA) National Income and Product Accounts (NIPA) before and after the rebate proves that the rebate failed.

Before discussing Feldstein and Taylor, it is useful to note how a rebate is supposed to work. After receiving a rebate check from the US Treasury, a household deposits the check and its saving initially increases by the amount of the rebate. Gradually, the household spends more than it otherwise would have. Thus, immediately after

a household receives a rebate check, there should be a spike in saving, but not a spike in spending, relative to what it would have been without the rebate. The key issue is the time path of consumption spending following receipt of the rebate compared to what it would have been – in particular, the spending differential during the year following the receipt of the rebate.

To assess the impact of any policy, a comparison is required between what actually happened after the policy was implemented, and what would have happened if the policy had not been implemented. What would have happened can only be estimated – it cannot be known with certainty. Yet Feldstein and Taylor claim the data prove conclusively that the rebate failed.

Before examining their assertions, consider Figure 2, which shows personal consumption outlays (seasonally adjusted quarterly amount in current dollars) for each quarter from 2007.1 through 2010.1. Figure 2 shows a plausible hypothetical path for personal consumption outlays in 2008.2 and 2008.3 had there had been no rebates: \$2630 billion in 2008.2 and \$2635 billion in 2008.3. Figure 2 also gives the actual values for personal consumption outlays in 2008.2 and 2008.3: \$2648 billion in 2008.2 and \$2653 billion in 2008.3. Actual personal consumption outlays were \$18 billion higher than the plausible no-rebate value in 2008.2 and \$18 billion higher in 2008.3, a total of \$36 billion higher for the two quarters. Thus, *if* this plausible path would have occurred had there been no rebates, then the \$93 billion rebates paid out in the two quarters raised personal consumption outlays \$36 billion above what they would otherwise have been over the two quarters, so the increase in consumption outlays due to the rebates would have been 39 percent of the rebates ($\$36/\$93 = 39$ percent).

But in his *WSJ* article, August 6, 2008, Feldstein asserts he can tell for certain that the increase in consumption due to the rebate was only 15 percent (not 39 percent) of the rebate simply by examining actual data before and after the rebate. He says:

Here are the facts. Tax rebates of \$78 billion arrived in the second quarter of the year. The government's recent GDP figures show that the level of consumer outlays only rose by an extra \$12 billion, or 15% of the lost revenue. The rest went into savings, including the pay down of debt.

But, of course, Feldstein had to make an *assumption* about what would have happened had there been no rebate, and his assumption was implausible. He arbitrarily *assumed*

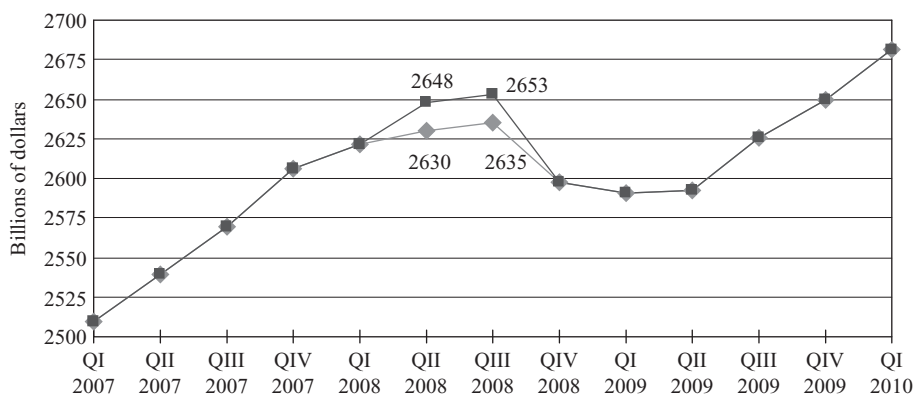


Figure 2 Personal outlays (in billions of dollars)

that, without the rebate, consumer outlays would have increased exactly as much in the second quarter of 2008 as they did in the first quarter. But in the second quarter house prices, stock market price indices, and the University of Michigan's index of consumer sentiment all fell significantly (Bear Stearns nearly failed just before the second quarter began). These second-quarter declines might well have caused personal outlays to increase much less than in the first quarter. If so, then Feldstein's 15 percent is a substantial underestimate of how much the rebate raised consumption above what it otherwise would have been.

In his *WSJ* article, November 25, 2008, Taylor gives this account of the mid-2008 rebate to households:

The chart nearby reveals the answer. The upper line shows disposable personal income through September. Disposable personal income is what households have left after paying taxes and receiving transfers from the government. The big blip is due to the rebate payments in May through July. The lower line shows personal consumption expenditures by households. Observe that consumption shows no noticeable increase at the time of the rebate. Hence, by this simple measure, the rebate did little or nothing to stimulate consumption, overall aggregate demand, or the economy.

Taylor therefore claims that actual data from May through July prove the rebate didn't work. Taylor's chart shows a spike in disposable income but no spike in consumption spending. But what Taylor's chart of actual data doesn't show, and cannot show, is what would have happened to spending from May through the next 12 months had there been no rebate. In mid-2008, several other influences – the plunge in house and stock prices and the unprecedented high level of consumer debt – would surely have reduced spending. Yet actual spending did not fall until September. It is therefore plausible that the rebate kept spending steady when it otherwise would have fallen.

After asserting that the 2008 rebate failed in their *Wall Street Journal* op eds, Taylor and Feldstein turned to the standard regression method and report results in their 2009 *AER* articles. Their regression results are critiqued in detail by Lewis and Seidman (2011). Not surprisingly, the Taylor and Feldstein regressions using monthly data do not yield a precise robust coefficient estimate for the tax rebate variable because there were *very few* months with a tax rebate – rebates were paid in only 6 months (3 months in 2001 and 3 months in 2008) out of the 106 months in Taylor's sample (January 2000 to October 2008). Lewis and Seidman also show that the rebate coefficient estimate and standard error are sensitive to the inclusion of other plausible variables. Taylor and Feldstein claim that the rebate variable is 'statistically insignificant' and that their regressions therefore prove that the rebate had no effect. Lewis and Seidman point out that 'insignificant' means only that, given the large standard error, the hypothesis that the true rebate coefficient is zero can't be rejected. Lewis and Seidman show that the hypothesis that the true rebate coefficient is half the true ordinary disposable income coefficient also can't be rejected. Thus, even when Taylor and Feldstein use a proper method for estimating the impact of a rebate, they misinterpret their regression results and claim erroneously that their regressions prove that tax rebates don't work.

By contrast, a very different way of analysing the impact of the 2008 rebate is reported in a study that uses cross-section individual household micro data (Parker et al. 2010). The study exploits the fact that different households received the tax rebate in different weeks and the week each household received the rebate was assigned randomly. Jonathan Parker, Nicholas Souleles, David Johnson, and Robert

McClelland (*ibid.*) use micro-data consisting of the reports of individuals of the dollar amounts of their recent consumer expenditures from the Consumer Expenditure Survey conducted by the US Bureau of Labor Statistics (BLS). They write:

Using special questions added to the Consumer Expenditure Survey, we measure the response of household spending to the economic stimulus payments (ESPs) disbursed in mid-2008. We find that, on average, households spent 12–31% of their stimulus payments on non-durable goods during the three-month period in which the payments were received. Further, there was also a substantial and significant increase in spending on durable goods, in particular autos. Improving on previous research, these spending responses are estimated with precision using only variation in the timing of ESP receipt.

Their conclusion for the 2008 rebate is similar to the conclusion from their *AER* article (Johnson et al. 2006) on the effect of the 2001 tax rebate using the same kind of micro data:

Using questions expressly added to the Consumer Expenditure Survey, we estimate the change in consumption expenditures caused by the 2001 federal income tax rebates and test the permanent income hypothesis. We exploit the unique, randomized timing of the rebate receipt across households. Households spent between 20 to 40 percent of their rebates on nondurable goods during the three-month period in which their rebates arrived, and roughly two-thirds of their rebates cumulatively during this period and the subsequent three-month period. The implied effects on aggregate consumption demand are substantial. Consistent with liquidity constraints, responses are larger for households with low liquid wealth or low income.

Given the finding of the studies of the 2001 and 2008 tax rebates using individual micro data, and the implausible assumptions made by Feldstein and Taylor concerning the 2008 rebate, one lesson that should be drawn from the Great Recession is that it is very likely that a tax rebate works: according to the micro-data study, the 2008 rebate, like the 2001 rebate, had a positive impact of considerable magnitude on consumption spending relative to what it would have been without the rebate.

Based on these empirical studies of the 2001 and 2008 rebates, it is very likely that all three tax cuts implemented during the Great Recession were very helpful in mitigating the severity of the recession.

9 A COMMON MISTAKE IN ESTIMATING THE KEYNESIAN MULTIPLIER

The Keynesian multiplier is the ratio of the increase in real output to the increase in government spending or tax cut that generates it. Suppose the economy is at full employment and full capacity utilization when the government increases spending or cuts taxes (supported by a monetary stimulus). With hardly any unemployed labor or capital available, real output hardly increases; so the multiplier is near zero. By contrast, suppose the economy is in a severe recession with high unemployment and low capacity utilization. Then the increase in spending or tax cut would cause employers to hire unemployed workers and utilize idle machines, thereby increasing real output; hence, the multiplier would be positive. Moreover, the newly employed would enjoy an increase in income enabling them to raise their consumption spending, inducing producers of consumer goods to hire unemployed workers, utilize idle machines, and raise real output, thereby making the multiplier larger. What matters for fiscal stimulus to combat a recession is the size of the multiplier in a recession

when unemployment is high and capacity utilization low, not the size of the multiplier in a fully-employed economy.

Consider an aggregate supply aggregate demand diagram, shown in Figure 3, in which the supply curve is initially flat but then curves upward to become steep at the full employment level of output Y_0 . When the economy is in severe recession at a low value of real output, Y_1 , with high unemployment and low capacity utilization, a shift right of aggregate demand (D) can raise real output with only a slight bidding-up of wages, costs, and prices, so the aggregate supply (S) curve is relatively flat. But when the economy is at full-employment output Y_0 , a shift right of aggregate demand curve mainly bids up wages, costs, and prices, with hardly any increase in real output Y , so the aggregate supply curve is steep. Thus, when the economy is in a severe recession, a shift right of the D curve by magnitude ΔD causes a relatively large increase in real output ΔY – from Y_1 to Y_2 – hence, the multiplier is large – but when the economy is at full employment output Y_0 , a shift right of the D curve by the same magnitude ΔD causes a relatively small increase in real output ΔY – hence, the multiplier is small. Thus, it is a fundamental error to estimate the value of the multiplier in a fully-employed economy and then assume this value holds when the economy is in a severe recession.

Yet Robert Barro makes exactly this error. He tries to estimate a value for the multiplier using data from a fully-employed economy and then asserts that this multiplier value would hold when the economy is in a severe recession. Barro summarizes his research in a truly revealing article in a 2009 *Economists' Voice* article entitled 'Voodoo Multipliers.' He writes:

Because it is not easy to separate movement in government purchases from overall business fluctuations, the best evidence comes from large changes in military purchases that are driven by shifts in war and peace. A particularly good experiment is the massive expansion of US defense expenditures during World War II... In any event, the usual Keynesian view is that the WWII expansion provided the stimulus that finally got the US economy out of the great Depression.

His last sentence is correct. There was a dramatic reduction in the US unemployment rate from 1939 to 1942 driven by the sharp rise in military and related spending in

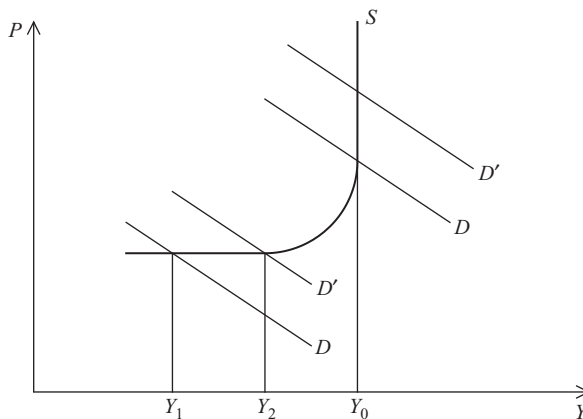


Figure 3 Aggregate demand aggregate supply

preparation for a possible entry into a world war. An analysis confined to 1939 to 1942 might therefore be useful. Instead, incredibly, Barro focuses on 1943–1944 when the US economy was at full employment. He writes:

I have estimated (in my book, *Macroeconomics, A Modern Approach*) that World War II raised US real defense expenditures by \$540 billion (1996 dollars) per year at the peak in 1943–44, amounting to 44% of trend GDP. I also estimated that the war raised real GDP above trend by \$430 billion per year in 1943–44. Thus, the multiplier was 0.8 (430/540). The other way to put this is that the war lowered components of GDP aside from military purchases.

Unfortunately, Barro is not the only economist who claims to estimate the magnitude of the Keynesian multiplier in a recession by using data generated in a fully-employed economy. There is a large recent literature that regresses the change in real output against the change in government spending or taxes for all quarters in the sample. But only a small fraction of the quarters in the sample are recession quarters, so these studies mainly estimate the value of the multiplier when the economy is not in recession. What matters for Keynesian counter-cyclical fiscal policy, however, is the value of the multiplier when the economy is in recession, not the value of the multiplier in a full-employment economy.

10 KEYNESIANS SHOULD ADVOCATE AUSTERITY IN PROSPERITY

Ever since early Keynesians prescribed fiscal stimulus for a recession, others have objected because of concerns about its impact on the national debt. That concern is as strong as ever today. In Congress and among the citizenry, concern about the national debt is perhaps the major obstacle to enacting sufficient fiscal stimulus to combat a severe recession. This concern was an important reason why Congress kept the fiscal stimulus package of February 2009 under \$800 billion despite estimates from Keynesian macro-econometric models that a much larger fiscal stimulus would be needed to bring unemployment down to normal by the end of 2010. Concern about debt has kept Congress from enacting another substantial fiscal stimulus package.

The reaction of Keynesians since the 1940s has been to dismiss the concern about national debt as uninformed, a vestige of old-fashioned classical economics that Keynesian analysis has rendered obsolete, and based on false analogies between households and business firms on the one hand, and the national government on the other. Perhaps the earliest and most articulate Keynesian exponent of this view was Abba Lerner who contrasted Keynesian ‘functional finance’ to ‘sound finance’ and argued that we owe most of the national debt to ourselves.

The Great Recession has taught us, however, that despite the efforts of Keynesians for 7 decades, concern about the national debt is as strong as ever. A majority in Congress, the public, and the business and financial community continue to worry about the impact of fiscal stimulus on the national debt. As Keynes said in other contexts, the actual opinions and psychology of the public, whether ill or well informed, must always be taken into account in designing effective public policies.

Suppose it is true that American consumers, business managers, and financial investors around the world worry about a rising US government debt as a percent of GDP. Then this worry must be taken into account in designing economic policy. Keynesians have always emphasized that a realistic view of how people actually

think and behave is crucial to getting policy right – this insistence on realism has been at the core of the Keynesian critique of the new classical economics with its unrealistic assumption that everyone holds ‘rational’ expectations and that workers promptly accept wage-cuts needed to ‘clear’ labor markets.

Keynesians, therefore, should recognize that the widespread fear of high and rising government debt – whether valid or not – might cause a plunge in aggregate demand. If all financial investors, consumers, and business managers thought like Lerner, this wouldn’t happen. But many don’t think like Lerner, and Keynesians must design policy accordingly. It is just as mistaken to assume everyone in the economy actually thinks like Lerner as it is to assume that everyone in the economy actually thinks like Lucas or Barro. Keynesians should therefore advocate keeping federal debt as a percentage of GDP low during prosperity.

But is it really politically possible to keep deficits and debt low during prosperity? The answer, based on evidence from the past 2 decades, is ‘yes.’ In the prosperous second half of the 1990s, the US Congress actually achieved surpluses. In the prosperous years 2005 to 2007, Congress kept the federal deficit under 2 percent of GDP. From 1997 to 2007, these surpluses and small deficits, together with GDP growth, brought down federal debt as a percentage of GDP from 46 percent to 36 percent. In 2007, just prior to the plunge into the Great Recession triggered by the housing market collapse, the federal deficit and federal debt were well under control. It was the plunge into the Great Recession that sent the deficit and debt rising as tax revenue fell, and the government cut taxes and raised spending in order to keep the Great Recession from becoming Great Depression II. Even the weak recovery has been enough to reverse the rise in the deficit, and if the recovery strengthens, the deficit will fall enough to begin reversing the rise in the debt percentage. The last two decades have shown that it is indeed politically possible to get federal deficits and debt under control. The key is to make the economy prosperous again by sufficient temporary Keynesian fiscal stimulus.

As prosperity returns due to Keynesian fiscal stimulus, confidence will return, boosting consumption demand and investment demand so that the Keynesian stimulus can then be gradually phased down. With the return of private sector confidence, as in the 1990s, private sector demand should become strong enough so that full employment can be maintained while keeping government deficits low enough to gradually reduce government debt as a percentage of GDP. Then, when the next recession occurs, with government debt low, it should be politically possible to enact a sufficient Keynesian fiscal stimulus to combat it.

11 PREVENTING CLASSICAL AUSTERITY IN A RECESSION

Keynesians must recognize that, however misguided, adopting classical austerity during a recession makes sense to much of the citizenry. A recession is often the result of excesses in financial markets that generated a bubble that finally burst. Citizens rightly sense that some people behaved badly during the bubble and feel that the bursting is a just punishment for the bad behavior. Many citizens conclude that people need to behave prudently and practice personal austerity by cutting their spending and saving more. To many citizens, it seems right that government should do the same: cut its spending and balance its budget.

Keynesians know that austerity by households, businesses, and government all make a recession worse by further reducing aggregate demand. People and businesses

have no choice but to adopt personal austerity in a recession. But government does have a choice. Government can practice stimulus when the private sector is compelled to practice austerity. Government can spend more than it taxes, borrow the difference, and have its central bank finance the difference by buying the government's bonds with new money.

How can Keynesians persuade the citizenry that Keynesian stimulus, not classical austerity, is the right policy for government during a recession? Here's a practical strategy. Keynesians should strongly advocate austerity in prosperity, and strongly advocate stimulus in recession. The right policy is for the government to lean against the wind. This policy may be able to win the support of a majority of the citizenry. By contrast, if the citizens perceive Keynesians as always advocating stimulus and never advocating austerity, a majority may support austerity both in prosperity and in recession. If advocates of austerity control the government the next time a severe recession hits, Keynesians know it will turn into a great depression. One close call is enough.

Finally, within the economics profession, Keynesians must launch a second Keynesian revolution. The target should be the new generation of economics PhDs. Classical economics is no longer the 'new' attraction the way it was in the 1970s. It has had its run for several decades and its fundamental flaws have finally been dramatically exposed by the Great Recession. This exposure has finally created an opportunity for Keynesians. We should seize it.

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