

The Great Recession and Perspectives on Keynesian Policy

Barry Z. Cynamon (barry.cynamon@gmail.com) and Steven M. Fazzari (fazz@wustl.edu)

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As the provocative title of this conference points out, the world economy is indeed in crisis. Since late 2007, myriad indicators of economic activity in many countries around the world have registered their most dismal performance since the Great Depression. Figure 1 provides a specific example. It shows the percentage decline in U.S. employment since December of 2007 along with similar data for U.S. recessions since the middle 1970s. The collapse of employment in recent months is already nearly twice as deep as the worst of the comparison events, and it is unlikely that the U.S. economy has reached its employment trough yet. While it is common for heterodox Keynesian economists to worry about slow recovery, even most mainstream forecasters predict a painfully long period before employment returns to the level reached before the recession, much less the trend necessary to keep up with labor force growth. By the time the “Great Recession” enters the history books the cumulative waste of labor resources will dwarf anything the developed world has seen since the 1930s.

This dramatic economic event raises the question of how macroeconomic theory and policy will change as it digests what has happened. For those of us who define our research perspective and policy analysis as Keynesian, this event, painful as it is, provides intellectual validation. Yet one wonders about the extent to which practical policy analysis and mainstream macro theory will move in a Keynesian direction, especially as the panic of the initial stages of the Great Recession appears to have subsided. This essay considers reactions to the Great Recession through the lens of Keynesian theory. In section I, we explore how mainstream thinking has already changed as theory struggles to come to terms with recent events, and as policymakers confront problems that seem completely out of scale with the benign “Great Moderation” perspective that dominated central banks and fiscal. A lot has happened. Policy has shifted dramatically in many countries as both monetary lender-of-last-resort interventions and fiscal deficits have exceeded anything imagined by conventional macroeconomists just a few years ago. Recent events have introduced new themes to mainstream theory as well, the relevance of the zero bound for nominal interest rates in particular.

Although some shift toward Keynesian thinking seems to have occurred, there are deeper lessons from the Great Recession that remain outside the mainstream, although these things have been widely discussed in Post Keynesian and other heterodox literatures. In section II, we

consider a set of issues that extend our perspective beyond the textbook “short run,” the relevant horizon for mainstream “sticky price” theories. We consider the limits of monetary policy to generate full-employment demand and argue that the zero bound problem is likely not just a short-term constraint. We argue that modern capitalism has yet to find a *general* solution to the problem of generating long-run demand growth adequate to fully employ supply-side resources. As argued in Cynamon and Fazzari (2008), we develop the theme that demand growth in recent decades, at least in the U.S., came from a spending and borrowing binge of unprecedented magnitude. The Great Recession marks the end of this era. Events since late 2007 raise serious questions about where demand will come from to generate recovery and renewed growth.

Section III offers some initial ideas about alternative sources of medium-term demand growth with a focus on government fiscal policy: a Keynesian New Deal.” We criticize the mainstream view that government budget constraints and the unsustainable size of fiscal deficits limit what can be done. We also develop ideas about how aggregate fiscal stimulus affects micro distribution and allocation outcomes.

We conclude with a proposal for a Keynesian “New Deal” for the 21st century. This paradigm proposes a much more active role for national governments in creating demand growth. We also argue that the modern governments, and the citizens they serve, need to adopt a much different perspective on fiscal deficits. This “New Deal,” however, should not be a blank check for any government project that a vote-seeking politician can dream up in the name of demand stimulus. We propose the need for a new set of institutional structures to channel government activity in directions that shore up demand, enhance productivity, and promote a decent society worthy of the high material living standards achieved by modern capitalism.

I. A Shift Toward Keynesian Thinking in Mainstream Policy?

In some important ways, the events of the past two years have shown a remarkable shift toward Keynesian thinking among mainstream economic analysts, particularly in the practical business press and the halls of policymaking. Consider first the understanding of the sources of the Great Recession. Almost all analysts begin with problems in the U.S. mortgage market. The bursting of the housing bubble created a clear and direct “demand shock.” Residential construction is a relatively small component of U.S. GDP, but it fell more than 50 percent, enough to account for more than a 3 percentage point decline in output by itself. Of course, the plunge in housing prices and associated turmoil in the markets for mortgaged-backed securities transmitted problems in housing to the rest of the economy. Perhaps most important, the crisis finally derailed the American consumer juggernaut that has fueled demand growth in the U.S. for more than two decades (see Cynamon and Fazzari, 2008). Between November, 2007 and April, 2009 personal consumption expenditure fell the most since the mid 1970s. Considering the credit crunch and the remaining household debt overhang, it seems very unlikely that consumer spending will lead a robust recovery as it did after previous deep recessions of 1974-75 and 1980-82.¹

¹ In the three years following the consumption troughs of both the 1974-75 and 1980-82 recessions, real personal consumption expenditure grew at annual rates exceeding 5 percent.

To the extent that these factors are central to the Great Recession, it is a Keynesian demand-driven phenomenon. Although some economists remain in denial, a broad swath of the profession and virtually all practically oriented forecasters recognize the current problem as one of insufficient spending. Although recent data from the U.S. and other countries give reason to believe that the precipitous crash is over (as of this writing in the fall of 2009), the near-consensus projection is for an anemic recovery for one primary reason: the tapped-out American consumer. Consumer spending, retail sales and housing start statistics are all scrutinized for any glimmer of recovery. Why? Because these data signal movements in demand. Nothing could be more “Keynesian.”

Macroeconomic policy has also taken on a definite Keynesian look. Fiscal stimulus packages have emerged around the world with the explicit objective of boosting spending. This is a major change. Since the Reagan-Thatcher years, fiscal responses to recessions were often *justified* with supply-side arguments, even if it turned out that the most important effect of the resulting tax cuts were Keynesian.² But discussions of recent stimulus measures emphasize the importance of creating spending, and doing so quickly. In this environment, a saved tax cut is a useless tax cut. Consider this assessment of the 2008 U.S. tax rebates by well respected mainstream economists, Shapiro and Slemrod (2008, page 11) write, “those designing the next economic stimulus package should take into account that much of a temporary tax rebates is likely not to be spent.” The effectiveness of government infrastructure programs is judged in large part by how fast the new spending can take place. In addition, fiscal authorities talk explicitly about multipliers (even if the assumed values seem stingy). Again, Keynesian theory has become the guiding principle of these discussions.

Recent events have also transformed monetary policy, in both its execution and how it is perceived by mainstream economists. The Bernanke Fed has pursued aggressive lender-of-last-resort interventions. Journalistic accounts of the dark days in the fall of 2008 show that Bernanke, Paulson, and others recognized the grave threat posed to modern capitalism from financial instability. While one can argue about the details of how policymakers implemented interventions such as TARP, TALF, bailouts of Fannie, Freddie, and AIG, etc., the basic logic that motivates these remarkable actions comes from Keynesian theory, broadly conceived to include the work of Hyman Minsky. Indeed, mainstream journalism, if not yet mainstream macroeconomics, has widely recognized the prescience of Minsky’s ideas.

A less obvious, but potentially very important, shift may be occurring in mainstream macroeconomic thinking. Over the past decade, the so-called “New Keynesian” literature proposes the emergence of a “new consensus.” These models adopt the microfoundation approach that new classical research used to criticize, and largely dismiss, Keynesian theory. But price stickiness embodied in the New Keynesian Phillips Curve leads to short-run monetary non-neutrality.³ In this context, enlightened and predictable monetary policy can stabilize output and offset unpleasant Keynesian problems. The real world has Keynesian aspects, but

² It is likely not a coincidence that the beginning of the American consumption boom in the middle 1980s occurred at the same time as the massive Reagan tax cuts increased household disposable income. Ironically, these tax cuts were supposed to raise the incentive to save.

³ The microfoundation for this price stickiness, usually an assumption that only a fixed proportion of firms are permitted to change prices in a given period, seems *ad hoc*, but this problem is not the main theme of the current essay.

technically competent monetary engineers, their tool belts equipped with Taylor rules and inflation targets, can keep the real effects of demand shocks in check. The makers of fiscal policy need not worry about Keynesian problems, they should focus instead on the classical long run in which output converges to potential, the incentive effects of the tax system dwarf concerns about how taxes affect consumer spending, and government activity crowds out the private sector.

The new consensus emerged during the years of the “Great Moderation,” a marked reduction in variance of macro time series, in the U.S. and other developed countries. These statistical developments could be interpreted by central banks and monetary economists as support for the view that they had found the way to solve the worst aspects of Keynesian problems. But the new consensus has suffered a bad couple of years. While research in this area did not completely ignore the uncomfortable possibility that the “zero bound” could bind monetary policy, the full force of the modern version of a liquidity trap was not evident until recently. The Bernanke Fed aggressively reduced the federal funds interest rate in the U.S. to historic lows as the forces leading to the Great Recession emerged in the second half of 2007 and early 2008. The European Central Bank and the Bank of England have also cut rates to very low levels. These institutions did what they could through conventional monetary policy. But the nuances from the New Keynesian literature about optimal monetary policy seem of little relevance to the current crisis. Debates about how much interest rates should be cut in a recession or the optimal degree of interest-rate smoothing seem of little relevance when the policy rate is set to zero, banks are sitting on mountains of excess reserves, and we still are far from a robust recovery.

II. Keynesian Insights: Outside the Mainstream

Policy actions and almost all practical analysis of the Great Recession in the press since the fall of 2007 have clear Keynesian characteristics, to a degree that would have been difficult to imagine just a few years ago. Still, many deep aspects of Keynesian theory remain outside the mainstream. A full understanding of unfolding events, and a policy response that goes beyond treating the most immediate problems, requires consideration of less familiar Keynesian principles discussed in this section.

The Limits of Monetary Policy: Beyond the Zero Bound

As discussed above, the zero-bound problem is hardly a theoretical curiosity; the liquidity trap has been resurrected. But current mainstream understanding suggests that the Great Recession is a rare event and that enlightened monetary policy should be capable of stabilizing economic activity in “normal” times. Central to this perspective is the idea that conventional interest elasticities of spending are robust structural features of the economy so that the central bank usually has strong policy levers to control spending. The “transmission mechanism” from monetary policy to aggregate spending in almost all of the new consensus models relies entirely on the interest sensitivity of consumption derived from intertemporal substitution effects in the representative consumer’s utility function. This effect, however, has been very difficult to verify empirically. The inability to find a robust effect for marginal tax rates on saving, for example, directly implies that interest rate effects on consumption spending are empirically unreliable, at

least as they derive from mainstream intertemporal substitution channels. Some authors have generalized the “IS curve” in new consensus models to include investment (see Fazzari, Ferri, and Greenberg, 2009, for example), but a robust interest elasticity of investment has also been difficult to demonstrate empirically (see Fazzari, 1994-95 and Chirinko, Fazzari, and Meyer, 1999, for example).

Imagine a simple loanable funds diagram in which both the saving supply and investment demand curves are “steep,” that is, interest inelastic. The intersection of the investment curve with a curve that represents the amount of saving forthcoming when income corresponds to potential output determines the long-run “natural” interest rate, the steady-state target emphasized in the discussion of new consensus models of monetary policy. With highly inelastic demand and supply curves, any negative demand shock will cause a large movement in this natural rate. It should not be surprising that it becomes negative. Thus, a binding zero-bound constraint may not be the once-in-a-lifetime issue suggested by much current mainstream discussion, but rather a common and persistent problem.⁴

If this perspective is correct, one might ask why the combination of low interest elasticities and the zero-bound problem has been largely ignored in the mainstream. We propose that monetary policy has worked through a different kind of channel for the past quarter century, and this channel has obscured the low-elasticity problem. Rather than initiating intertemporal substitution, monetary policy has stimulated demand by encouraging borrowing and boosting asset prices. While monetary policy was not always stimulative, the general trend of interest rates since the end of the “Great Inflation” in the early 1980s has been downward. When demand lagged, central banks always had room to cut rates. Refinancing opportunities created spending. Falling interest rates increased asset prices and contributed to two major asset-price bubbles in technology stocks and residential real estate. These bubbles likely induced wealth effects that further boosted spending.

Indeed, the Greenspan Fed has been widely criticized for keeping interest rates too low in the early part of this decade. The claim is that these low rates fueled the unsustainable housing bubble, the bursting of which was the proximate cause of the Great Recession. But what was Greenspan to do in 2002 and 2003 when the economy continued to bleed jobs and deflation worries persisted? If enlightened monetary policy is the key to macro stability, as the new consensus thinking proposes, it is hard to see how one could have argued to raise interest rates at that time.

Nonetheless, the low rates early in this decade undoubtedly did contribute to the asset bubble. We believe the lesson for Keynesian policy must be that monetary policy is more limited in what it can do than conventional wisdom suggests. Benign intertemporal substitution effects are not likely strong enough to create powerful policy levers for central banks. If monetary policy works, it works by encouraging borrowing and asset price inflation. The result is rising financial fragility, suggestive of a Minsky cycle. It may not be so surprising that monetary policy *appeared* powerful over the past two decades. The trend of declining nominal interest rates gave central banks significant leverage to boost demand. But we have seen in the

⁴ The natural rate of interest would usually be defined in real terms; the zero bound applies to nominal interest rates. But with low inflation, another principle of new consensus monetary policy thinking, a zero bound on nominal interest rates prevents a significantly negative real rate.

past two years that conventional interest rate policy can no longer prevent a severe recession. We argue that a Keynesian New Deal for the 21st century must recognize these limitations.⁵

What is the Source of Demand Growth in the Long Run?

A defining feature of Keynesian economics is the failure of Say's Law. That is, no automatic mechanism exists to assure enough demand to purchase full-employment output. While this principle has been widely accepted for years in "middle-of-the-road" macroeconomics, most mainstream Keynesians believe that problems of insufficient demand are confined to the short run, at what might be called "business-cycle frequencies." In the long-run, beyond a year or two, nominal wage and price adjustment should restore demand to a level adequate to buy what ever the supply side can generate. From the vantage point of this neoclassical synthesis, any Keynesian New Deal set of policies need focus only on the short run, to nudge along the endogenous effects of nominal adjustment. Economic growth beyond a few years should be understood as a purely supply-side phenomenon.

While the neoclassical synthesis is undoubtedly attractive theoretically, there was never much theoretical or empirical support for its assertion that wage and price flexibility automatically restored the economy to its supply-determined growth path. Keynesian economists have written for decades about how deflation (or disinflation) might have destabilizing effects on economic activity. Debt deflation, contractionary re-distribution, and expectations that encourage agents to defer spending constitute channels through which the aggregate wage and price adjustment mechanism could *reduce* demand when output is below potential.⁶

Indeed, despite the persistent textbook interpretation of Keynesian theory as the macroeconomics of nominal stickiness, *practical* economists and business analysts in recent years seem to have put their faith in enlightened monetary policy as the primary engine of macro stabilization rather than nominal adjustment. The previous subsection, however, discusses how the Great Recession reveals the limitations of monetary policy. But if we can rely on neither nominal adjustment to restore demand to potential automatically, nor monetary policy to fine tune demand to meet growth targets, where is the source of demand that keeps the economy growing over both short and long horizons? We propose there is no single answer to this question and that Keynesian macroeconomists and economic historians need to look at a variety of "models" to understand different ways that economies have (or have not) found sources of demand growth across time.

Although we cannot do justice here to the history of demand growth in even a single economy (much less the world system), it is instructive to sketch briefly the somewhat idiosyncratic ways that the demand growth problem has been addressed in an important special case, the U.S. in the recent century. This brief history demonstrates how demand growth in the

⁵ Palley (2009) makes a similar point, arguing that the "neoliberal growth model" is flawed in its belief that there can always be a sufficiently low interest rate to assure sufficient demand to support full employment.

⁶ Although this statement contradicts the widely accepted downward-sloping aggregate demand curve enshrined in generations of textbooks, and it destroys the theoretical foundations of the neoclassical synthesis that dominated decades of macro theory, it is hardly a surprise. Keynes made these arguments in chapter 19 of the *General Theory* and they have been explored widely in post Keynesian research. For recent contributions and further references, see Fazzari, Ferri, and Greenberg (1998), Palley (2007), and Tobin (1993).

medium and long term is hardly automatic. The “roaring 1920s” were fueled by a debt-financed consumption boom and strong asset price growth. Of course, this particular model for demand growth ended spectacularly with the Great Depression. The original New Deal seemed to turn things around, until fiscal policy tightened in 1937, but the main source of demand growth that ended the Depression came from the government in World War 2. The war provided not just a direct source of demand but, through its financing, created unusually liquid household and corporate balance sheets. A combination of the Marshall Plan that created an international market for American exports, the Cold War military-industrial complex, hot wars in Korea and Vietnam, and another wave of consumerism in the optimistic baby-boom years created strong demand growth through the 1960s. High oil prices and a wage-price spiral created trouble in the 1970s as demand growth faltered and was deliberately suppressed to rein in inflation during the monetarist experiment of the early 1980s.

The dramatic U.S. tax cuts during the early Reagan years were sold politically as supply-side policy. But the fast demand growth that ensued came in large part from consumer spending.⁷ Indeed, U.S. consumption rose almost without pause through 2007, along with household debt. We explore the sources of what we label the “consumer age” in Cynamon and Fazzari (2008). The rise in debt and consumption followed the script of a self-reinforcing boom phase of a Minsky financial cycle, but it was a “phase” that lasted nearly a quarter century.⁸ In the aggregate, this particular method for generating demand growth worked quite well, as long as it could be sustained by falling interest rates (engineered in large part by monetary policy) and expanding household access to credit. The Fed, with support from the academic establishment, drove rates lower. Financial engineers exploited new technologies (widely available credit scoring, for example) and financial innovation that supposedly made risk sharing more efficient to pump unprecedented debt into the household sector. The consumption boom became a major engine of U.S. GDP growth. Unemployment fell to levels that rivaled the best performance in history. Through a dramatic rise in imports, the American consumer became a demand engine not just of domestic growth but also of the global economy as a number of emerging industrial countries embraced export-led growth strategies to solve their own demand problems. These Keynesian characteristics extended well beyond typical “business-cycle frequencies.”

At the end of 2009, it is clear that the American consumption engine fueled by rising debt has stalled, if not crashed into a brick wall. This extended Minsky cycle has entered a new, painful phase. The point of the brief historical summary above is to argue that rising demand is far from automatic. In the U.S. and, we suspect, other countries, the fundamental Keynesian problem has been solved in the majority of years by idiosyncratic, historically specific institutional, geopolitical, and cultural forces. When demand growth faltered, as in the 1970s or, more dramatically, the 1930s, the economy sputtered, and not just for a year or two. Even as mainstream forecasters are anxious to declare the beginning of “recovery” in October, 2009. It is far from clear where the demand necessary to initiate significant growth will come from. Simple faith in the mainstream mechanisms of nominal adjustment and standard monetary policy is unjustified. If this is the case, fundamental Keynesian concerns must play a central role in any attempt to discover the foundation for recovery and a new wave of growth.

⁷ Supply-side policy claimed that it would increase the incentive to save, but the beginning of a dramatic *decline* in the U.S. saving rate coincides almost exactly with the Reagan tax cuts.

⁸ See, for example, Wray (2007), Cynamon and Fazzari (2008), and Palley (2009).

Where do we go from here? In the U.S. consumption is 70 percent of demand. If consumption stagnates, other demand components must grow at considerable rates to reach conventional steady-state growth of roughly 3 percent per year, much less generate recovery from an output and jobs gap that is likely in the neighborhood of 10 percent at the end of 2009. In principle, a new round of the lend-spend process, perhaps supported by yet another asset bubble, could stimulate the economy, but this seems both unlikely and undesirable, for obvious reasons. The mainstream approach to the dilemma of reduced consumption in the “long run,” would be to match a lower share of private consumption in GDP to a higher share of private capital investment. Where should this investment come from? Even with interest rates at historic lows, investment is deeply depressed. If a robust recovery occurs, there is little doubt that investment will follow its historical procyclical pattern and rise strongly, but such a process magnifies demand growth, it does not initiate it. Of course, there may be some new “can’t miss” wave of autonomous investment to exploit new technologies akin to the internet-driven boom of the mid to late 1990s (biotechnology? green investments?) but it seems wishful thinking to assume that this is the path to recovery from the Great Recession. For an individual country, international trade can create significant demand, but the world economy is closed by definition. (We don’t trade with the Martians!)

These observations open the door for a Keynesian New Deal approach to expansionary fiscal policy. We consider this idea in more detail later. In the context of asking where long-run growth in demand comes from, however, we point out that the case for activist fiscal policy is not based on ideology. Rather, it is a matter of arithmetic. If consumption grows sluggishly at best, there is no reliable source of robust capital investment growth; and if monetary policy has done all that it can do, a fiscal solution seems the only alternative to extended stagnation. In addition, the argument here shows that the need for such fiscal stimulus may not be temporary. Without an effective “invisible hand” (nominal adjustment) or “visible hand” (enlightened monetary policy) to assure full employment of resources in the long run, it seems possible, if not likely, that economies will need fiscal support for an extended period.

Before leaving this subsection, we need to emphasize that historically specific sources of demand growth alone are necessary but not sufficient for long-term economic growth. Developed economies, the U.S. in particular, could not have expanded so much in the postwar decades without supply-side growth, generated from sources such as physical capital accumulation, greater human capital, and technical change. But we do part company with the mainstream assertion that supply-side forces *by themselves* are sufficient to explain growth over decade-plus horizons. Again, demand is not automatic; Say’s Law fails in the long run just like it does at business-cycle frequencies. Indeed, we argue that much of the supply-side expansion of recent decades was driven by the demand side, as strong demand-led growth encouraged capital accumulation, raised asset prices, and helped provide the funds for innovation.⁹

⁹ Brown, Fazzari, and Petersen (2009) present evidence that the remarkable R&D boom that took place in the U.S. from roughly 1993 through 2000 was the result of financial conditions that we argue here depend on the demand side of the economy.

III. Some New Directions: A “Keynesian New Deal?”

The consumption-debt engine of demand growth for the American economy has run out of gas. Similar problems appear in other countries, both because of related problems in credit markets and because of the collapse in the ability of the American consumers to serve as the world’s “consumer of last resort.” In this section, we consider how policy might address what may be the central problem of global capitalism in the early 21st century. Our ideas center on fiscal policy.¹⁰

Where Does the Money Come From to Finance Stimulus?

Even those who appreciate that low demand is the source of stagnation often fear that an aggressive fiscal solution cannot work, especially beyond a year or two, because it requires current borrowing and therefore threatens the welfare of future generations.¹¹ Before offering a more detailed perspective on government fiscal stimulus, we address a related question that pervades current economic and political discussion. How can countries “afford” stimulus when the economy is so weak?¹² A careful response to this question provides useful perspective on the issue of how increased spending today, by private agents or the government, impacts the welfare of future generations.

Where does the money come from? The typical answer to this question in most popular analysis seems to come from simple analogies between government borrowing and the representative household’s budget constraint. If a person borrows today to consume beyond current income, implicitly taken as given, then she must consume less of her given income in the future if she is not to default on the loan. So, the argument goes, private or government borrowing today for demand “stimulus” must somehow put a burden on the future. From this perspective, the “money” for current spending stimulus appears to come from the people in the future.

The Keynesian response to the misleading household analogy is obvious: current incomes are not given independently of current spending. If there are unemployed resources today, current spending brings these resources into use. This more intensive use of resources raises incomes today. In the aggregate, “where does the money come from” to finance stimulus? *Stimulus itself creates income.* Alternatively, think about this point in terms of real resources. If stimulus today mobilizes idle labor and productive capacity then stimulus creates a

¹⁰ Because of space (and time) constraints, we do not address financial regulation and other monetary reforms to contain the financial instability that clearly played a central role in turning the consumption boom into the Great Recession. See Wray (2007) and Palley (2009), among many others, for a discussion of these critical issues.

¹¹ Here is typical rhetoric, in this case from U.S. House of Representatives minority leader, Republican John Boehner of Ohio (statement on new federal deficit projections, August 25, 2009): “the Democrats’ out-of-control spending binge is burying our children and grandchildren under a mountain of unsustainable debt. ... Democrats have stepped on the accelerator and spent taxpayer dollars with reckless abandon all year, refusing to make tough choices and putting all the sacrifice on future generations.”

¹² Of course, one could reverse this statement. Minsky (1986, p. 297) argues “Big Government must be big enough to ensure that swings in private investment lead to sufficient offsetting swings in the government’s deficit so that profits are stabilized” (p. 297). He claimed that only massive federal deficits prevented a deep depression in 1975 and 1982 (p. 19). One could easily make the same argument for the first years of the Great Recession.

net gain for society. Effective stimulus does not “borrow” labor or capacity from the future in any direct sense. Rather, stimulus today employs resources that would otherwise sit idle.¹³

One naturally thinks of government stimulus in this context. Nothing in the preceding discussion, however, changes if stimulus arises from fresh acts of private spending. Private spending creates income. Additional private spending today when resources are under-utilized does not, in the aggregate, borrow real resources from the future. But private spenders will necessarily have a more narrow personal perspective on stimulus-creating activity than the government. Private agents cannot avoid the private opportunity cost of a fresh act of current spending: if they spend today on good X, they have less for good Y, now or at some future date. The fact that my spending today creates an equivalent amount of income and relaxes the budget constraint for someone else does not enter *my* current spending choices. Private spenders do not care that they create income or stimulate the use of idle resources. Stimulus spending, therefore, while potentially crucial to the smooth functioning of modern capitalism must confront an inherent externality problem. And it is this problem that creates a responsibility for government action. We discuss how the government can meet this responsibility later, but first we need to consider some indirect effects of demand stimulus that have an intertemporal dimension, and also give rise to conventional fears about the future consequences of stimulus policies.

Let us consider the intertemporal implications of a fresh act of spending in more detail. Suppose this spending is financed by new borrowing. A private individual has an intertemporal budget constraint; so does the government. Does this fact contradict the statement above that stimulus today does not borrow from the future? We must grapple with two issues, the direct effect of future debt service and possible indirect “crowding out” effects due to rising interest rates.

Conventional wisdom certainly suggests that the cost of borrowing to finance stimulus spending today is the future debt service on the loan. If individuals borrow on their own private account, the future debt service requirement is obvious. For government borrowing, the concern is the future tax liability imposed by the government’s intertemporal budget constraint. Simple accounting demonstrates that these liabilities are transferred to future “generations,” and almost every commentator on these issues emphasizes this fact. What is hardly ever recognized, and certainly not emphasized, however, is that current borrowing also transfers a new *asset* to future generations. If the government borrows today, the lender acquires a new asset. The debt service paid from future liability holders to future asset holders can be thought of as a transfer payment. Future debt service, public or private, imposes no *net* burden on future generations as the result of stimulus-creating borrowing today.

Does the transfer payment from debt service make a difference to the agents involved? Does it affect how we should understand the benefits and costs of economic stimulus? The answer is likely yes, but simply ignoring the asset side of the generational transfer, as the simple representative household analogy does, cannot be the right approach. Indeed, a different analogy illuminates the issue better. Consider the standard argument in favor of free international trade. The direct “gains from trade” benefit from exploiting comparative advantage receives the most

¹³ If capital, or even labor, depreciates through use, this point is overstated. But a somewhat higher depreciation rate on current capacity cannot be a reason to leave it sitting idle. In addition, much depreciation is the result of obsolescence through time rather than through use.

attention. In principle, everyone could be better off as the result of the net social gain from beneficial trade. Sensible analysts recognize, however, that any practical attempt to realize these benefits will likely have complicated distributional effects. There could be some losers. Nonetheless, the comparative advantage argument usually proceeds to recommend that we need, first, to exploit basic gains from trade and, second, design institutions to mitigate possible distribution effects for some agents. The story for Keynesian stimulus is analogous. The primary benefit arises from bringing idle resources into use and creating new income, a net social gain especially at times like 2009 when so many resources are under-utilized. Future distribution effects should be considered, but they should not divert us from the primary objective.

This perspective shows that the future tax liabilities arising from debt-financed government spending in an environment of unemployed resources creates no *aggregate* burden on future generations. This result is fully consistent with the government budget constraint. Much of mainstream economic analysis recognizes this point implicitly, because most economists (unlike politicians and the popular press) do not identify the future tax burden of current government borrowing as the main cost of deficits. Rather, they worry that current deficits, by increasing the demand for loanable funds, raise interest rates and crowd out private investment, at least in the “long run.”

Keynesian theory provides several responses to this worry. First, as discussed in the previous subsection, it is far from obvious that the economy on its own reaches a path of potential output determined independently of demand over any time horizon. So the mainstream “long run” may have little practical relevance. Second, as long as there are unemployed resources, it is logically inconsistent to argue that the demand and supply of loanable funds determine real interest rates. The problem, known since Keynes wrote chapter 14 of the *General Theory*, is that the supply of saving is not independent of spending. Stimulus spending raises income and income creates saving (also see Fazzari 1994-95). The equilibrium condition between borrowing and lending is established by income adjustment, not interest rate adjustment. This condition implies that the deficit, in a sense, finances itself.¹⁴ Other things equal, a fresh act of spending (public or private) financed by borrowing will continue to boost income through the multiplier process until new saving rises to exactly equal the injection of borrowing.¹⁵ There is, therefore, no upward pressure on interest rates as the result of an excess demand for loans, because there is no effective excess demand for loans. Third, money is endogenous and the central bank can offset any pressure on interest rates that might arise, for example, by the typical

¹⁴ The “functional finance” perspective on government spending and taxation, explained by Wray (**) for example, argues that it is misleading to think of any flow of funds as “financing” government spending. For a government that can create sovereign currency, payments always require the creation of money and government deficits simply drain monetary reserves. This perspective, however, does not change the point in the text that when the government increases its deficit the Keynesian equilibrium condition between output and demand will not be reached until saving (domestic or foreign) rises to equal the amount of the deficit.

¹⁵ Here is a little more intuition. Suppose borrowing and spending rises by \$100 at a store owned by person A. Then, A’s income rises by \$100. If A saves the entire \$100, the multiplier process ends after one round and saving has risen by the amount of borrowing. Now, suppose A spends half of his new income by purchasing something from B for \$50. A’s saving is then higher by \$50, but now B has an additional \$50 of income. Should B save all of this new income, the multiplier process ends and total new saving of A and B offset the additional \$100 in fresh borrowing. If B spends part of the new income, however, at C, then the process continues. The multiplier continues to grow until the entire initial injection of \$100 leaks into saving by someone.

“LM curve” effect that rising income might increase money demand. Indeed, this is what an interest rate target would do.

In spite of the widespread mainstream fear that deficits raise interest rates, systematic empirical evidence for such an effect is thin at best.¹⁶ Anecdotally, recent major swings in U.S. fiscal policy do not justify crowding out fears. During the final years of the Clinton presidency, there was much fanfare about the first American fiscal surpluses in decades, but interest rates rose. In the first years of George W. Bush’s presidency the federal budget changed quickly from a modest surplus to a large deficit, a very large historical shift when measured relative to GDP. Interest rates fell. And as the Great Recession unfolded the U.S. deficit increased to levels not seen since World War 2 (the fiscal 2009 figure of \$1.4 trillion is 10 percent of GDP). Again, interest rates fell.

Indeed, it seems that crowding in is much more likely than crowding out. Business investment has collapsed during the Great Recession. Venture capital funding, an important source of financing for new technology, has dried up. These effects of the Great Recession have tangible costs for future generations of workers and consumers who will likely face a more poorly equipped economy in which innovative activity has been curtailed. Effective stimulus to limit such damage and hasten the recovery from the Great Recession will likely lead to more capital, better technology and a more productive future economy.

These observations lead to another provocative point from what might be called Keynesian public finance. How much will a given injection of government spending actually increase the deficit? The typical intuition is that a dollar of spending raises the deficit by a dollar in the absence of any change to the tax system. But when stimulus creates income, it also creates income taxes. To fix ideas, consider a simple closed-economy Keynesian multiplier model in which people spend all that they receive in disposable income, but leakages come from a proportional income tax. In this case, a dollar of debt-financed stimulus must generate enough income so that tax revenues rise to *completely offset* the effect of the new spending on the deficit. This result follows from the above discussion that deficits are self-financing: a spending injection must raise income until endogenous saving and taxes equal the size of the initial injection. If the saving effects are zero by assumption, tax revenues rise by the full amount of the initial spending once the multiplier process converges to equilibrium. In reality, people likely save some of their marginal income and some consumption spending leaks into imports, so higher government spending holding tax rates constant will raise the conventionally measured deficit. But the effect is likely to be substantially less than dollar-for-dollar, euro-for-euro, pound-for-pound, etc.¹⁷

Of course, this analysis assumes that resources are not fully employed so that demand stimulus can create real income. In Cynamon and Fazzari (2008) we argue that the proximate constraint on U.S. output for most of the past quarter century was demand, not supply. And the global

¹⁶ See Galbraith (2005).

¹⁷ In Paul Krugman’s *New York Times* blog, September 29, 2009, he identifies this effect and speculates that endogenous increases in taxes generate about 40 cents of new government revenue for each dollar of stimulus spending. With a very simple model and rough estimates of how much U.S. tax revenues rose in the recent expansion (including federal, state, and local revenues), we estimate that the effect is larger, at least 50 cents and perhaps as high as 70 cents for each dollar of stimulus. Import effects would reduce this figure, but induced investment accelerator effects make it larger.

collapse in 2008 and 2009 reinforces this point. While practical design of stimulus must pay attention to possible bottlenecks and supply constraints, we should not underestimate the flexibility of the labor market to guide flows of unemployed workers into expanding sectors. Stimulus spending on highway construction, for example, most likely could effectively absorb unemployed home builders.

Distribution and Fiscal Policy (Incomplete)

In the previous section, we argued that concerns that fiscal stimulus imposes a net burden on future generations are misplaced in an economy with idle resources. Government debt created today as a by-product of fiscal stimulus transfers a future tax liability to the future, but it also transfers an asset. The Keynesian stimulus from current borrowing, private or public, creates an equivalent amount of saving and for that reason puts no pressure on interest rates dismissing fears about investment crowding out. We must recognize, however, that fiscal deficits induce future *transfers* from taxpayers to bond holders. These transfers may have economic effects that we explore in this subsection.

Remaining text to be added. We plan to make three points in this subsection:

1. Even with a large expansion in U.S. government debt the size of the future transfers for debt service will likely be small and manageable.
2. Government debt financed by domestic borrowing will largely create transfers among the relatively wealthy because both saving and income taxes are heavily skewed toward high-income people.
3. Foreign debt financing creates transfers that may be more problematic (politically, if not economically). This problem is likely most important for the U.S. since U.S. dollar assets are widely held by international savers. Even in the U.S. case, however, the size of transfers is likely to be small.

Government Spending: Keynesian Stimulus vs. Allocation (Incomplete)

Remaining text to be added. We plan to consider the following points in this subsection:

1. Government spending affects allocation of resources. If output reaches potential, government activity creates opportunity costs.
2. In the more likely case that output is below potential, the opportunity cost of government activity is much lower. Nevertheless, even spending choices justified as Keynesian stimulus should not ignore allocation effects for both economic “cost-benefit” reasons and the need to generate political support for Keynesian policy.
3. These considerations raise the question of whether stimulus might be better pursued with tax cuts rather than government spending. On the one hand, tax cuts rely on markets and individual choice rather than bureaucratic processes to make allocation decisions. On the other hand, tax cuts will create Keynesian stimulus only if they are spent. The propensity to spend out of Keynesian-oriented tax cuts can be larger if their distribution is appropriately designed and if the cuts do not expire because of unfounded fears of excessive future deficits.

4. We also plan to raise the question of whether it may not be desirable to stimulate demand by direct money creation rather than bond sales.

IV. Concluding Remarks (to be added)

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Figure 1: Employment Relative to Beginning of Recession

