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REVIVING FULL EMPLOYMENT POLICY Challenging the Wall Street Paradigm

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Economic Policy and the Challenge of Shared Prosperity

Over the last 30 years the American economy has exhibited a systematic disconnection between wages and productivity growth. This disconnection means that ordinary Americans are not properly sharing in the economy's growth, thus contributing to rising income inequality.

Rising inequality and the failure of wages to rise with productivity has triggered a fundamental debate among Democrats. One position argues that the underlying structure of the economy is sound, but workers must be offered a "helping hand" in the form of enlightened social policy, in the form of income supports, tax credits, educational assistance, and wage insurance. Policy would thereby ameliorate the effects of the disconnection between wages and productivity growth.

A second position is that the underlying structure of the economy is flawed, and policy needs to address the flaws. From this perspective, it is not enough to address "symptoms;" policy must address underlying "causes." Enlightened social policy is always welcome, but it is not adequate to the scale of the problem and therefore cannot produce the desired outcome—an economy in which productive work is appropriately rewarded and provides the means for participating in the American dream.

There is a further analytical twist, which is that economic policy has itself contributed to the disconnection

TABLE OF CONTENTS

Economic Policy and the Challenge of Shared Prosperity	1
The Erosion of Shared Prosperity	2
Macroeconomic Policy and the Erosion of Shared Prosperity	3
Constructing a New Macroeconomic Policy Regime	7
The Political Challenge of Macroeconomic Policy	18

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of wages and productivity growth. That calls for changing the existing policy paradigm. There are many dimensions of policy that must change, including labor market policy (Kochan and Shulman 2007) and globalization policy (Faux 2007). This briefing paper examines needed changes in macroeconomic policy—monetary policy, exchange rate policy, and fiscal policy.

The argument is that existing macroeconomic policy has paid inadequate attention to delivering full employment for the U.S. economy. In doing so, current policy has contributed to undermining the link between wages and productivity growth because full employment is an essential condition for workers to be able to bargain for a fair share of productivity. Moreover, as documented by Bernstein and Baker (2003), the benefits of full employment go beyond higher wages and more jobs to include reduced poverty and crime rates. The implication is that full employment must be restored as a primary goal of macroeconomic policy, and this briefing paper describes policies that can bring about that outcome.

The Erosion of Shared Prosperity

Over the last 30 years the U.S. economy has experienced a sea change in performance defined by the emergence of a disconnection between wages and productivity growth. The disconnection is captured in **Figure A**, which shows growth of productivity and hourly compensation for production and non-supervisory workers (who constitute over 80% of wage and salary employment). From 1959 to 1979 compensation moved with productivity. Since 1979 productivity has kept growing but hourly compensation has essentially flat-lined.

The flipside of the wage/productivity-growth disconnection is increasing income inequality. **Figure B** shows how family incomes at the top (95th percentile) and the bottom (20th percentile) of the scale grew together between 1947

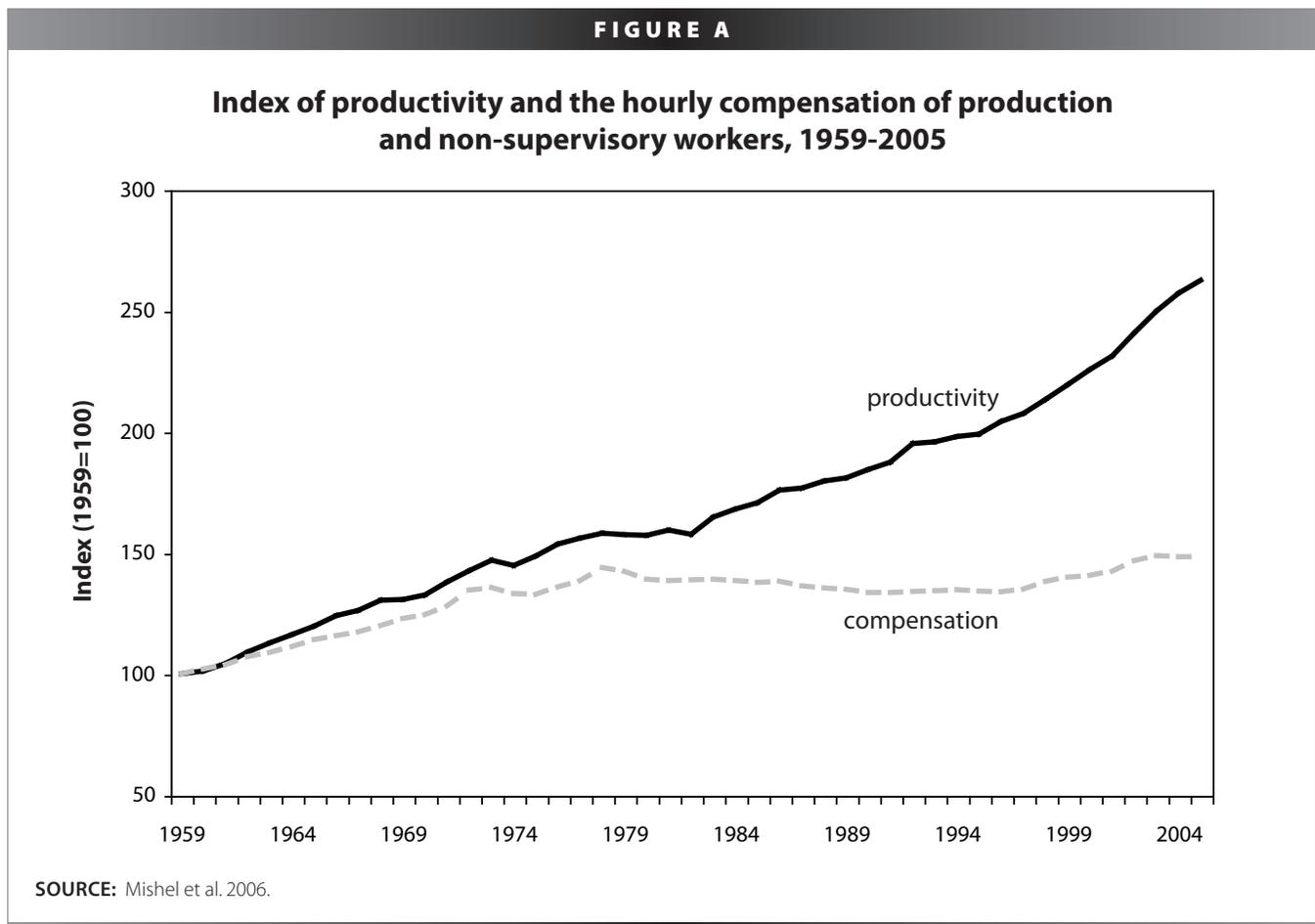
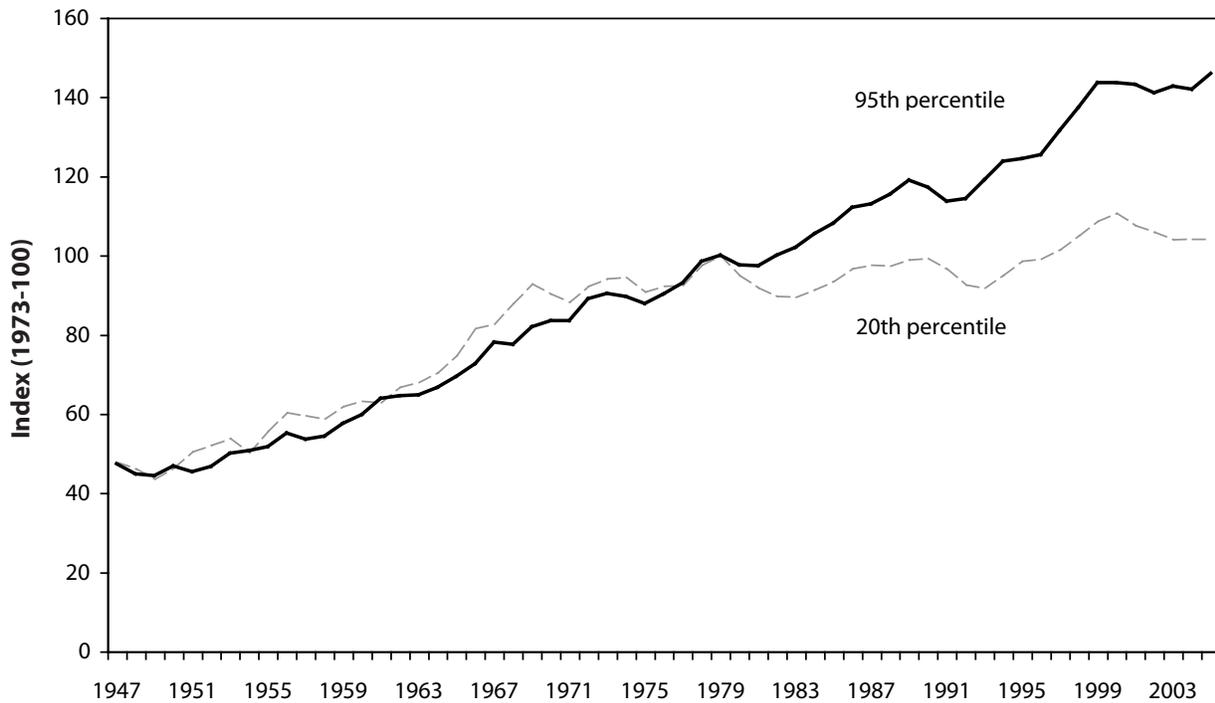


FIGURE B**Low family income and high family income growth, 1947-2005**

SOURCE: Mishel et al, *The State of Working America 2006/2007*. An Economic Policy Institute Book. Ithaca, N.Y.: Cornell University Press, 2007.

and 1973. Indeed, family incomes at the bottom of the distribution actually grew fractionally faster than those at the top. Since 1973, however, this situation has been transformed: instead of growing together, the nation has grown apart, with the productivity growth dividend accumulating almost entirely to those in the top 20%—and especially the top one percent—of the family income distribution.

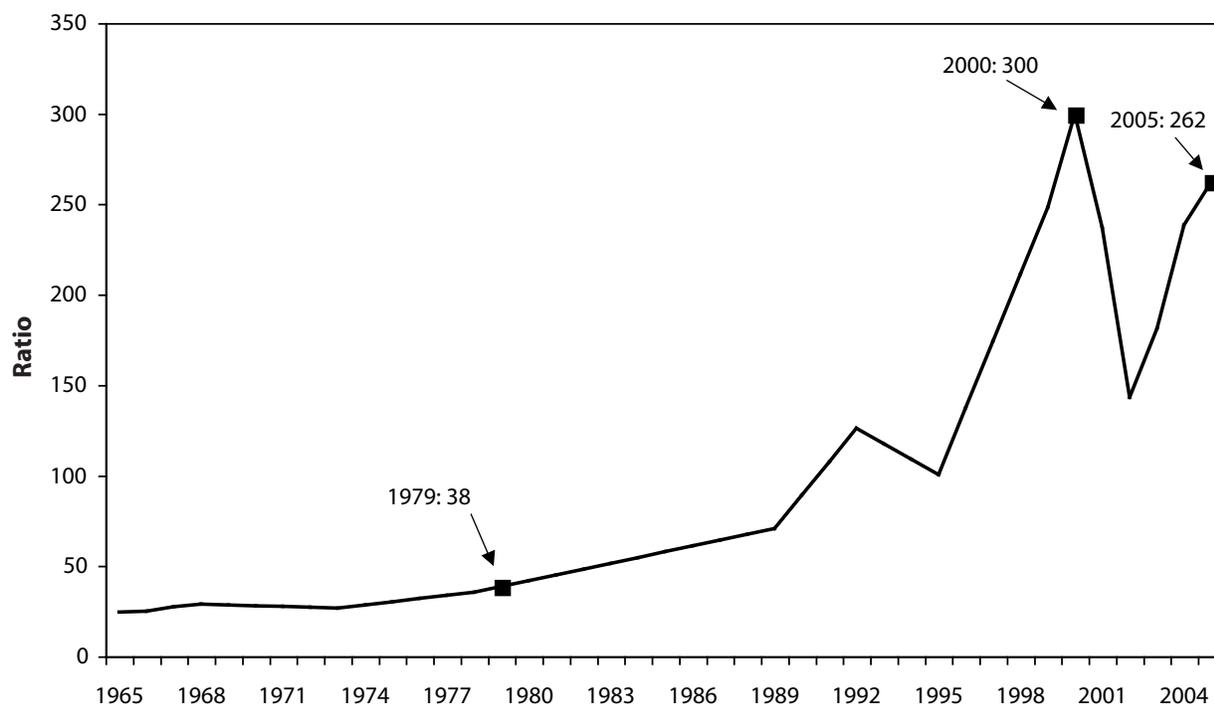
These developments occurred in two stages. Stage one involved widening of wage inequality, exemplified by the CEO-pay explosion. **Figure C** shows that between 1979 and 2005 CEO pay went from being 38 times average worker pay to 262 times. Stage two has occurred post-2000 and has been marked by a jump in the profit share of national income.

Digging deeper, the disaggregated wage data show that male workers at the bottom of the wage distribution have seen their real wages fall, while those in the middle have seen increases of about 10% spread over 25 years.¹ From a cross-generational perspective, male workers at the *bottom* of the wage distribution now earn less than the previous generation, and their wages also grow more slowly. That means these workers have suffered both cross-generational wage “level” and wage “growth” deterioration. Male workers in the *middle* of the wage distribution have had some small wage gains relative to the previous generation, but their wages grow more slowly than in the past. They have therefore experienced a cross-generational deterioration of wage growth.

This gloomy family income and compensation picture is compounded by other adverse labor market trends. Thus, average Americans are carrying more economic risk in the form of greater job loss risk, greater risk of permanent wage reductions, reduced length of job tenure, reduced health care coverage or increased health care costs, and greater retirement income security risk owing to the shift away from defined-benefit pension plans to defined-contribution plans (Hacker 2006).

FIGURE C

Ratio of CEO to average worker pay, 1965-2005



SOURCE: Mishel et al. 2006.

Macroeconomic Policy and the Erosion of Shared Prosperity

The role of macroeconomic policy

The disconnection between wages and productivity growth has been caused by many factors, including globalization and the changed balance of power in labor markets. But macroeconomic policy has also played a significant role through its impact on overall economic performance. Moreover, there also has been resistance to new policies that could have moderated or altered these trends. As such, policy has been marked by both sins of commission and omission.

The current policy regime accommodates a new type of business cycle that emerged post-1979, in part due to policies of financial deregulation and global economic integration. This new type of business cycle is financially driven by asset price inflation and borrowing, with cheap imports helping contain inflation. This kind of cycle contrasts with the pre-1979 business cycles that rested on wages tied to productivity growth, full-employment, and high rates of capacity utilization that provided an inducement to invest.² This new business cycle has, in turn, called forth a new macroeconomic policy regime. Thus, whereas the pre-1980 macroeconomic policy regime can be viewed as having put a floor under labor markets, the post-1980 regime implicitly puts a floor under financial markets.³

With regard to specific failures of macroeconomic policy, two stand out: the first concerns monetary policy and the setting of interest rates, while the second concerns exchange rates and policy attitudes to the trade deficit. Additionally, fiscal policy has been problematic with regard to its impact on after-tax income inequality, and its response to the 2001 recession was particularly poorly designed.

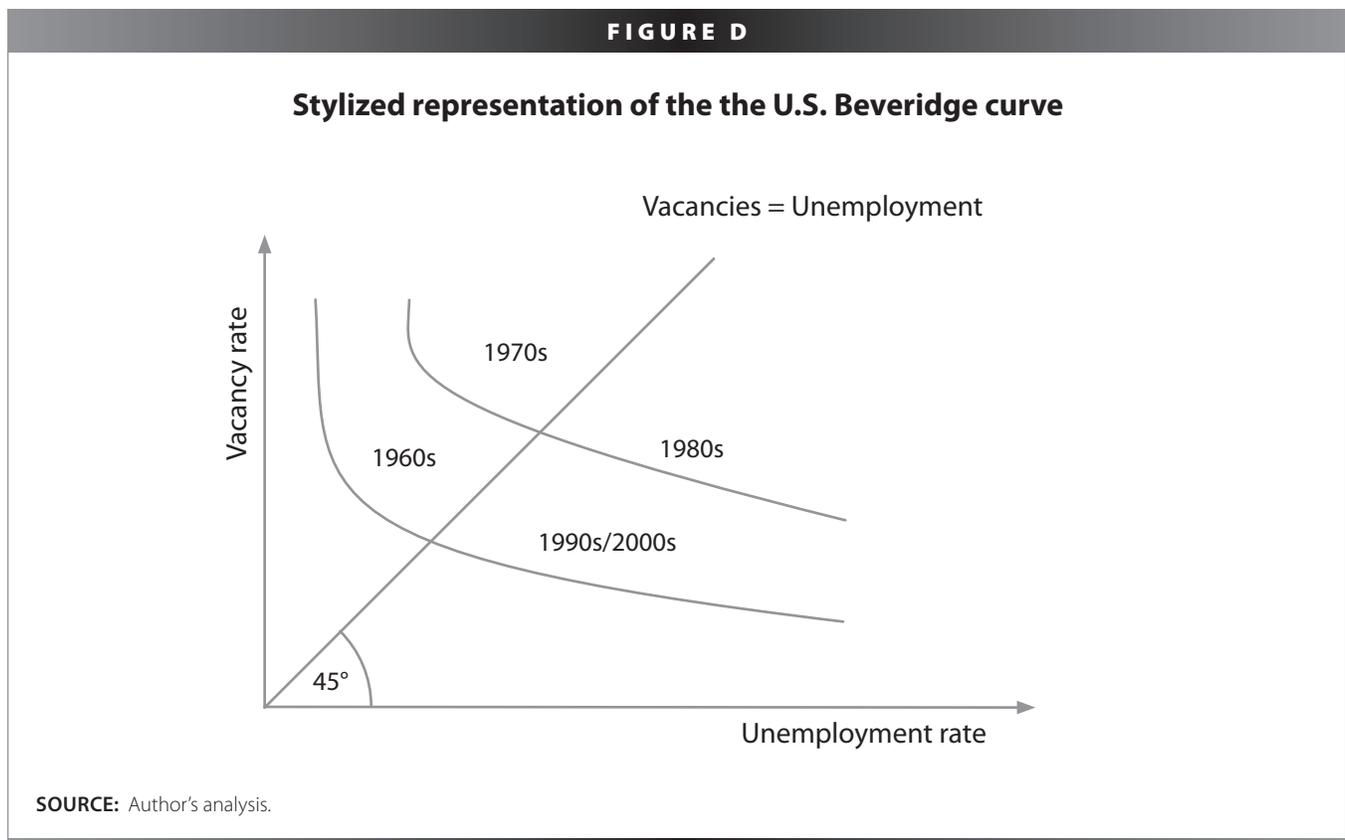
In the post-World War II era the Federal Reserve's macroeconomic policy goals have always been a combination of full employment and price stability. During this era all Federal Reserve chairmen have wrestled with the problem of inflation. However, since 1979 there has been a significant shift in emphasis toward concern with inflation.

The new regime manifests itself in several ways, the most noticeable feature of which is the prominence given to combating inflation. This has replaced earlier concerns with full employment, easy job availability, and rising real wages. Indeed, rising wages are actually viewed as cause for concern on the grounds that they may be inflationary, but the same standard is never applied to rising profit rates.

The impact of this shift in macroeconomic policy is captured in **Figure D**, which shows the U.S. Beveridge curve that relates job vacancies and the unemployment rate. The 45-degree line splits the diagram in half, and regions above the line correspond to conditions of relatively full employment since the vacancies are high relative to the unemployment rate. Figure D shows that, whereas in the 1960s and 1970s the U.S. economy operated at a high vacancy-to-unemployment rate, this has been reversed since the 1980s.

The Beveridge curve shifted adversely in the 1970s and 1980s (Bleakley and Fuhrer 1997). Part of this shift was due to demographic factors and the entry of the baby-boom into the workforce, which tended to increase job market churn. However, part of the shift can be attributed to policy, particularly the lack of attention to exchange rates and manufacturing. This contributed to waves of job loss in manufacturing, which created pockets of structural unemployment that have taken years to erase.

A second critical contribution of macroeconomic policy concerns exchange rate policy, whose impact is felt in the trade deficit and manufacturing employment. The new policy regime has the Federal Reserve and Treasury turning a blind eye to the foreign exchange value of the dollar despite its critical impacts on manufacturing employment and the trade deficit. Indeed, the Fed has even tended to view an over-valued, "strong" dollar as a bonus that helps contain infla-



tion by putting the squeeze on prices of manufacturing goods. Meanwhile, the Treasury has pursued a form of “exchange rate populism” whereby an over-valued dollar results in cheaper consumption good imports, which buys public acceptance of international economic policies that erode wages and manufacturing employment.

The formal economic rationalization of this neglect of the trade deficit is that the deficit supposedly represents the decisions of “consenting adults” who are making consumption and investment choices that maximize their economic well-being. The putative logic is that economic agents are taking advantage of new opportunities for exchange created by trade agreements that have fashioned a global market, and if that results in a trade deficit, then so be it.

This policy stance contrasts fundamentally with the policy that prevailed in the pre-1979 era, and it reflects the changed character of the American economy’s business cycle. Today’s economy is fuelled by credit expansion and asset price inflation, with cheap imports helping contain inflation. The pre-1979 business cycle rested on wage growth tied to productivity and full employment, which together fuelled consumption and investment spending. In that earlier regime, trade deficits represented a leakage of aggregate demand that undermined the virtuous circle whereby robust domestic market conditions promoted investment and capacity expansion. Trade deficits were therefore a problem, whereas now policymakers view them as assisting with control of inflation.

The natural rate of unemployment⁴

Ideas have played an important role in driving these changes, promoting a retreat from full-employment policy on the grounds that it is not needed and that activist stabilization policies may actually worsen outcomes. No idea has been more influential than Milton Friedman’s (1968) theory of a natural rate of unemployment.⁵

Friedman’s natural rate of unemployment challenged the earlier view that there existed a trade-off between inflation and unemployment, and that the Federal Reserve could lower unemployment by enduring slightly higher inflation. Instead, Friedman asserted that the economy automatically and quickly gravitates to a natural rate of unemployment, determined by the economy’s institutions. Moreover, that rate cannot be affected by monetary policy, and attempts to use expansionary monetary policy to push unemployment below the floor set by the natural rate will be unsuccessful and only generate ever-accelerating inflation.

This claim regarding the ineffectiveness of monetary policy and the absence of a long-run tradeoff between inflation and unemployment has been hugely influential in shaping policy choices on monetary policy. First, the claim of policy ineffectiveness has contributed to abandonment of earlier concerns with full employment. The logic is that, since monetary policy cannot have lasting effects on employment, trying to use policy to secure some concept of full employment is a useless exercise. In other words, employment and full employment should not be the focus of policy since they are simply beyond its reach.

Second, the claim that monetary policy cannot affect unemployment and only affects inflation leads to a focus on inflation. And because inflation is considered detrimental, that pushes the case for price stability or zero inflation. For much of the 1990s the Alan Greenspan-led Fed explicitly talked of price stability being the long-run goal. However, after the brief flirtation with deflation during the recession of 2000, the Fed has now settled on a 2% inflation target to leave itself room to lower real interest rates in economic downturns.

Third, the theory of a “natural rate” provides the Fed with cover when it comes to questions of wage and income distribution. According to the theory, real wages are determined in the labor market and are completely unaffected by Federal Reserve policy. Thus, the Fed may lament wage stagnation and worsening income distribution, but it bears no responsibility, nor can it do anything about it.

Indeed, the situation is even worse because of the Fed’s asymmetric approach to nominal wages. When wages lag prices, the Fed sits on its hands, albeit with expressions of sympathy for workers. However, when wages outrun prices, the Fed stands ready to raise interest rates on the grounds that rising unit labor costs are inflationary. This creates a monetary policy trap for real wages and has macroeconomic policy supporting a higher profit share—something that is also

supported by current labor market and international economic policy.

Fourth, the theory of the natural rate contributes to driving the so-called “labor market flexibility” agenda that attacks unions, the minimum wage, and employment and worker protections. The logic is that these institutions prevent wages from adjusting downward, and thereby increasing the natural rate of unemployment. This explains opposition to the minimum wage by former Federal Reserve Chairman Alan Greenspan. Since the Fed adheres to natural rate theory, the Fed implicitly places its weight and influence behind the labor market “flexibility” agenda.

The theory of the natural rate has been extensively criticized on both theoretical and empirical grounds (see Galbraith 1997; Palley 1999 and 2007). At the theoretical level it makes grand, unrealistic assumptions about wage flexibility and the way labor markets work, and at the empirical level it has been impossible to establish a tight, stable estimate of the natural rate. Thus, empirical estimates at any moment in time vary enormously, and the average estimate tends to track the actual rate of unemployment (see Staiger et al. 1997).

The one clear theoretical prediction is that anticipated monetary policy should have no impact on unemployment and output. Yet studies have repeatedly found that this is not so—and among the best of these studies is one by current Federal Reserve Vice Chairman Frederic Mishkin (1982). Despite this, the “natural state” theory has been widely adopted by Federal Reserve policy makers, with enormous consequences for the framing and conduct of policy and for the way that the economy is understood and discussed more broadly.

Constructing a New Macroeconomic Policy Regime

Monetary policy

Full employment is key to restoring the link between wages and productivity growth. That means that change in Federal Reserve thinking and in monetary policy is at the fulcrum of an agenda for shared prosperity.

Full employment interest rate policy

The first and most critical change the Fed must undertake concerns its construction of interest rate policy. Currently, the Fed hawkishly watches inflation and devotes much less attention to employment. This stance implicitly rests on economic understanding rooted in the theory of the natural rate of unemployment. Restoring proper policy weight to full employment therefore requires taking the theory of the natural rate of unemployment off the table and out of policy discourse. In its place must be put a new discourse that emphasizes full employment and rejects the notion that the Fed has no permanent impact on employment outcomes and wages.

Full-employment monetary policy begs the question of what is full employment. Lord Beveridge, the originator of the Beveridge curve, defined it as a situation in which vacancies equaled unemployment so that there is a job available for everyone wishing to work. The Humphrey-Hawkins Act (1978) defined full employment as an unemployment rate of 4%. However, an unemployment metric is subject to some serious criticisms because the official unemployment rate (the Bureau of Labor Statistics U-3 measure) does not include workers who are “discouraged” or “marginally attached” to the labor force. These are workers not actively looking for work because they think they cannot find appropriate jobs. Additionally, the official rate does not include workers who want full-time work but are only able to find part-time work.

An alternative employment-focused measure of full employment is the employment to working-age population ratio, which captures the extent to which the working-age population is employed. This ratio peaked at 67.1% in 2000, and that peak can serve as an indicator of full employment for the current economy.

Pornography is difficult to define, which prompted U.S. Supreme Court Justice Potter Stewart to famously observe “I know it when I see it.” The same holds for full employment, which is also hard to define, but we know it when we see it. Simply put, full employment constitutes a condition in which jobs are easy to find. That implies a relatively high vacancy-to-unemployment ratio, a low official unemployment rate, low numbers of discouraged workers, little invol-

untary part-time work, and a high employment-to-population ratio. Under those conditions, the duration of spells of unemployment will also be short since jobs are plentiful. With full employment, wage growth will also track productivity growth as firms compete for scarce workers.

Currently, the Fed defines full employment as a situation of rising inflation. A better definition would be one of wages systematically rising with productivity. According to that measure, the United States has operated below full employment for most of the last 30 years. The exceptions have been the late 1970s, the late 1980s, and the late 1990s, when wages started rising with productivity at the tail end of booms.

The dangers of inflation targeting

Not only has Federal Reserve interest rate policy privileged concerns with inflation over full employment, there are now indications that it is moving to adopt an explicit inflation-targeting policy regime. This would entail monetary policy being guided by the goal of hitting an explicit numerical inflation target. Federal Reserve Chairman Ben Bernanke has written extensively in favor of inflation targets (Bernanke et al. 1997 and 1999). Moreover, a co-author of his book on inflation targeting, Frederic Mishkin, has recently been appointed vice-chairman of the Fed. Additionally, there is much support for inflation targeting within the economics profession, again showing the importance of ideas in shaping policy.

Considerable damage has already been done through persistent talk about the existence of an informal 2% inflation target. This talk has coordinated the bond market and given it a focal point against which to bind the Fed. Formally institutionalizing inflation targeting would compound this damage and further entrench natural-rate-based interest rate policy.

The intellectual justification for inflation targeting comes out of the Fed's natural rate framework. This framework claims that the Fed cannot do anything about unemployment and inflation is always bad. Given that, it therefore makes sense to aim for low and stable inflation subject to retaining a margin of space to lower nominal interest rates in recessions.

However, the natural rate model is flawed. The reality is that the Fed manages macroeconomic activity, and in doing so it implicitly influences inflation, the unemployment rate, and the real wage.⁶ It is easy to see how an inflation target policy will bias all macroeconomic policy decisions toward low inflation. If policy is framed exclusively in terms of inflation, a 2% target will trump a 3% target even if that means higher unemployment. Conversely, if policy is framed exclusively in terms of unemployment, a 4% target will trump a 5% target even if it means higher inflation. How policies are framed matters to the outcomes because it affects perceptions and politics. The reality is that Federal Reserve policy influences inflation, unemployment, and wages, not just one of those areas, and needs to create policies accordingly.

Modernizing financial regulation

A key feature of the new business cycle is its reliance on credit expansion and asset price inflation as sources of demand. The increased presence of credit and asset prices is the result of both financial innovation and deregulation, and with it has come several problems.

First, the economy is increasingly exposed to debt-driven asset price inflation. This process is potentially unstable, and the bursting of bubbles can generate serious economic harm. Yet, because of the reliance on asset price inflation and borrowing for demand growth, the Fed is reluctant to intervene in this process. Instead, it has an incentive to put a floor under asset prices.

Second, individuals are not necessarily made better off by this process. Increased house prices go hand-in-hand with increased debt, meaning individuals carry more balance sheet and bankruptcy risk. Increased house prices also mean greater interest payments on the increased debt. Additionally, increased house prices strain the economic prospects of younger workers. With regard to stock markets, over-paying for stocks can have significant consequences for retirement income.

For the Fed, the problem is that it has relinquished all of its tools except interest rates. That means it must now manage activity in both the real economy and the financial sector with just one instrument—the short-term interest rate. If it

uses interest rates to manage asset prices, then it risks damaging manufacturing and the broader economy, which can be termed the “blunderbuss effect.” Conversely, if it ignores asset prices and uses interest rates to manage the real economy, it risks an unstable asset price bubble and debt build-up.

The Fed’s shortage of policy tools is a direct result of policies pursued over the last two decades. During this period, the Fed has given up on quantitative regulatory controls that impose quantity limits on the activities of financial firms, and even where controls remain, the Fed has refused to use them on ideological grounds. A case in point is margin requirements on debt-financed equity purchases that the Fed could have used to chill the stock market bubble of 1999-2000, but Chairman Greenspan resisted doing so. The Fed has even been reluctant to use the bully pulpit—so-called “open-mouth operations”—to discourage bubbles.

In the wake of two decades of financial deregulation and innovation, the Fed needs some policy instrument innovation of its own. In particular, it needs an instrument that can surgically target financial markets. Such an instrument can be provided through a regulatory system using asset-based reserve requirements (ABRR), which would give the Fed an ability to manage relative asset class returns, thereby managing demand for assets and prices (Palley 2000 and 2004b).

ABRRs oblige financial institutions to hold cash reserves against different asset classes, with the level of reserves being adjustable at the discretion of the Fed. Thus, if the Fed wanted to reduce speculation in a particular asset class, it would raise the cash reserve requirement for holding that type of asset, thereby raising its effective cost and thus cooling speculation. For instance, if the Fed wanted to cool housing speculation, it could raise reserve requirements on mortgages. This would *de facto* raise the cost of mortgages since banks would have to hold more cash for each mortgage issued. However, the level of interest rates for other types of loans would be unchanged, thereby avoiding the blunderbuss effect.

A popular fallacy is that financial markets can no longer be regulated. The reality is that it is possible to invent new market-consistent regulations for the financial sector. The real problem is that the Fed has resisted doing so, and it has also refused to use its existing instruments of financial control. That has left the Fed with just the blunderbuss of interest rates, with asset price inflation and debt accumulation as the natural outcomes of this new policy stance.

The Fed’s bully pulpit

Another important change is for the Fed to use its bully pulpit to shape opinion supportive of a new policy configuration. Formally, the Fed sets monetary policy and has an important role in financial regulation. However, the Fed does far more than that through its influence over the shaping and coordination of elite policy opinion. This influence works through the research activities conducted by hundreds of Federal Reserve economists, Fed conferences and publications, and Fed connections with the business community. Through these activities, the Fed contributes to shaping and legitimizing understandings of the economy that in turn drive policy.

As the senior and most visible executive of this powerful institution, the chairman of the Federal Reserve can powerfully influence the direction of this opinion-shaping power. Over the last 20 years this power has been used to promote policies friendly to the interests of corporations and the wealthy, and it has also been used to promote a host of policies unconnected to the Fed’s main mandate. Under former Chairman Greenspan, this included promoting trade liberalization, regressive Social Security reform, tax cuts favoring the wealthy, and even an attack on the economic merits of the minimum wage.

Looking to the future, the Fed’s bully pulpit must be used in a way that is less ideological and more in tune with the Fed’s official mandate. Making that happen requires having a better balance of views and opinions represented on the Board of Governors, among the regional Federal Reserve bank presidents, and within the staff of the Federal Reserve system.

Institutional reform of the Fed

One overarching challenge to accomplishing the above policy changes is the fact that the existing policy priorities have become ensconced in an institutional framework that is increasingly free of political accountability. Since its inception in 1913, the Federal Reserve has always been a relatively autonomous institution, evidenced in its partially public, partially private ownership structure. However, under Chairman Greenspan, its political autonomy increased significantly.

Though still subject to Congressional oversight through hearings first mandated by the Humphrey-Hawkins Act (1978), the Fed has established an expanded position of independence. Multiple factors have been at work. First, the fact that the new policy regime has had bipartisan support means that neither major political party has significantly challenged the Fed, creating space for new practices to take root. Second, former Chairman Greenspan's oracular status made it politically difficult to criticize the Fed, even for those few politicians who would have liked to. As a result, a culture of non-criticism may now have taken root. Third, academic economists have promoted the notion that monetary policy is highly technical and should be left to the experts. Fourth, economists and conservative public policy institutes have also promoted the notion that politicians are not capable of objectively overseeing monetary policy. Instead, it is asserted that monetary policy should be left to independent central bankers who will conduct it in a non-partisan fashion that advances the national interest. The implication, never explicitly spelled out, is that central bankers are capable of objective non-partisanship but the rest of society is not.

This institutional and political setting makes it difficult to criticize the Fed. Given the Fed is approaching its centennial anniversary and there have been no significant core structural reforms since the 1930s, its centenary provides an occasion for Congress to re-examine that structure. Just as the rest of the economy has changed in response to technological innovations, so, too, there is a case for shrinking the number of regional Federal Reserve banks. These banks were created to fit a less-integrated U.S. economy in which 19th century financial and communications technology ruled. Today, there is little justification for that structure other than habit and vested social and political networks.

As part of any restructuring, the Fed's governance at both the Board and regional bank level should be changed to ensure greater community and labor representation. The Fed should also be mandated to give a better justification of its expenditures and their increase relative to inflation. Lastly, it should account for its economic research and education activities, why they are undertaken, how they relate to the Fed's mandate, and how the Fed makes sure that group-think is avoided by giving a full hearing to a broad array of views.

Exchange rate policy⁷

Exchange rate policy constitutes the second leg of macroeconomic policy. With the increased integration of the U.S. economy into the global economy, exchange rates matter even more. Yet, policy has moved in the exact opposite direction, turning exchange rates over to the market and the manipulations of foreign country governments. The results have been disastrous for the U.S. economy.

Effects of failed exchange rate policy

The principal channel of impact of exchange rates is via the trade deficit. An over-valued dollar makes U.S. exports more expensive in foreign markets and foreign imports cheaper in U.S. markets. The result is that exports fall and imports rise, increasing the trade deficit. Trade deficits then have real and financial effects. The real effects take the form of impacts on employment, wages, and the manufacturing sector. Financial effects refer to the impact of accumulated indebtedness resulting from borrowing to finance the deficit.

One important real effect of the recent record-breaking trade deficits has been to weaken the current economic expansion. The commerce department estimates that the trade deficit directly reduced gross domestic product (GDP) growth by over 25% between 2001 and 2003 by channeling spending to foreign rather than domestically produced goods. Moreover, this estimate excludes additional indirect losses stemming from the fact that lower spending on domes-

tic production meant fewer jobs, in turn causing the U.S. economy to forfeit the spending and growth that those jobs would have generated. Furthermore, this adverse growth impact continued in 2004, 2005, and 2006.

Robert Scott of the Economic Policy Institute estimates that each billion dollars of imported goods embodies approximately 9,500 jobs. Stripping out the OPEC oil deficit of \$92.7 billion, the goods trade deficit in 2005 was \$695 billion. Using Scott's estimate implies the trade deficit embedded 6.6 million jobs.

Not only does the trade deficit negatively impact output and employment, it also has lasting adverse effects on U.S. manufacturing capacity. Behind the trade deficit is a problem of lack of competitiveness owing to undervalued exchange rates in the rest of the world. Such under-valuation makes foreign goods cheaper relative to U.S.-produced goods. Given this competitive disadvantage, many U.S. manufacturing companies have closed plants, which has reduced manufacturing capacity. Some companies have gone out of business, while others have re-located or sub-contracted production, particularly to China. Companies have also cut back on investment or re-directed investment elsewhere rather than building new modern capacity in the United States.

American University economist Robert Blecker (2006) has examined the impact of the over-valued dollar on U.S. manufacturing investment spending. He estimates that the appreciation of the dollar from 1995 to 2004 lowered U.S. manufacturing investment by 61%. It also lowered the manufacturing capital stock by 17% relative to what it would have been in 2004 had the dollar remained at its 1995 level. This has structurally weakened the U.S. industrial base. It also makes the future task of trade deficit adjustment more difficult as the United States may now lack the capacity needed to produce many of the manufactured goods it currently imports.

These developments have implications for future U.S. living standards. Manufacturing is key to long-run prosperity, being a major source of the innovations and productivity growth that drive increased income. A reduced manufacturing base means a smaller base from which to draw such benefits. Additionally, when manufacturing moves offshore, associated research and development activities can move, too, thereby diminishing future innovation.

The trade deficit also carries significant adverse financial implications. In particular, growing foreign indebtedness that results from borrowing to finance the deficit makes U.S. financial markets vulnerable to a loss of confidence in the dollar. If financial investors—foreign or domestic—decide they no longer wish to accumulate dollar denominated assets, the dollar stands to fall and interest rates will rise as investors exit the U.S. economy. Higher interest rates would then have severe adverse effects given the high indebtedness of American households. Additionally, a dramatic weakening of the dollar would likely accelerate inflation because of heavy reliance on imported goods and limited domestic manufacturing capacity to replace those goods.

Lastly, the trade deficit also has national security implications. The heavy reliance on imports and the erosion of manufacturing capacity potentially expose the United States to global economic disruptions. These economic security concerns are amplified by the special role of China, which now accounts for almost 30% of the deficit.

There is still considerable uncertainty as to whether China will evolve into a democracy that shares U.S. values, or whether it will remain an authoritarian state and become an outright hostile geo-political rival. China is now the world's second largest holder of U.S. treasury debt, it has the largest trade surplus with the United States, and many U.S. companies are investing heavily in production facilities in China and transferring state of the art manufacturing technology there. These developments give China both real and financial leverage over the U.S. economy. Given the uncertainty surrounding the U.S.–China relationship, this leverage is a major national security risk.

What is the U.S. responsibility for the trade deficit?

What are the causes of the trade deficit, and what is the U.S. responsibility for it? It turns out that these are hard questions to answer because the correct answer requires clearing the decks of a host of economic misunderstandings. The United States has a deep responsibility for its trade deficit. That responsibility is one of profound policy failure whereby

the United States has voluntarily entered into international economic arrangements that have fostered trade imbalances and that lack procedures for dealing with them.

One mistaken argument is the “twin deficits” hypothesis that claims the U.S. trade deficit is the result of the U.S. budget deficit. This argument first appeared in the 1980s, and it implicitly blames government for the trade deficit. The twin deficit hypothesis is both empirically and theoretically weak. At the empirical level, the budget was in record surplus in the late 1990s, yet simultaneously the trade deficit widened and set new records. Other countries also provide compelling empirical evidence against the hypothesis, with both Germany and Japan running persistent large budget deficits and persistent large trade surpluses.

At the theoretical level, the budget and trade deficits are significantly independent of each other. The budget deficit is principally determined by spending policies; by tax policies that determine tax revenues; and by the state of the economy that also influences tax revenues. The trade deficit is principally determined by trade policies; the exchange rate that influences the price of imports and exports; and by the state of the domestic economy relative to the rest of the world. When the U.S. economy is strong, it tends to suck in imports; and when the rest of the world is booming, it buys more, which raises U.S. exports.

That said, there is an indirect linkage between the two, and that linkage is used to muddy public understanding and push twin deficit politics. The linkage is the state of the economy, which affects both the trade and budget deficits. Thus, tax cuts worsen the budget deficit, but they also increase spending on both domestic output and (to a far lesser degree) imports.

A second mistaken argument is the saving shortage hypothesis, which asserts that the trade deficit is due to inadequate household saving and excessive consumption. However, suppose Americans were to reduce spending and increase saving. That would immediately cause a recession. The trade deficit would show some improvement because about one-sixth of each dollar of spending goes to imports, but the overall reduction would be marginal and achieved at brutal economic cost. Put bluntly, increasing saving by reducing the number of meals consumed at McDonalds will do little to improve the trade deficit.

In reality, the primary problem is the composition of spending. Too much of U.S. spending is on imports rather than domestically produced goods, which points to exchange rates as the principle cause. Lowering the international value of the dollar will raise the price of imports compared to domestically produced goods, thereby shifting spending toward the latter. Changing prices is how market economies shift spending and production. The United States is a market economy and the exchange rate a critical price, making exchange-rate adjustment key to fixing the economy.

This brings us to the real contribution of the United States to the trade deficit, which is international economic policy. Over the last 25 years, successive Republican and Democratic administrations have created a global economy in which goods, capital, finance, and corporations are free to move about the globe with little restriction. This new system has boosted profits by allowing companies to establish export-production platforms in low-wage countries and batter America’s unions into submission. Big-box retailers, such as Wal-Mart, have also supported the new arrangements because they benefit from global sourcing. The purpose of the new system has always been access to cheap, low-wage production; it has never been about expanded, balanced trade.

The Federal Reserve and Wall Street have both supported the new international system. The Fed has supported globalization and a strong dollar because low-cost imports and fear of outsourcing help hold down inflation, which is the Federal Reserve’s primary policy goal in the new order. Wall Street has supported it because it benefits from financing trade deficits. The strong dollar supports also make foreign assets cheap, enabling Wall Street and multi-national companies to buy foreign assets even as the United States has been falling deeper in debt.

The bottom line is that U.S. policy makers, working in bi-partisan fashion, have created an international system that inevitably produces trade deficits. This architecture suits the economic interests of the most powerful players—multi-national corporations, big retail, Wall Street, and the Federal Reserve. The problem is that it harms the interests of America’s working families.

The growing U.S. trade deficit has been entirely predictable, with each trade agreement being followed by a worsening deficit. Today's exchange rate problem with China was also predictable. In 1994, immediately after the inauguration of NAFTA, the Mexican peso collapsed in value relative to the dollar, contributing to an exodus of U.S. manufacturing to Mexico. Yet despite this history, attempts to include provisions protecting against under-valued exchange rates in trade agreements have been persistently rejected.

Needed exchange rate policies

Today's international economic system is flawed. It is subject to damaging trade imbalances, it promotes de-industrialization, and it places persistent downward competitive pressures on wages. That this system is an American creation is no excuse. The system needs change.

The immediate need is for a new international agreement on exchange rates modeled after the Plaza Accord of 1985. Such an agreement can deliver a global re-alignment of exchange rates, thereby beginning a process of smoothly unwinding today's global financial imbalances. China will need to revalue its currency by 30%, and Japan by 20%. The recent strength of the euro (now approximately 1.35 dollars per euro) puts it close to an equilibrium parity.⁸

As the largest contributor to the U.S. trade deficit, China must significantly revalue upward its exchange rate. Chinese co-operation is key because other East Asian countries that also have surpluses with the United States will not revalue unless China does, too. These countries legitimately fear that if they revalue and China does not, they will lose competitive advantage and the U.S. trade deficit will remain unchanged since Chinese exports will merely replace theirs.

This realignment must be credible and markets must believe it will hold. Absent that, business will not relocate production and investment back to the United States out of fear the dollar will revert to uncompetitive levels.

Beyond an immediate realignment, there is need for structural reforms. One reform must be the inclusion in trade agreements of exchange rate provisions guarding against use of undervalued exchange rates to manipulate the pattern of trade. This is the lesson from experience of trade agreements with Mexico and China. Exchange rates affect the pattern of trade, and can do so permanently (Palley 2003). This necessitates explicitly incorporating them in the rules governing trade. The current trading rules ignore exchange rates, resulting in major trade damage and distortions. It also periodically generates extreme friction as countries are eventually forced to confront the distortions caused by exchange rate misalignment.

Along with putting exchange rates in trade agreements, there is need to establish a global system of exchange rates that prevents a recurrence of such misalignments. It cannot be over-emphasized how much the increase in international trade has elevated the significance of exchange rates. A global economy needs a system of managed exchange rates that promotes fair exchange rate alignments and stability. Such a system would increase the benefits from trade, prevent exchange rate induced distortions, and reduce country conflict over exchange rates and trade deficits.

The obvious candidate is some system employing crawling band target zones, as proposed by a number of economists, including Williamson (1985 and 1999), Bergsten et al. (1999), Blecker (1999), and Grieve-Smith (1999).

Target-zone systems involve choice of a number of parameters that would need to be negotiated by participants. First, countries would need to choose target exchange rates. Second, there must be agreement on the size of the band in which the exchange rate could fluctuate. Third, there is a choice whether the band would be hard or soft. A hard band is automatically and decisively defended; a soft band is one that allows for marginal temporary deviations outside the band, while retaining a commitment to bring the exchange rate back within the band when market conditions are most conducive. Fourth, there is the choice of the rate of crawl. This involves determining the rules governing the adjustment of the target and band. Issues here concern the periodicity of adjustment, and the rules governing adjustment of the nominal exchange rate.

Regarding the target exchange rate, a sensible candidate is the notion of fundamental equilibrium exchange rates proposed by Williamson (1994). The basic notion is that participating countries select a set of exchange rates consistent with their targeted current account and GDP outcomes.⁹

Finally, rules of intervention to protect the target exchange rate need to be agreed upon. Historically, the onus of defending the exchange rate has fallen on the country whose exchange rate is weakening. This requires the country to sell foreign exchange reserves to protect the exchange rate. Such a system is fundamentally flawed because countries have limited reserves, and the market knows it. This gives speculators an incentive to try and “break the bank” by shorting the weak currency, and they have a good shot at success given the scale of low-cost leverage that financial markets can muster. Recognizing this, the onus of exchange rate intervention needs to be reversed so that the strong currency country (the central bank whose exchange rate is appreciating) is responsible for preventing appreciation, rather than the weak currency country being responsible for preventing depreciation. Since the strong currency bank has unlimited amounts of its own currency for sale, it can never be beaten by the market. Consequently, once this rule of intervention is credibly adopted, speculators will back off, making the target exchange rate viable. Such a procedure recognizes and addresses the fundamental asymmetry between defending weak and strong currencies.

Additionally, in a fixed (or managed) exchange rate system, placing the onus of defense on the weak country can impart a deflationary bias to the system. This is because the country with the trade deficit is pushed to adopt tight money policies that contract demand. If surplus countries do the adjusting by increasing their money supplies in response to demand for their currencies, this expands demand. That situation does raise inflationary cautions, but this potential source of inflation can be addressed by appropriate setting of exchange rates that prevents large imbalances.

Breaking policy passivity

Today’s global exchange rate system is a haphazard, sub-optimal creation. Whereas East Asian economies are strategically manipulating their exchange rates, U.S. policy makers have rejected intervention on the grounds that markets know best and should be left alone. This asymmetry has allowed East Asia to pursue neo-mercantilist policies that have contributed to today’s massive trade deficit and global financial imbalances.

The U.S. policy mentality is at odds with reason and evidence. There are many theoretical reasons for believing that foreign exchange markets are prone to herd behavior. There is also strong empirical evidence that exchange rates depart from their theoretically warranted equilibrium levels—be they defined as purchasing power parity or as the exchange rate consistent with sustainable current account deficits. And from a *realpolitik* standpoint, it is unwise for a country to let itself be out-gamed by others.

East Asian policy makers are right to believe that they can improve economic outcomes through exchange rate intervention. As Williamson (1999) observes, policy makers that use theory to think sensibly about the exchange rate and how to manage it can do a better job than a pure unregulated float. The problem is that U.S. policy makers have absented themselves from the exchange rate table, leaving others free to manipulate exchange rates for their benefit and to the detriment of the United States.

Fiscal policy

The third pillar of full employment macroeconomic policy is fiscal policy. Broadly speaking, there are two dimensions to the design of fiscal policy. The first concerns the funding and composition of government’s normal activities. The second concerns the design of stabilization policies to counter the business cycle. Both connect with the debate over budget deficits.

The design of fiscal policy

The government has a critical role to play in ensuring full employment. Government purchases of goods and services constitute almost 20% of GDP. That spending is a significant component of total demand and it is also relatively stable, thereby helping stabilize employment.

Additionally, government transfers of income through programs such as Social Security also add to and stabilize demand; such transfer programs stabilize individual household incomes and shift income to poorer households who spend proportionately more.

Finally, government spending on public capital such as infrastructure also helps employment. In the first instance, it creates jobs when the investment is undertaken. Subsequently, the public capital that is created raises the productivity of private sector workers and capital, thereby encouraging private job creation.

Government spending should meet the needs of citizens and contribute to economic growth. The funding of spending should be governed by the principles of adequacy, progressivity, and economic efficiency. *Adequate funding* means that deficits should not imply an unsustainable debt-to-GDP ratio that would result in unsupportable fiscal burdens on future generations. *Progressive funding* means that richer persons should pay proportionately more. *Efficient funding* means that taxes should be levied so as to maximize their contribution to the goals of fiscal policy while minimizing any adverse impacts on economic activity.

The second leg of fiscal policy concerns the design of stabilization policies aimed at smoothing the business cycle. Because the policy process is subject to implementation lags, it is desirable to make maximum use of automatic stabilizers that automatically kick in during recessions and turn-off in booms. Automatic stabilizers ensure that policy timing is right, and they also tend to be progressive and well-targeted (i.e., getting income to those in need). As a result, automatic stabilizers give more “bang per buck” since those in need spend proportionately more, helping mitigate recessions.

The fiscal failures of the Bush administration

The Bush administration has failed to deliver fiscal policy that satisfies these needs and principles. That failure began with the tax cuts of 2001 and has continued throughout the administration’s tenure in office.

The 2001 tax cuts and their extension in 2006 exemplify that failure. Those tax cuts were sold as a counter-cyclical measure to combat the recession of 2001. However, they were extremely poorly designed regarding combating the recession, were extremely regressive, and have been kept in place long after the recession has ended, thereby undermining the long-term budget outlook.

The tax cuts of 2001 were skewed toward high-income wealthy households, violating the principle of progressivity. As a result, they had a smaller impact on spending because wealthy households save more, making them poorly designed to combat the recession and violating the principle of tax efficiency. Finally, they have remained in place long after the recession has ended, thereby contributing to continuing large budget deficits despite the fact that the economy has been in an expansion (albeit an unsatisfactory one) for five years. The bottom line is that the Bush tax cuts should be speedily repealed.

In addition to poor tax policy, the administration has failed to adequately fund public investment. Such spending has fallen from approximately 4% of government spending in the 1960s to approximately 2% today. It is well documented that public investment has high rates of economic return (Aschauer 1991; Munnell 1990), and the nation is suffering from a shortage of public capital in the form of deteriorated infrastructure and schools. Public investment is also needed to help meet urgent 21st century needs regarding transportation, energy security, and the environment. All of this speaks to a need to increase spending in these areas, which will benefit employment today and tomorrow.

Finally, the Bush administration’s regressive tax policies have done damage to the system of automatic stabilizers by making the tax code less progressive. Progressive income taxes are a classic automatic stabilizer, and therefore have a dual justification of being both ethical and efficient. Policy must work to rebuild the system of automatic stabilizers, including restoring more progressivity to the tax codes.

Unemployment insurance (UI) is another critical and effective automatic stabilizer. UI coverage needs to be reformed and expanded to fit today’s labor market experience. Currently, only 40% of the unemployed receive UI. A major factor behind this low coverage rate is the UI system’s convoluted qualification rules. Policy must look to expand UI coverage, and coverage should be automatically extended in recessions when jobs are hard to find.

Social Security is another automatic stabilizer. In addition to contributing to a secure retirement income, it facilitates retirement and exit from the labor force of elderly laid-off workers in recessions, thereby alleviating labor market pressures on wages. These benefits speak to the need to strengthen Social Security, not shrink it, as the Bush administration has sought to do.

Rubinomics and the budget deficit debate

Discussion of fiscal policy inevitably raises the issue of budget deficits. Many “new” Democrats maintain that balancing the budget should be the primary focus of fiscal policy. This view, often referred to as Rubinomics after former Treasury Secretary Robert Rubin, derives from the belief that a lack of saving is the nation’s number one economic problem. The claim is that the deficit is absorbing vitally needed saving, thereby driving up interest rates, reducing investment and capital accumulation, and ultimately lowering productivity and future living standards.

Additionally, budget deficits are accused of causing trade deficits, the so-called “twin deficits” argument. The assertion is that budget deficits soak up resources and saving, thereby contributing to a shortage that is satisfied by imports that cause trade deficits.

Rubinomics rests on faulty economics. Its central empirical proposition is that budget deficits significantly increase interest rates. Given the centrality of this proposition, that effect should be clear as daylight. Yet, it is extremely difficult to detect, requiring skillful statistical scratching under every rock to find even miniscule impacts. Instead, in recent years interest rates hit record lows despite large deficits. Given that the Fed lowered rates to record lows, this fits the common sense observation that it is the Federal Reserve that determines interest rates contingent on the state of the economy.

The core claim of a shortage of saving also makes no sense. The last five years have witnessed an explosion in profits and corporations are awash with cash. U.S. after-tax profits are the highest percentage of GDP in 75 years, and in 2006 corporate stock buybacks exceeded corporate capital spending. Across the board, asset prices are surging in response to the flood of financial saving pouring into markets from wealthy individuals, pension funds, and foreign governments. That suggests saving is not the problem.

Nor does the twin deficit argument make sense. In the late 1990s the United States ran record trade deficits as the budget moved into record surplus. And both Japan and Germany have run huge budget deficits and trade surpluses for over a decade.

Rubinomics lacks empirical support, and underlying this failure is a deeper analytical misunderstanding about the role of saving in fostering economic growth. Drawing from classical economics, Rubinomics mistakenly asserts that saving drives investment. That logic derives from the days of the agricultural economy when corn seed (saving) was needed to produce next year’s crop. However, in a modern economy the process starts with business deciding it needs new machines, then ordering those machines, which get built and count as saving because they are long-lived.

In a modern economy investment drives saving and policy should aim to stimulate business investment while ensuring an adequate supply of finance. Today, finance is plentiful (*viz.* the boom on Wall Street), but the demand for investment is weak because policy has undermined the incentive to invest in the United States.

These faulty analytical underpinnings result in economic misdiagnosis that distracts attention from the issues of real concern. Investment is key to both productivity growth and full employment. But by focusing on saving, Rubinomics grabs the wrong end of the “investment-saving” stick, promoting policies that may actually reduce investment. The budget deficit fixation means that needed public investment in infrastructure, alternative energy, and education stand to be short-changed, despite rhetoric that supports such expenditures. That is because budget deficit concerns always trump other concerns. Moreover, budget deficit reduction at a time when the economy may be cooling could deepen a recession and thereby reduce private sector investment.

Rather than focusing on saving, policy should focus on increasing investment. That calls for domestic economic policy ensuring full employment, and international economic policy dealing with the trade deficit, the over-valued dollar, and offshore outsourcing by corporations.

Despite its analytical weakness and lack of empirical support, Rubinomics still has great appeal because the 1990s boom coincided with Rubin’s tenure as Treasury Secretary. That appeal is misplaced. The rooster crows at dawn but does not cause the sunrise. Rubinomics claims tax increases and spending cuts caused the boom of the 1990s. However, the reality is that the boom of the 1990s happened because of a standard cyclical recovery, the Internet investment boom,

and a speculative stock market bubble. Such good fortune is unlikely to recur, especially given the legacy of private sector debt from the Bush administration's feeble boom. Democrats will quite likely be vulnerable if they place their bets on Rubinomics again.

The need for a new fiscal policy conversation

Fiscal policy is a critical component of macroeconomic policy. Unfortunately, the current fiscal conversation is obsessed with budget deficits, and even that narrow discussion is misconceived and inadequately constructed. The focus on deficits rests on faulty economics, promotes bad public policy, and drives undesirable anti-government politics. The nation needs and deserves an entirely different conversation about fiscal policy.

That conversation must begin with a discussion of tax and expenditure policies. The tax system should be efficient, progressive, and counter-cyclical. Expenditures should be non-wasteful and deliver value for money. The primary issue is the substance of tax and expenditure policies, not the deficit. That is where debate must begin.

There is a clear need for fiscal discipline, defined as responsible fiscal policy that levies taxes fairly and efficiently and spends wisely. However, that is a very different proposition from making balancing the budget the primary focus of fiscal policy. Moreover, deficits should be recognized as a rational and reasonable tool of fiscal policy. In recessions, when private sector demand is inadequate, there is a role for deficit-financed public sector spending and tax cuts to jumpstart the economy.

Public investment represents accumulation of public capital, and that capital is used and consumed over long periods. Just as private corporations finance their investments with borrowings, so too it makes sense that government finance its investment with borrowing (i.e., via deficits). Such deficit financing ensures those who ultimately use and consume the capital pay for it.

Deficits should only be considered a policy problem when they promise a rapidly increasing debt-to-GDP ratio that cannot be closed except by unreasonably burdensome future taxes. If the economy is growing, government should be able to run deficits and increase debt in line with the growth of the economy. Exactly the same applies for corporation and households, which increase their borrowings and debt as their income grows. Indeed, if GDP is projected to grow in the future so that incomes will be significantly higher in the future, it is legitimate for government to borrow against that future income as a way of improving inter-generational economic outcomes.

The bottom line is that there is a place for both cyclical and reasonable persistent budget deficits in a growing economy. However, the fact that budget deficits are not automatically bad does not mean that all deficits of any scale are good. Deficits involve issuing obligations on which interest must be paid in the future. They therefore represent a form of pre-commitment that consumes future tax revenues.

Whether such pre-commitment is a problem depends on a number of factors, the first of which is future GDP. The larger future GDP is predicted to be, the greater future tax revenues will be. A second factor is future revenue needs. If these are large, then it may be a problem to pre-commit future revenues for interest payments. A third factor is what will future tax rates be? If tax rates will be higher, then government will have capacity to both fund expenditures and pay interest. That raises the question of whether tax rates are low today and have room to rise without causing economic distortions or political opposition.

The problem with today's deficit debate today is that the only concern raised is future expenditure and revenue needs. That is a wholly inadequate framing of the budget deficit question issue. It ignores legitimate economic arguments for budget deficits, and it misrepresents and overstates the danger of deficits.

The Political Challenge of Macroeconomic Policy

Sustained full employment is a key ingredient for shared prosperity. Appropriately designed and implemented macroeconomic policy—monetary policy, exchange rate policy, and fiscal policy—is in turn critical for full employment. That makes macroeconomic policy a central political challenge.

However, it is difficult getting macroeconomic policy the attention it deserves. First, discussion of macro policy has an academic flavor, involving technical language and theoretical differences. Second, politics is often focused on legislation, but economic policy concerning interest rates, exchange rates, and the administration of fiscal policy is unsuited to legislation. Instead, it often requires responding to unfolding events.

The failure to pay appropriate attention to macroeconomic policy has high costs. Remedying that failure calls for embedding a vision of full employment in political discourse. That vision should be supported by rigorous policy argument and by the appointment of officials that can realize it. Vision without policy cannot hold, while policy without vision cannot persuade.

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Endnotes

1. Disaggregated data on wages of all workers, male workers, and female workers are contained in Mishel et al. (2006), p. 116 – 23. One difficulty in talking about overall wages is that wages of male workers have stagnated significantly while wages of female workers have been rising, albeit from a much lower level. That complicates picture for the average worker wage.
2. For a fuller discussion of the new business cycle see Palley (2005).
3. The Federal Reserve's implicit policy of placing a floor under asset prices has been referred to as the "Greenspan put," indicating that financial markets view the Fed as insuring them by providing a put option that protects against large losses. The Greenspan put recently surfaced again in comments by Federal Reserve Vice Chairman Frederic Mishkin made to the Forecasters Club, Wednesday, January 17, 2007.
4. For a fuller discussion of theory of the natural rate of unemployment see Palley (2007).
5. The natural rate of unemployment is also referred to as the NAIRU—Non-Accelerating Inflation Rate of Unemployment. This is because the natural rate is supposedly the equilibrium rate of unemployment at which inflation will remain constant, neither accelerating nor decelerating.
6. A formal theoretical model explaining the relationship between inflation, unemployment, and real wages is presented in Palley (2007).
7. This section draws heavily from Palley (2006b).
8. See Bergsten and Williamson (2003) for detailed discussion of needed dollar depreciation.
9. Operationally, for the single country case, this is done as follows. The first step is to empirically estimate a current account equation of the form $CA = \alpha_0 + \alpha_1 Y + \alpha_2 e + \alpha_3 X$, where CA = current account, Y = GDP, e = exchange rate, and X = vector of exogenous variables. This estimated equation is then solved to yield the fundamental equilibrium exchange rate (e^*) consistent with the target current account (CA^*), target GDP (Y^*), and given levels of exogenous variables, yielding $e^* = -\alpha_0/\alpha_2 - \alpha_1 Y^*/\alpha_2 + CA^*/\alpha_2 - \alpha_3 X/\alpha_2$.

In a multi-country exchange rate system, these equations must be estimated and solved simultaneously across countries to ensure a consistent set of exchange rates. Moreover, it is also necessary for countries to agree on a consistent set of national current account targets as not all countries can run surpluses.

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