

# **Restoring American Prosperity: Challenges and Solutions**

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When I was in Washington, the most common question I got from friends and acquaintances was, “So, are you having fun?” I used to say something cryptic like, “I’m sure I will have had fun in retrospect.” But, of course, what I wanted to say was, “Are you out of your mind? The economy is in freefall; I have had a knot in my stomach since the moment the President-Elect offered me the job; and dealing with Larry Summers is, believe it or not, the easy part of my day.”

But now that I am back to my old life of teaching and research, it feels as though my more diplomatic answer was strangely true. I will never call the nearly two years I spent in Washington fun, but I am very happy and proud to have served my country. The emergency actions we worked to pass helped to stop the freefall and put the United States firmly on the road to economic recovery. Health care reform and financial regulatory reform have helped to correct long-run problems. And, the people that I worked with at the Council of Economic Advisers and in the White House—including, I should say, Larry Summers—are the closest thing I will probably ever have to army buddies.

With the benefit of a few months of rest and 3000 miles of distance from the policymaking world, I thought it would be helpful to take stock of where the American economy is now and the challenges that we face going forward. Many of the central challenges are of particular concern to those in Silicon Valley—unbalanced trade,

keeping our edge in innovation, and ending this recession once and for all. I also want to think about which problems are likely to be best solved by the private sector, and which would benefit from prudent government action.

### **Reducing Unemployment**

The first and most immediate challenge that we face is bringing the unemployment rate back down to historically normal levels.

We learned a few weeks ago that GDP growth in the fourth quarter of 2010 was 3.2 percent and that the national unemployment rate fell to 9 percent in January. Both of these are strong indicators that the U.S. economy is clearly strengthening. We are gradually recovering from the horrendous output and employment losses of 2008 and 2009.

But as welcome as each sign of improvement is, it is important to understand just how far we still are from normal. The Congressional Budget Office estimates that real GDP is still more than 5 percent below its long-run trend level.<sup>1</sup> That means that demand and production are still far below our productive capacity. It is this continued shortfall of demand that accounts for most of the continued high rate of unemployment.

The same is true here in Silicon Valley. As the *Index of Silicon Valley* put out by Joint Venture documents, there are important signs of life in the region. Employment is rising and commercial vacancy rates are finally stabilizing. But the unemployment rate in San Mateo and Santa Clara counties is still 9.8%, exactly five percentage points higher than it was when the recession began in December Of 2007.

Continued high unemployment is a tragedy for all who are affected. It is ruining lives, destroying businesses, and devastating state and federal budgets. Moreover, the

longer it lasts, the more devastating it is likely to be. Economic research suggests that prolonged high unemployment can permanently damage workers' job prospects and can cause the country's normal unemployment rate to rise.<sup>2</sup>

For all these reasons, it is essential that we speed up the process of recovery. There is reason to hope that the private sector will lead the way. The last GDP report showed robust growth in consumer spending and unusually low inventory investment. It is possible that firms will continue to regain their confidence and step up production and employment sharply.

Recent data on factory orders for core capital goods have led forecasters to expect greater investment in equipment and software this year. This investment is also being encouraged by the expanded tax incentives for investment passed in December. A surge in equipment and software investment would obviously be very beneficial for Silicon Valley businesses, which produce many of these goods. Such investment is also essential for the country as a whole, because it creates jobs in the short run and improves productivity in the long run.

Even with these encouraging signs of life in the private sector, however, there is still a productive role for government policy to play in strengthening the recovery. Back in the fall, there was quite an uproar about the Federal Reserve's policy of quantitative easing. Some thought it was irresponsible and potentially inflationary. The experience has, in fact, been positive. Inflation remains low, and sophisticated studies suggest that the Fed's actions have helped reduce long-term interest rates and encouraged growth.<sup>3</sup>

My main concern is that the program is, if anything, too timid. With additional fiscal stimulus very unlikely, quantitative easing is the main recovery tool we still have

in our arsenal. I wish the Federal Reserve were using it more aggressively.

On the fiscal side, the actions passed in the lame-duck session provide much-needed help, particularly given that the original Recovery Act winds down rapidly after this quarter. Like many, I was disappointed that the Bush tax cuts for high-income earners were continued. They provide little stimulus, and extending them once greatly increases the chance that they will become permanent and so make our deficit mess that much worse. But the continuation of longer unemployment benefits for another year and the payroll tax cut are good policies that should give the economy a needed jolt.

In his State of the Union address, the President called for additional government investment spending. Such increased investment now would be excellent policy. Money spent on infrastructure, education, and research today would create jobs and leave us far richer in the process. In contrast to tax cuts or support payments that encourage consumption, public investment leaves us with something tangible. We have new roads, bridges, and airports, as well as new discoveries and a generation of better educated workers.

Sadly, I see little sign that Congress is likely to go along. Indeed, my great fear is that Congress will push to cut such useful government spending in 2011, rather than increase it. That would slow down the recovery at exactly the time when we desperately need for it to be gaining speed.

### **Dealing with the Deficit**

Lest you think I am some knee-jerk Keynesian who doesn't understand that we have a terrible deficit problem, let me be clear that I only support more government investment in conjunction with a comprehensive plan to deal with the long-run budget

problem. The long-run budget deficit is a second key challenge facing the U.S. economy, and it must be dealt with.

But it is incredibly important to understand the true nature of the deficit problem. It is not today's deficit and debt levels that are a threat. The current deficit is large—almost 11 percent of GDP—mainly because of the recession and the policies taken to fight it. When the unemployment rate is high, tax revenues are low—as the state of California knows all too well. Our creditors understand why the deficit is large today, just as they did when we ran huge deficits to fight World War II. We are dealing with a national emergency. As the economy recovers, the deficit will tend to fall. In the President's budget, the deficit falls from 11 percent of GDP to 3 percent over the next several years, in large part because of projected improvement in economic conditions.

The real problem is the long-run deficit. Because of the aging of the baby boom generation and rising health care costs, the deficit is expected to rise rapidly over the next 25 years. By 2035, CBO estimates that it will be 17 percent of GDP, and on its way to even higher numbers.<sup>4</sup> Those numbers are not the result of a temporary crisis—they are a slow-moving train wreck that everyone can see coming years in advance. No country has ever managed to run deficits like that for an extended period of time.

These long-run deficits are the true budget problem and the thing that would eventually cause the bond market to lose faith in our ability to repay. They are the problem we need to solve.

That is why it is so frustrating that most of the recent budget discussion has been just about how much non-defense discretionary spending should be cut in the near term. Some in Congress are talking of shaving \$50 to \$100 billion in 2011. The President's *Budget* released on Monday urges smaller cuts in the short run, but

proposes a five-year discretionary spending freeze.

Neither plan would do much at all to deal with the fundamental long-run budget problem. Non-defense discretionary spending is less than 15 percent of the total budget. These measures are largely a distraction from the much harder discussion about reforming entitlement spending and raising revenues. And, if we actually do cut spending substantially in 2011, that would likely slow the recovery, and so the budget gains would be even smaller.

So what is the solution to the long-run budget problem? I won't claim to have all the answers, but I do know two things. One is that any true solution will not be easy—it will include painful spending cuts and tax increases that will affect nearly every American. The other is that we should not wait until the recession is completely over before we formulate the plan. The President and Congress should make the tough decisions this year, and start implementing them as the economy returns to normal.

The bipartisan fiscal commission released its plan in December.<sup>5</sup> It didn't get the 14 of 18 votes needed to force a debate in Congress. But it did get 11 votes, including those of the three Republican senators on the commission.

The bipartisan plan includes sensible measures to strengthen the cost-containment provisions of the health reform act passed last year. It proposes ways to trim the growth of Social Security benefits, while protecting low-income seniors and raising the revenues necessary to ensure the long-run solvency of the system. It endorses serious trimming of defense spending and agricultural subsidies, and raising the gas tax to pay for transportation infrastructure. And it proposes limiting a number of tax deductions and exemptions so that we can simplify the tax code, lower marginal tax rates, and still raise additional revenue.

Now this plan is not the only way we could deal with the long-run budget problem. I certainly don't like everything the commission proposes. Indeed, one of the great things that has come out of the commission process is a range of thoughtful alternative proposals. But the fiscal commission report is a very good start with genuine bipartisan support. It deserves to be the focal point of an active legislative process. I deeply hope the President and Congress will make forging a consensus plan on the deficit a top priority.

While much of this consensus-building will need to happen behind the scenes, the public needs to be involved too. Policymakers are going to be asking for sacrifices from every one of us. I have no doubt that the American people will willingly do their part if they see the facts and understand the choices we face. Policymakers need to trust the people's good sense, and earn their support.

### **Increasing American Exports**

A third challenge facing the United States is less central than ending the recession and dealing with the long-run deficit, but closely related to both. That is encouraging our exports.

In the near term, we need the extra demand that more exports would bring to help put Americans back to work. Increased net exports could help to speed the recovery.

Over the longer term, it is clear that the American economy is facing a serious rebalancing act. American consumers have been through a searing crisis and are unlikely to go back to their free-spending ways. Saving rates that fell to near zero during the height of the housing bubble are now hovering at between 5 and 6 percent, and are

likely to stay there as consumers continue the long process of rebuilding their savings and paying off debt.<sup>6</sup> As I have just discussed, the government too is going to have to change its free-spending, inadequate-taxing ways. And, we built so many houses and shopping malls in the last decade that it is unlikely that we will have a robust construction sector for quite a while.

If we are going to have enough demand to return the economy to full employment and keep it there over the longer term, we are going to need to invest more and export more. As I mentioned, investment is rising. So, how do we get our net exports to rise also?

Trade agreements probably aren't the answer. Don't get me wrong—like almost every card-carrying economist, I am a strong supporter of international trade. Trade agreements that assure free and fair trade are good for our long-run productivity and benefit both the United States and our trading partners. We should absolutely pass the pending agreements with South Korea, Columbia, and Panama because they will make us richer and more efficient. But trade agreements naturally tend to increase both our exports and our imports—they don't typically increase net exports. What does?

Exchange rates are obviously important. Indeed, when they are market-determined, they are a key mechanism by which the necessary rebalancing that I described can occur. As the U.S. moves to more sensible levels of private consumption, construction, and government borrowing, this naturally tends to decrease the amount of U.S. government debt, mortgage-backed securities, and other American assets that foreigners purchase. With foreigners not demanding as many dollars to make those purchases, the dollar would not be as overvalued as it was in the early 2000s. Our goods and services will be more competitive in world markets, and our exports higher and our

imports lower.

Exchange rates that are not market determined, however, pose a special problem. Here I am thinking particularly of the Chinese yuan. Most experts, such as the International Monetary Fund, believe that the Chinese government is keeping the yuan at a rate that is substantially below its true market value.<sup>7</sup> It is not letting the natural equilibrating mechanism work. The low value of the yuan makes Chinese consumers and firms reluctant to buy American products, and American consumers and firms wildly enthusiastic about buying goods from China. Chinese goods look very cheap precisely because the yuan is so weak relative to the dollar.

This is why Secretary Geithner and the rest of the U.S. government continues to press China to let its currency appreciate. That would certainly help to stimulate U.S. exports and cool our imports.

Importantly, that is not the only answer—and maybe not even the best answer. While the undervalued yuan rate is clearly taking a toll on our exports and growth, American consumers do benefit from the low prices we pay for Chinese goods.

Another way that China could help rebalance world trade is by increasing the demand of Chinese consumers and firms. Right now, many Chinese households save a very large fraction of their income because their social safety net is so weak. They need a large cushion of saving in case they get sick and to provide for their retirement. Chinese state-run enterprises also save greatly because of credit market difficulties and the lack of incentive to pay dividends.<sup>8</sup>

Instead of focusing just on the exchange rate, American policy has and should continue to encourage more fundamental reforms in China. Providing better health care and pensions would make Chinese consumers save less and buy more—including more

from the United States. Emphasizing market forces in the corporate sector would likely decrease corporate saving and raise demand for investment goods. And such demand would likely be met, in part, from abroad. This would be especially true if China can be convinced to not unfairly favor domestic firms in procurement.

More generally, this discussion points out that rising incomes and strong domestic demand in our trading partners are good for American exports and American jobs. This means that Americans should be concerned about growth abroad, not just because of what it means to people in other countries, but because it directly impacts our firms and workers. For example, helping Europe to weather the fiscal crisis in Greece, Ireland, and other troubled countries is strongly in America's economic interest. And encouraging Germany to focus less on export-led growth and more on programs to encourage domestic demand is probably more important to our exports than trade missions and commercial diplomacy.

Also, in thinking about increasing exports, we need to remember that services are just as real as goods. Recently, there has been a lot of lamenting that we don't make "things" any more. We produce health care, education, and internet services, but not as many manufactured goods as we once did. But there is nothing inherently better about washing machines than cloud computing. In recent years, some of America's most dynamic industries have been ones producing high-value services. This is certainly true of many firms in Silicon Valley. Increasing our exports of those services raises demand and puts people back to work just as much as if we exported goods made of steel.

### **Encouraging Innovation**

Some of our challenges, like dealing with the deficit, are things we have to face

because we don't want something bad to happen to us. Other challenges we should face because they will cause good things to occur. That is the case with my fourth challenge: encouraging innovation.

In his State of the Union address, the President talked about this being our generation's "Sputnik moment." He said it was time to redouble our efforts at innovation. The President talked a great deal about "winning" in his address. Some have interpreted the President as saying that we must improve our innovation or risk "losing" to other countries, such as China or India. But, I don't think that is what he meant at all.

It is not the case that there is some fixed amount of output in the world and we are fighting over who gets to produce it. If other countries become more prosperous, that's great. There will be more demand, and more for everyone to produce.

The reason to encourage American innovation is so that we can be more productive—so that we can be a more prosperous country. Innovation is the main source of economic growth. Coming up with new products and new ways of making things and doing things is the fundamental reason standards of living have risen dramatically in the United States over the last 200 years. It is the main reason that we are an economic powerhouse today.<sup>9</sup> If we want to ensure continued growth and rising standards of living—so that each generation is better off than the one before—we have to keep the American innovation process flourishing.

Fortunately, the fundamentals of that process remain exceptionally strong. I am proud to be part of a higher education and research system that remains the very best in the world. America's universities and research labs not only turn out the engineers and scientists of tomorrow, but the ideas and science behind the products of tomorrow.

Our private sector innovators are also as dynamic as ever. One need only look at the ideas and products tumbling out of Silicon Valley to know this. You all craft solutions for problems we didn't even realize we had. You create products we hadn't yet dreamed of, but now can't live without.

Of course, the Great Recession has taken its toll. Bad economic times and tight credit tend to slow the rate of innovation. But there is every reason to expect that it will come back strongly as the economy comes back. Economic recovery tends to spur investment in product development, and patents tend to surge as growth picks up.<sup>10</sup>

All of this suggests that perhaps the most useful thing the government can do to increase innovation is to take the measures I mentioned before to hasten the economic recovery. If there are buyers for products, American entrepreneurs will come up with new and enticing ones. A healthy economy is thus a key ingredient to rapid innovation.

But is there more that policymakers could do to encourage innovation? The answer is surely yes, but there needs to be a guiding principle. And that principle is that the government should leave the private sector free to do what it is good at, and get involved only where there is some sort of market failure—where there is some reason the private sector innovation machine isn't likely to work well.

One of my favorite interchanges on this topic occurred on a trip to China last spring. As part of an official delegation for the Strategic and Economic Dialogue, I was meeting with a group of Chinese academics and business people. Someone asked me what the next U.S. growth industry was. Without hesitating, I said I didn't know, and more importantly, it wasn't my job to know. In the United States, the President's economic advisers don't decide where firms should be investing and what industries should be growing. We trust the private sector to figure out where the best

opportunities are and let profits be the ultimate guiding force.

That model has served us very well. We have been an incredibly innovative and prosperous economy for most of our history. And the experience of other countries with more activist industrial policy is full of examples where government bureaucrats guessed wrong about the right technologies to encourage and the industries to invest in.<sup>11</sup> As much as possible going forward, we should let private entrepreneurs with money on the line guide the innovation process.

But there are times when the private sector won't make the best decisions for the country as a whole. The most obvious concerns investment in basic scientific research. The social returns from such research are enormous, but the private returns are limited. Often the lag between a fundamental discovery and a marketable product is several decades. And while some ideas can be patented, many cannot. As a result, it is very hard for a private investor to capture much of the return from the discovery. All of this results in the private sector investing too little in basic research.

This is where government can play a positive role. It can subsidize basic research and ensure that the results are broadly available for the private sector to use and apply. The Administration did this aggressively in the Recovery Act, which included some \$18 billion for research funding. The President has also pledged to increase the budgets of key scientific agencies, such as the National Science Foundation and the National Institutes of Health. The Administration's Budget proposes that the Research and Experimentation tax credit be increased and made permanent, so that private firms have a greater incentive to invest in R&D as well.

Another case where the private sector may invest too little in innovation is when the products they discover may solve another market failure. This is the case with clean

energy products. Climate change is a classic example of what economists refer to as an externality. People and firms using carbon-based fuels don't take into account the harm to society of global warming. An innovator coming up with a cleaner technology will get a return, but not one that fully takes into account the social benefits of less climate change. As a result, the incentives for such innovation are not as strong as they should be.

Again, the government can help to improve incentives. It can subsidize innovative activity in areas like clean energy where the social benefits exceed the private returns. That too was done in the Recovery Act, which dedicated \$90 billion—nearly one-eighth of the total—to clean energy investments. And the President has proposed continuing and expanding some of the most successful programs in his new budget.

The government can also penalize the use of carbon-based fuels, so that the private sector feels the full cost of climate change. This too would raise the private returns to clean energy innovation, and again give entrepreneurs the socially optimal incentives.

If we keep the principle of correcting market failures in mind, government support for certain types of innovative activity could be very helpful. It would preserve what is best about the American system—its dynamism and responsiveness to consumer desires. But it would promote the socially useful investments that the private sector isn't likely to do on its own.

### **Ensuring that Prosperity Is Widely Shared**

The last challenge that I want to discuss is a little broader than those I have discussed so far, but fundamentally important. It is the challenge of ensuring that

prosperity is widely shared.

The last two decades have brought dramatic increases in income inequality. Since 1993, those in the top 1 percent of the income distribution have seen their incomes rise, on average, by almost 4 percent per year in real terms. The other 99 percent have seen their real incomes rise on average less than 1 percent per year.<sup>12</sup> As a result, the gap between top earners and everyone else has increased greatly. Indeed, real living standards for the median family have fallen noticeably since 1999.<sup>13</sup>

I won't try to claim that reversing this trend is essential for economic stability and growth, though there is an element of truth to those claims. Instead, in my view ensuring that prosperity is widely shared is a good in its own right. It makes us a stronger, happier, and more cohesive country.

How do we rise to this challenge? Part of the answer is to restore some of the progressivity in the tax code that was eliminated in the past decade. I am a strong believer in the power of incentives. But I am an even stronger believer in empirical evidence. And the evidence is very clear that tax cuts for the very wealthy do not have large incentive effects on work effort or entrepreneurial activity.<sup>14</sup> They mainly just make already rich people even richer. We can add revenue disproportionately from the top of the income distribution without doing noticeable damage to economic growth.

An even better way to ensure that prosperity is widely shared is to even the playing field through a first-rate education for all our children. The empirical evidence shows that education is a prime determinant of earning potential. Indeed, the returns to education, particularly college education, have been rising greatly over the past few decades.<sup>15</sup> The best way to share prosperity is to encourage widespread education and training. This would give everyone a chance at the high-skilled jobs that pay good wages

and are the backbone of the modern economy.

Now how to reform our educational system and how to make higher education more widely available are incredibly contentious issues. But it certainly seems to me that when there is something like the Race to the Top program, which has led to higher national standards and gotten teachers and administrators working together at a relatively low cost, we should consider doing more of it.

More generally, as we face wrenching budget choices, preserving support for education should remain a top priority. Excellent education for all not only levels the playing field, it raises the standard of living for everyone. If innovation is the engine of growth, a well-educated labor force is its gasoline (or if Tesla has its way, its electricity). Better educated workers produce more, discover more, and pass on better technology to the next generation. We owe it to ourselves, and our children and grandchildren not to skimp on these crucial investments in the future.

## **Conclusion**

As it turns out, my talk today has not been unlike my time at the Council of Economic Advisers. One of my predecessors once referred to being CEA chair as playing economic pinball. Issues come flying at you from all sides, and your job is to quickly give good economic analysis. Today I have talked about everything from quantitative easing to trade with China to the returns to innovation, and I have tried to give you good economic analysis.

The point has been to step back and think broadly about where we are as an economy and where we need to go.

Where we are today is not where we want to be. We face a number of

tremendous challenges—reducing unemployment, dealing with the long-run budget deficit, expanding our exports, strengthening innovation, and ensuring that prosperity is widely shared. Rising to those and other challenges is essential to restoring American prosperity, and passing that prosperity on to our children.

I have given you my thoughts on how we might deal with these challenges. But there are obviously many other ideas. The important thing is that we start forging a consensus on the solutions.

While our economic challenges today look daunting, it is important to remember that the United States has faced many challenges before. Even times that in retrospect look easy were not free of economic concerns and people working hard to fix them. It is precisely because we are always thinking about where we want to be that America has achieved so much.

On the Obama economics team, I got pegged early on as the optimistic one. I still haven't forgiven the *San Francisco Chronicle* for topping an otherwise very pleasant profile with the headline, "Obama's Sunny Economic Forecaster."

It's not that I don't see the tremendous economic challenges that we face. Of course I do; I have discussed many of them today.

It is that I also see the promise of solutions. I have great faith in the strength of our free market system, and in the ability of sensible government policy to make that system even stronger. And despite having been in the middle of partisan battles for two years, I still believe that people of good faith can come together and do what is right for the country. We have done it many times before—we will do it again.

## ENDNOTES

<sup>1</sup> CBO's data on potential GDP are in "Key Assumptions in Projecting Potential Output," available at <http://www.cbo.gov/doc.cfm?index=12039>. These data show potential GDP, in billions of chained 2005 dollars, of \$14,017.12 in 2010. Actual GDP in 2010 was \$13,248.7, which is 5.5 percent below the estimate of potential. Because GDP grew at a slightly faster rate than CBO's estimate of the growth rate of potential in 2010, focusing on 2010:Q4 yields a gap of about 5.2%.

<sup>2</sup> See, for example, Wiji Arulampalam, Alison L. Booth, and Mark P. Taylor, "Unemployment Persistence," *Oxford Economic Papers*, January 2000, pp. 24-50; Laurence Ball, "Aggregate Demand and Long-Run Unemployment," *Brookings Papers on Economic Activity*, 1999, no. 2, 189-251; and Till von Wachter, Jae Song, and Joyce Manchester, "Long-Term Earnings Losses due to Mass Layoffs During the 1982 Recession: An Analysis Using U.S. Administrative Data from 1974 to 2004," unpublished paper, April 2009.

<sup>3</sup> See, for example, Joseph Gagnon, Matthew Raskin, Julie Remache, and Brian Sack, "Large-Scale Asset Purchases by the Federal Reserve: Did They Work?" Federal Reserve Bank of New York Staff Report No. 441, March 2010; Andreas Fuster and Paul S. Willen, "\$1.25 Trillion is Still Real Money: Some Facts about the Effects of the Federal Reserve's Mortgage Market Investments," Federal Reserve Bank of Boston Public Policy Discussion Paper No. 10-4, November 2010; Hess Chung, Jean-Philippe Laforte, David Reifschneider, and John C. Williams, "Estimating the Macroeconomic Effects of the Fed's Asset Purchases," Federal Reserve Bank of San Francisco Economic Letter No. 2011-03, January 2011; and Arvind Krishnamurthy and Annette Vissing-Jorgensen, "The Effects of Quantitative Easing on Interest Rates," Working paper, Kellogg School of Management, Northwestern University, February 2011.

<sup>4</sup> Congressional Budget Office, *The Long-Term Budget Outlook*, June 2010 (revised August 2010), <http://www.cbo.gov/ftpdocs/115xx/doc11579/06-30-LTBO.pdf>.

<sup>5</sup> National Commission on Fiscal Responsibility and Reform, *The Moment of Truth*, December 2010, [http://www.fiscalcommission.gov/sites/fiscalcommission.gov/files/documents/TheMomentofTruth12\\_1\\_2010.pdf](http://www.fiscalcommission.gov/sites/fiscalcommission.gov/files/documents/TheMomentofTruth12_1_2010.pdf).

<sup>6</sup> Council of Economic Advisers, *Economic Report of the President, 2010*, Chapter 4, "Saving and Investment," February 2010.

<sup>7</sup> International Monetary Fund, "Peoples Republic of China: 2010 Article IV Consultation," IMF Country Report No. 10/238, July 2010. Press reports quote IMF officials and others as saying the degree of undervaluation is between 5 and 27 percent (see "IMF Review Calls Yuan Undervalued," *Wall Street Journal*, July 28, 2010).

<sup>8</sup> Guonan Ma and Wang Yi, "China's High Saving Rate: Myth and Reality," BIS Working Paper No. 312, Bank of International Settlements, June 2010.

<sup>9</sup> Council of Economic Advisers, *Economic Report of the President, 2010*, Chapter 10, "Fostering Productivity Growth through Innovation and Trade," February 2010.

<sup>10</sup> The classic reference for this relationship is Jacob Schmookler, "Economic Sources of Inventive Activity," *Journal of Economic History*, March 1962, pp. 1-20. More recent evidence is provided by Christian Broda and David E. Weinstein, "Product Creation and Destruction: Evidence and Price Implications," *American Economic Review*, June 2010, pp. 691-723;

<sup>11</sup> For some examples, see "Picking Winners, Saving Losers," *The Economist*, August 5, 2010.

<sup>12</sup> Emmanuel Saez, "Striking It Richer: The Evolution of Top Incomes in the United States (Updated with 2008 Estimates)," University of California, Berkeley, July 17, 2010.

<sup>13</sup> Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith, U.S. Census Bureau, *Income, Poverty, and Health Insurance Coverage in the United States: 2009*, U.S. Government Printing Office, 2010.

<sup>14</sup> Jon Gruber and Emmanuel Saez, "The Elasticity of Taxable Income: Evidence and Implications." *Journal of Public Economics*, April 2002, pp. 1-32.

<sup>15</sup> Claudia Goldin and Lawrence F. Katz, *The Race between Education and Technology*, Belknap Press of Harvard University Press, 2008.