

The Global Economy: Demand, Supply and Interdependence

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As prepared for delivery

I am very excited to be in Israel for the Globes Conference, one of the world's leading economic conferences. Israel has been such a close friend to the United States since its founding. It has one of the world's most innovative and dynamic economies, undertaking a remarkable transformation from a protected, low-end manufacturing- and agriculture-led economy to one that is diverse, open, and led by a cutting edge high-technology sector and, more recently, remarkable natural gas discoveries. We are proud of our strong economic and commercial relationship, including \$45 billion in two-way goods and services trade. Israel does not just have important economic ties to the United States, but it is also an important player in the global economy, well disproportionate to its size.

In my remarks today I want to discuss the current situation in the global economy and the outlook for the future. We are seeing differentiated performance by countries around the world. The latest economic news out of the United States has been very strong, with the strongest pace of job growth in over 15 years, upward revisions to GDP growth, and a rapidly declining budget deficit. In contrast, the most recent European data were relatively flat, the Japanese economy has contracted for two straight quarters, and many emerging markets have seen their growth rate forecasts marked down. This morning, I want to explore some of the causes of these differences.

I will also try to draw a few lessons from the United States' post-crisis experience. In particular, I will review the progress of the global recovery from both the demand side—where the United States' aggressive fiscal and monetary policies contributed to our recovery—and the supply side, where our focus on promoting technological progress and maintaining macroeconomic stability will help increase U.S. potential output. I will also consider the slowdown in international trade, the sustainability of global growth, and global inequality across income levels and nations. (Earlier this year, I identified some important lessons from the global economy for the United States.²)

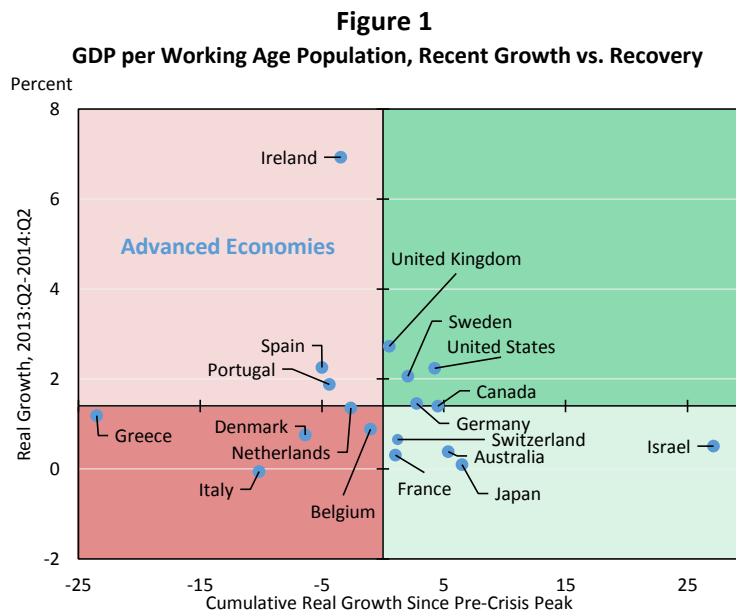
Of course, our experience in the United States is special in many ways and some aspects would not apply everywhere, especially in a small open economy like Israel's—and even less so in emerging economies. In this talk, I will therefore try to focus on U.S. lessons that may have relevance across a broad range of economies, leaving aside some specific issues—for example, management of the exchange rate or of capital inflows—that are naturally a major policy focus in most small open economies.

¹ Eric Van Nostrand, Susie Scanlan, and Matthew Aks at the CEA provided research assistance.

² Furman, Jason. 2014. "Global Lessons for Inclusive Growth." May (http://www.whitehouse.gov/sites/default/files/docs/global_lessons_for_inclusive_growth_iiea_jf.pdf).

A Varied Recovery

Nearly every advanced economy endured a recession amid the global financial crisis, but the experience since then has varied widely across countries. A notable exception is Israel which weathered the crisis admirably—in no small part due to its fine stewardship of economic policy. To illustrate the divergent dynamics of global post-crisis growth, we can study the evolution of GDP across economies. For comparability, I focus on real GDP growth adjusted for the growth rate of the working age population. Ten of the 18 economies shown in Figure 1 have surpassed the level of GDP per working age population they achieved before the crisis, while the other 8 have not. The United States, Canada, Australia, and Japan have risen more than 4 percent above their pre-crisis peak, while many advanced economies—including much of peripheral Europe—have yet to fully recover.



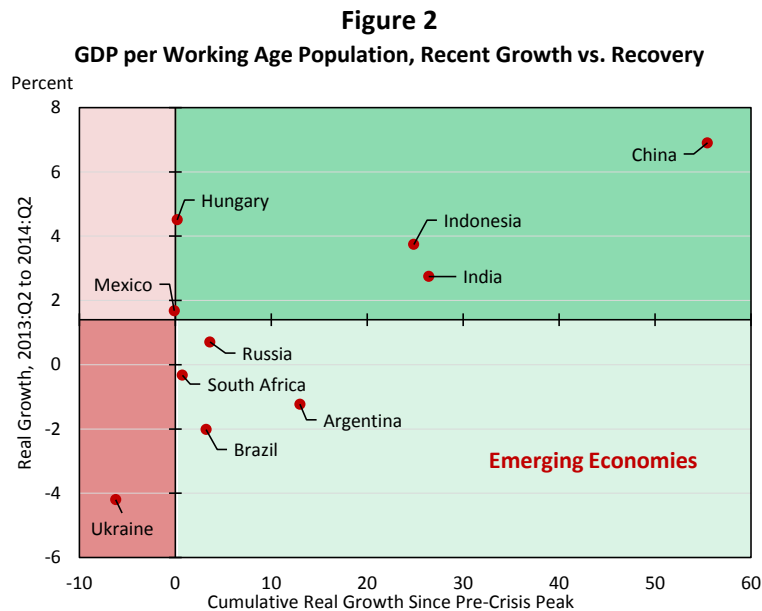
But looking at how current growth rates compare to the advanced economy median of about 1½ percent growth in GDP per working age population we see four broad patterns of recovery:

- The United States is firmly planted in the top-right quadrant of Figure 1, having both exceeded its pre-crisis peak while continuing to demonstrate global leadership in growth. The United Kingdom and Sweden have also exceeded their previous peaks, albeit by thinner margins. All three economies continue to see growth in GDP per working-age person of more than 2 percent per year. In the United States, this output growth has been accompanied by an increasing pace of job growth—with 2014 on pace to be the fastest pace of job growth since the 1990s—and the unemployment rate falling at the fastest pace in thirty years.
- Japan, France, and Australia occupy the bottom-right quadrant. They have also exceeded their pre-crisis peaks, but are slipping back with essentially a halt to growth in Japan and France over the last year. Japan’s contraction has been exacerbated by the consumption

tax increase in April, but that is not the whole story. The Japanese economy experienced slowing growth rates last year, culminating in a contraction in the fourth quarter of 2013, well before the consumption tax went into effect.

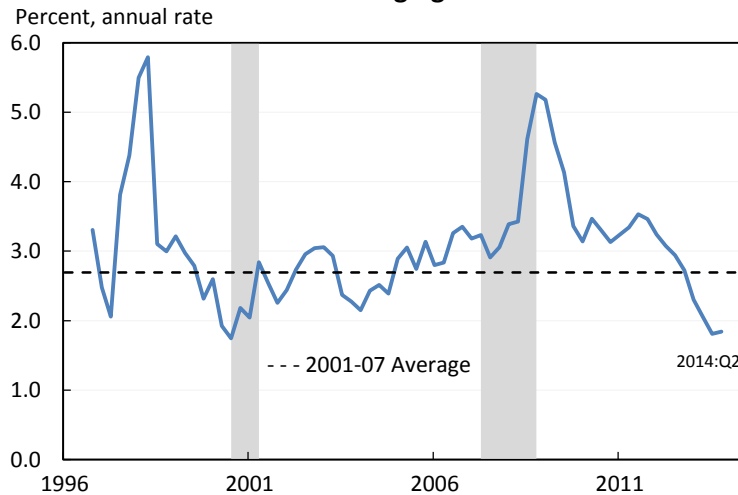
- Portugal, Spain, and Ireland, in the top-left quadrant, remain below their peak. But over the last year, the Iberian nations enjoyed decent growth of around 2 percent per year, and Ireland very strong growth of nearly 7 percent per year. Nevertheless, unemployment rates remain elevated in all of these countries—especially in Spain, where unemployment stands at 24 percent, down from 26 percent one year ago.
- Italy has not only failed to recover, it has continued to face significant economic challenges with growth well below average in the last year. Italy’s recession is now approaching its fourth year and the unemployment rate has risen to 13 percent.

Emerging markets also show differentiation. Most have surpassed their pre-crisis peaks in GDP per working age population. But in terms of recent growth in GDP per working age population, the emerging world is much more varied around a median of about 1¼ percent. Brazil and South Africa are actually contracting, while China and India are growing, as shown in Figure 2.



Although many elements of the global economy in 2014 are historically unique, this differentiation is not. The variation of growth rates across advanced and emerging economies is a long-standing feature. In fact, this variation has trended down over the past three years and is now below the 2001-2007 average, as shown in Figure 3.

Figure 3
Standard Deviation of Annual Real GDP Growth Across Major
Advanced & Emerging Economies



Looking forward, the 40 percent decline in global oil prices since their mid-June peak is likely to drive additional global differentiation between oil consumers and producers. One important contributor to the falling energy price environment has been the notable boom in U.S. oil production, which has now surpassed Russia and Saudi Arabia as the largest oil producer in the world. Despite this progress, however, the United States remains a net importer of oil, so it is likely to see a benefit from the recent decline in oil prices, along with other net oil importers like Japan, India, China and the major European economies—as well as many of you all here in Israel. Other countries that have depended on large petroleum trade surpluses are likely to face strains from the recent declines in prices, and monitoring for negative spillovers that emanate from these economies is likely to be an important task over the next several months. On net, the consensus is that the recent developments are likely to represent a meaningful boost to global aggregate demand—with the IMF projecting a 0.8 percent boost to global GDP—as consumers in the United States and elsewhere spend a large chunk of the windfall that, under a counterfactual scenario of continued high prices, would not have been spent as quickly by oil producers. An additional force leading to a net rise in global output is increased supply by energy-using industries.

Supply and Demand

Like so much in economics, the level of a country’s output reflects the interaction of supply and demand. In the macroeconomic context, supply tells us how much goods and services *can* be produced if all resources were fully utilized—it determines an economy’s potential output. Supply reflects factors like the size of the capital stock, the skills of the workforce, and the advancement of technology. The second factor is demand, which tells us how much actually *is* produced given the purchasing power of individual consumers, business purchases of plants and equipment, and government consumption and investment. This determines how much of the supply is actually utilized.

These two factors are interrelated. Increased supply raises incomes and thus boosts demand. Conversely, inadequate demand today implies less investment in equipment, infrastructure or education as well as more unemployed workers losing their skills, all of which translates into less supply in the future. Nevertheless, supply and demand are useful constructs that have different implications for the economic outlook and economic policy. Let me consider each in turn on a global basis and explore the ways that policy has affected and will continue to affect them in the United States.

Demand Deficiencies

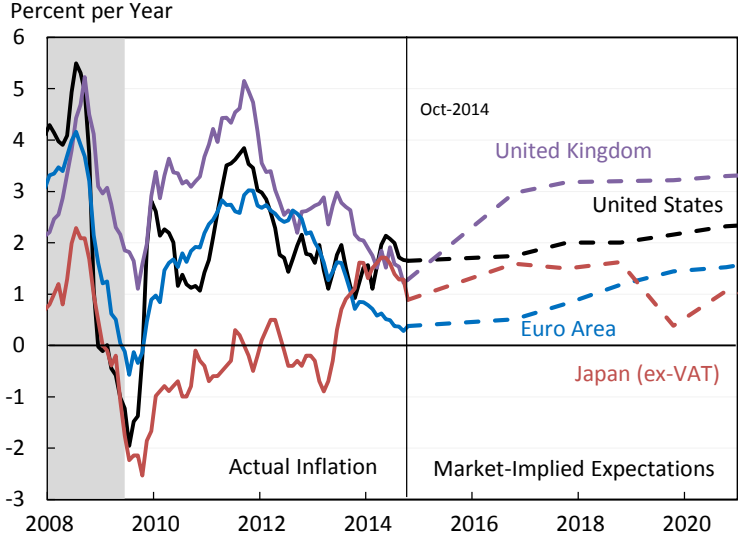
We do not directly observe either supply or demand. But several clues can help us distinguish between them and identify appropriate policies to help sustainably grow each.

Slack resources are the equivalent of inadequate demand. When the unemployment rate is 11.5 percent, as in the euro zone today, it is clear that the binding constraint on output is not a supply-side factor like technology or the capital stock, but instead the fact that demand is inadequate to fully utilize all the resources that already exist. And labor market slack comes in many different flavors than just the headline unemployment rate: in the United States, many policy conversations center on slack that is evident from alternative measures of labor utilization such as shortfalls in labor force participation and involuntary part-time employment.

Low or falling inflation *can* be a sign of inadequate demand. It is often difficult to observe resource utilization directly because the sustainable level of unemployment varies across countries and time. And other factors—like participation, work hours or even work effort—might systematically vary with the business cycle. As a result, it is useful to look at changes in inflation as another indicator of aggregate demand. Inflation confirms the same story that the euro zone unemployment tells—with inflation low and falling, as shown in Figure 4. Japan, which does not have excessively high unemployment, appears to have insufficient demand when viewed through the lens of inflation—which trended down this year when excluding the impact of the consumption tax hike and long-term inflation expectations remain below 1 percent.

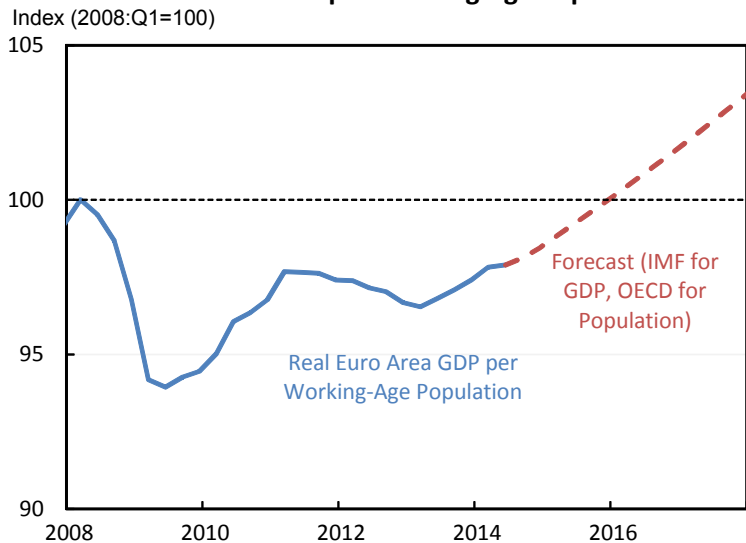
The signals from inflation are more straightforward in a large, fairly-closed economy like the United States. In other economies, inflation dynamics are strongly affected by exchange rates and by external factors, so managing demand through monetary policy involves more complicated trade-offs.

Figure 4
Consumer Price Inflation and Market Inflation Expectations



An abrupt change in output can be explained by a shock to aggregate demand. Demand can be volatile from quarter to quarter and year to year, as consumers and businesses shift their spending and investment patterns, leading to jumps in output. In contrast, supply is generally more smooth—and largely incapable of explaining abrupt contractions in output. However, supply shocks, such as a power supply disruption following a natural disaster, can result in abrupt changes in output. This is especially true in smaller economies. On this account, demand again appears to be playing an important role in both the euro area—which is still more than 2 percent below its 2008 peak in GDP per working age person as shown in Figure 5—and also in Japan. Indeed, the demand shortfall is projected to result in 8 years of lost growth to the euro area: output per working-age person is not projected to return to 2008 levels until 2016.

Figure 5
Euro Area Real GDP per Working Age Population



Although the causes of demand shortfalls vary greatly, the solutions to them differ to a much lesser extent. Expansionary monetary and fiscal policy, often in tandem, constitute the well-understood remedy for the problem. And while there may be some tradeoffs in some circumstances, sometimes these policies can even offer up a free lunch: shifting the economy to a better equilibrium can increase output while potentially even shrinking the debt as a share of the economy. In that regard, the steps Japan has taken to delay its consumption tax and that the European Commission is taking to invest in infrastructure clearly move in the right direction, although it is far from clear that the magnitude will be sufficient.

Lessons from the United States: Demand Management

I believe that one of the reasons the United States has recovered comparatively well has been more aggressive use of aggregate demand management than other countries, stimulating demand on both the fiscal and monetary side of the equation. Of course, as with all lessons, different countries in different macroeconomic and fiscal circumstances may not necessarily benefit from the same remedies.

The United States passed its first round of fiscal support in February 2008, when the unemployment rate was still 4.9 percent and virtually no economist even realized the economy had already slipped into recession. The Recovery Act signed into law by President Obama a year later was the largest single countercyclical effort in American history and it was followed by a dozen additional fiscal-jobs measures that, together, peaked at more than 3 percent of GDP in 2010. Together with automatic stabilizers, the fiscal support to the economy in 2010 totaled 5.5 percent of GDP.

The Administration's fiscal efforts were accompanied by accommodative monetary policy. The Federal Reserve cut the target Federal Funds rate to effectively zero at the end of 2008 and has kept it there ever since. On top of zero rates, the Fed implemented unconventional policy tools such as quantitative easing and forward guidance that have helped further extend the recovery.

Altogether, Alan Blinder and Mark Zandi estimated that the combination of these demand management policies with other financial policies prevented the loss of a further 8.5 million jobs and prevented the unemployment rate from rising above 16 percent in the wake of the crisis.³

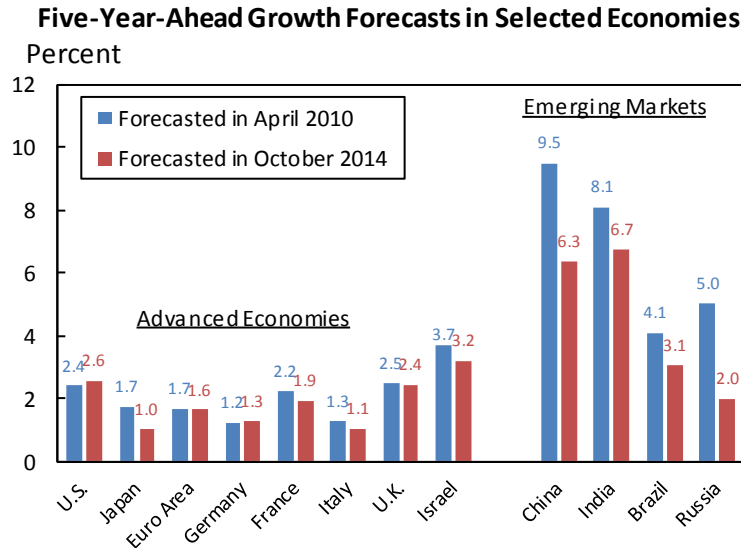
Supply Shortfalls

At the same time, supply shortfalls have also played an important role in the slower pace of global growth. The International Monetary Fund (IMF) has marked down its growth projections for many of the world's major economies, as shown in Figure 6, which compares the five-year-ahead growth forecasts made in the April 2010 *World Economic Outlook* to the five-year-ahead growth forecasts made in the October 2014 *World Economic Outlook*, a decent proxy for revisions to the expectation of the growth of aggregate supply. While Japan, France, and Italy have seen downward revisions to medium-term growth expectations, one striking aspect of this figure is the sharper downward revisions to prospects for the BRIC economies, which saw

³ Blinder, Alan, and Mark Zandi. 2010. "How the Great Recession Was Brought to an End." July (<http://www.economy.com/mark-zandi/documents/end-of-great-recession.pdf>).

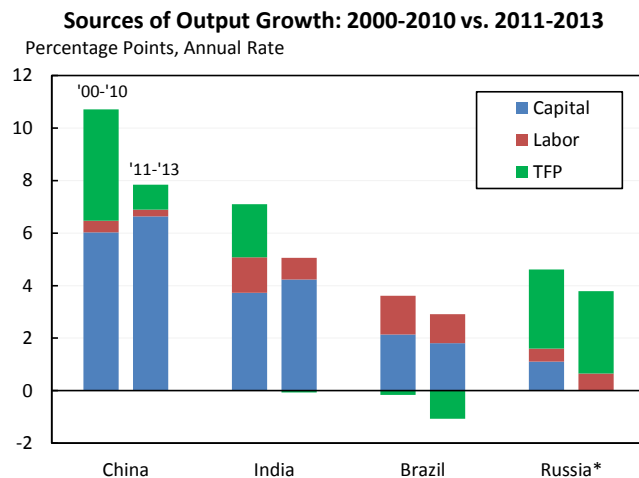
growth outlooks marked down by 1 to 3 percentage points. In fact, in the most recent World Economic Outlook, the IMF noted that the BRIC economies have been responsible for half of the IMF's total growth forecast errors from 2011-14, despite representing just over a quarter of global GDP. Much of that shortfall has been in economies operating with relatively little slack and without the lowflation that has characterized the euro zone and Japan.

Figure 6



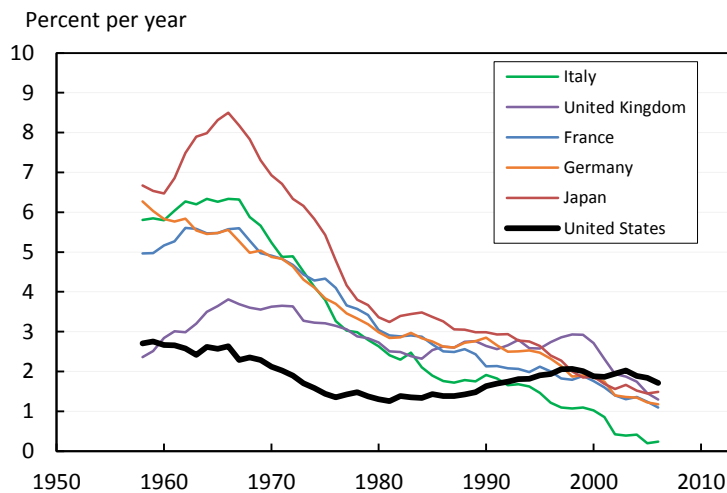
For these emerging markets, much of this supply-side slowdown in growth cannot be explained by capital or labor, and thus is in the residual category of “total factor productivity” (TFP) which measures some combination of technology, efficiency in production processes, the scale of markets, and measurement error. As shown in Figure 7, China, India, and Brazil all saw noticeable drops in total factor productivity growth from 2011 to 2013, relative to the preceding ten years. For advanced economies, the story around TFP growth since 2000 is somewhat more varied, though as I will show momentarily, declining productivity growth is also a clear challenge for most advanced economies when looking over a longer time horizon.

Figure 7



The emerging market productivity slowdown may be just a temporary phenomenon, and perhaps is at least in part a response to the economic crisis and weak demand. Another possibility is that it could represent the end of an unusual period in global economic history when the integration of China and India into the global economy led to a rapid period of catching up with the technological frontier, but as these nations—especially China—get closer to the frontier then the easier opportunities for growth are no longer available. Meanwhile, as shown in Figure 8, labor productivity growth in most advanced economies (which depends heavily on TFP growth) has been consistently slowing since the end of World War II—although the productivity boost in the United States with the new economy beginning in the mid-1990s represents somewhat of an exception.

Figure 8
15-Year Centered Moving Average of
Annual Labor Productivity Growth



Although the slowdown in productivity growth appears to be a global phenomenon, many of the solutions are very much national in character. Certain elements—like investing more in research (and Israel is an exemplar in this respect) or STEM education are likely to make a constructive addition to productivity growth in a wide range of economies. But the types of reforms that are most needed in product markets, labor markets, tax systems, and elsewhere in the economy will vary significantly from country to country. Israel, for example, could benefit from a regulatory framework that is more transparent and stable, particularly in the energy sector, encouraging more domestic and foreign investment in your economy.

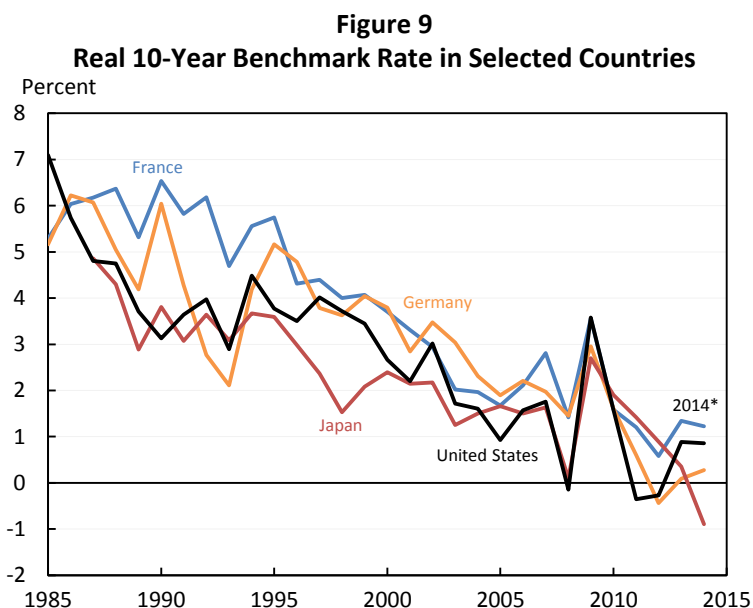
One potential cause—and solution—however, is global, and that is the slowdown in the growth of trade which I will turn to in a moment. But first let me briefly address another hypothesis: secular stagnation.

Secular Stagnation

One hypothesis for the current situation facing the global economy is “secular stagnation,” a term that Larry Summers revived from Alvin Hansen. In one sense, secular stagnation is a

demand side phenomenon characterized by chronically insufficient aggregate demand that cannot be remedied by conventional monetary policy. Specifically, even a real interest rate of zero does not generate enough investment growth to utilize the economy’s potential. The fear is that this leads to a vicious cycle—inadequate demand leads to falling inflation leads to higher real interest rates which leads to even less adequate demand.

The possibility of falling into a secular stagnation trap is closely linked to insufficient growth of *supply*, which is one of the reasons, together with the global savings glut and a shift in portfolio preferences, that the real interest rate has fallen so much across economies in recent decades, as shown in Figure 9.



In some countries, like Japan and possibly the euro zone, the combination of a low equilibrium real interest rate and low inflation expectations makes it very hard for monetary policy to be as accommodative as it should be, raising the real fear that the secular stagnation hypothesis describes important features of these economies today.

Secular stagnation is not relevant for thinking about the United States in 2014 or in the near term, because a self-sustaining recovery is well underway and inflation expectations remain well anchored. But slower population growth and the retirement of the baby boomers likely means that potential GDP growth going forward will not match the rates enjoyed in the second half of the twentieth century—a factor that reflects not “secular stagnation” but just standard growth mechanics. At the same time, the longer-term downward trend in U.S. interest rates increases the risk that in responding to the next recession—whenever it occurs—monetary policy will again be constrained by the zero lower bound. As such, secular stagnation is best understood not as a binary phenomenon that you either have or do not have, but as a probabilistic risk.

In the United States, we are taking two main policy lessons from the secular stagnation hypothesis to ameliorate the risks associated with potentially hitting the zero lower bound again in future recessions. The first is that fiscal policy may have to do more of the counter-cyclical

work in the future, and so we are looking very closely at ways to improve automatic stabilizers. In this regard, we are expanding our concept of what an automatic stabilizer is and ought to do. For example, the Affordable Care Act is not normally thought of as a countercyclical macroeconomic policy, but it is. The combination of progressive tax credits and the Medicaid expansion will significantly help households smooth consumption and will expand aggregate demand when it would otherwise be impaired.

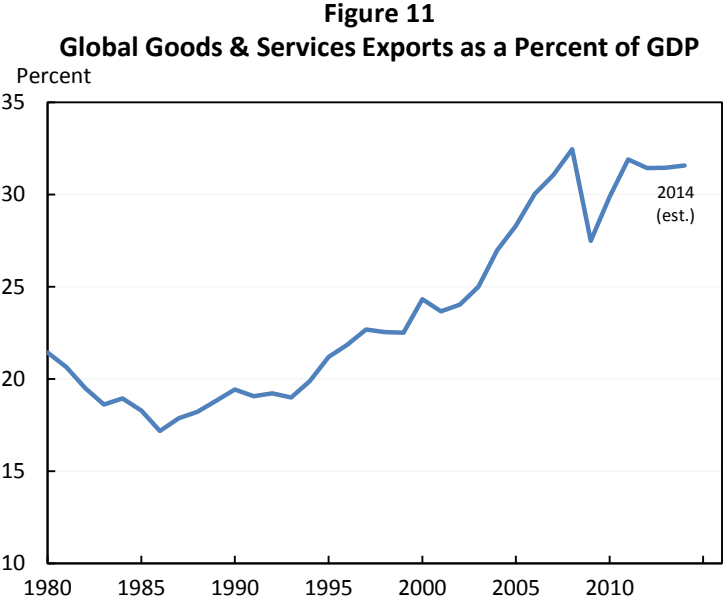
A second takeaway from the secular stagnation hypothesis is that it underscores the importance of promoting financial stability, since an extended period of low interest rates could fuel excessive risk-taking. In addition to continuing to implement the Dodd-Frank Act, we are also pressing to complete the most important piece of unfinished business in the financial arena—reforming the housing finance system and Fannie Mae and Freddie Mac. To promote financial stability internationally, the Administration also continues to argue for Congress to ratify important reforms that would modernize and strengthen the IMF. These reforms were agreed upon by G-20 leaders in 2010, and ratification by our Congress is the last step before they can go into effect.

The Slowdown in the Growth of Trade

In addition to the issue of secular stagnation, another major question surrounding the global economic situation is the outlook for global trade. At the outset of the financial crisis, the volume of global merchandise trade fell even more sharply than it did during the early stages of the Great Depression, although it quickly rebounded and by the end of 2011 was about 5 percent higher than its pre-crisis peak, as shown in Figure 10. Economists generally have a handle on explaining what happened between 2008 and 2011. A massive synchronized drop in global demand led to the postponement of purchases for commodities, consumer goods, and industrial equipment, and for those latter two categories, the development of global supply chains over the preceding thirty or so years served to amplify the initial shock. Unlike the experience in the 1930s, however, WTO rules helped to ensure that countries avoided turning to extreme protectionist measures in the immediate wake of the crisis, enabling a relatively rapid rebound of trade to its pre-crisis peak, at least during 2010 and 2011.



What is less well understood—and perhaps more concerning—is the more recent slowdown in global trade that has unfolded since about 2012. And by slowdown, I mean that in 2012, 2013, and 2014, global trade is estimated to have grown at about the same pace as overall global output—an unusual shift given that from the mid-1980s until 2008 when global trade (including goods and services) grew more quickly than global output by an average of nearly 3 percentage points per year. Figure 11 tells this story, with global exports rising steadily as a percent of GDP, from 18 percent in 1985 to 32 percent in 2008, dropping sharply during the crisis, rebounding in 2010 and 2011, and then plateauing over the last three years. As a result global trade as a share of global GDP in 2014 is estimated to be slightly lower than it was at its peak in 2008.



There are three broad sets of explanations for this plateauing of global trade. Because this phenomenon is so recent, I present these sets of explanations not as definitive answers and not to say they explain an equal share of what we have seen, but rather to frame the discussion on this important topic.

One possible explanation is that the recent slowdown in global trade is cyclical and reflects the weak spots in the ongoing global economic recovery that I have been discussing. On this point, it is worth noting that the volume of euro area imports is still 8 percent below its pre-crisis peak, while Japan’s import growth has been flat over the past twelve months.

Alternatively, a second possible explanation recently advanced by economists at the IMF and World Bank is that structural changes in the world’s two largest economies have contributed to slowing global trade. In the United States, the wave of offshoring that occurred in the 1990s has abated and domestic manufacturing has begun to rebound, curtailing or perhaps even reversing international supply chain fragmentation. At the same time, the development of domestic supply chains in China has likely reduced the need for China to import intermediate inputs for the purpose of processing and re-export.

The third possible set of explanations for the recent slowdown in trade focuses on policy. A more innocent hypothesis put forth by Paul Krugman is that trade liberalization is now a victim of its own success—tariff rates have been cut substantially for both advanced and emerging economies, limiting the scope for future progress toward global trade integration. Taking into account this and other one-off events like China’s WTO accession that are now behind us, a plateauing in global trade as a share of global output may seem perfectly natural. A related hypothesis is that progress in multilateral trade negotiations has slowed. But there is also a more nefarious version of the policy-related hypothesis: it holds that we have actually seen a stealth resurgence in protectionist measures in recent years, with countries turning to non-tariff barriers like local content requirements or increasing the use of trade defense measures like anti-dumping and countervailing duties or safeguards. Non-tariff barriers remain particularly important for trades in services, a growing component of total trade.

Even as economists continue to debate which of these potential explanations is most important, the Obama Administration’s trade agenda recognizes that there is likely to be a grain of truth in each one. For starters, U.S. exports face tariff barriers in other countries that are persistently higher than the tariffs the United States charges for foreign imports. That is a key reason that our trade agreements result in higher rates of export growth to our FTA partner countries relative to countries that do not have agreements. Our strategy also places a major emphasis on reducing non-tariff barriers to trade, where there is perhaps even more scope for progress. For instance, economists at the Peterson Institute in the United States estimate that a global trade facilitation agreement could raise global GDP by nearly \$1 trillion over the long term. This sort of agreement was reached in principle at the WTO ministerial in Bali last year, and would standardize and streamline a number of customs and related processes at national borders. Gains of a roughly similar magnitude could also result from a global agreement on trade in services.

We are also honing in on tariff reductions in specific categories like information technology products and environmental goods, where there are unique benefits to be had. In the case of information technology products, many of these items are evolving so quickly that they are not even covered by the standard tariff schedule. President Obama’s trip to China in November yielded important progress on the Information Technology Agreement that should contribute to a rapid conclusion of the broader negotiations. Regarding a possible Environmental Goods Agreement, eliminating tariffs on items like solar panels and wind turbines offers positive spillovers for worldwide protection of the environment. We also believe that Israel could do more to open trade, especially in agriculture where it would give consumers lower prices and greater variety.

Moreover, the two major plurilateral trade agreements currently under negotiation—the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership which cover 40 and 50 percent of the global economy, respectively—focus not just on the tariff and non-tariff barriers I’ve been discussing, but also place substantial emphasis on cross-border investment, where there is still tremendous room for global progress. Finally, to the extent global economic growth remains a headwind, the push for trade and investment liberalization is accompanied by a similarly robust push for pro-growth policies—both on the supply and demands sides, as I was discussing earlier. All told, these efforts have the potential to make a major impact on the global

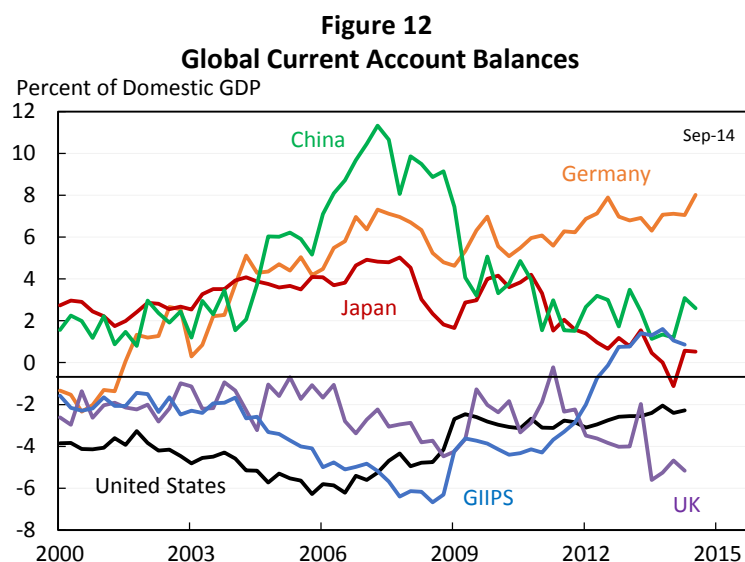
economy and represent a large step forward in realizing further productivity- and welfare-enhancing gains from trade.

Ensuring Growth Is Sustained: The Role of Current Account Rebalancing

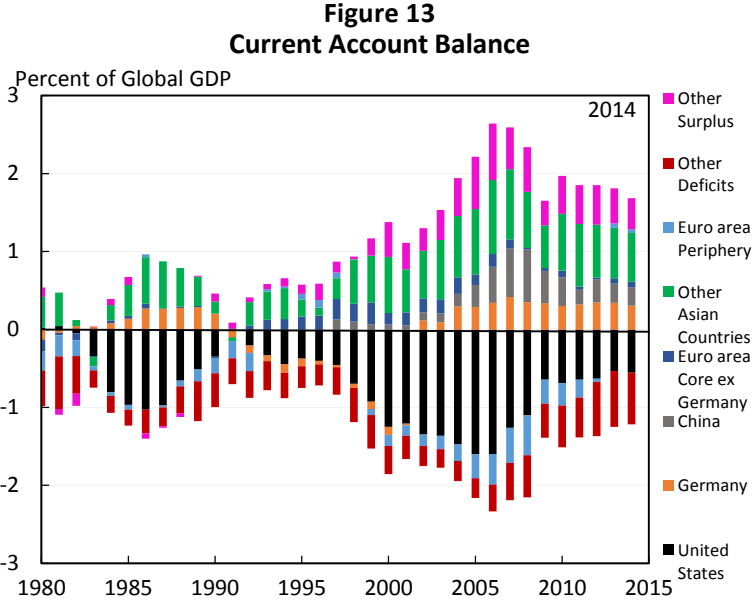
For many of the world’s economies, today’s biggest imperative is getting growth going and better utilizing demand. But it is not just about the level of growth: sustainability matters too. Growth built on artificial foundations—bubbles and excessive borrowing—is not only unlikely to last, but it also risks the propagation of much deeper problems, as witnessed during the global financial crisis. There are a number of elements to sustainability, including a sound financial system, fiscal sustainability, and domestic financial balances. I want to focus on one element that in some senses represents a combination of these three and has proved to be particularly important in recent crises: the current account balance.

The current account balance measures the net current transactions between a country and its trading partners. It is comprised of net exports, net factor income, and international transfers. When a country receives more cash inflows than it expends, its current account is in surplus. When a country spends more than it takes in, it runs a current account deficit, and must borrow from abroad to finance its activity.

Persistent deficits and surpluses both threaten the sustainability of global growth. Current account deficits left countries like Greece and Spain especially vulnerable to outflows of capital, even though the deficits themselves stemmed from very different causes. Greece’s persistent deficit was rooted in fiscal policy, while bank-fueled private real estate investment drove Spain’s. Conversely, excessive surpluses are not just an unreproducible model for the world as a whole, but they also can lead to unbalanced growth in the surplus countries and promote problematically large deficits in their trade partners. The evolution of the current account balances for selected major economies since 2000 is shown in Figure 12.



As Figure 13 shows, global imbalances, measured by the sum of absolute surpluses and deficits, have fallen since the Great Recession, primarily as a result of weak global demand following the financial crisis.⁴ In the process, however, some countries have continued to run sizable surpluses, forcing others to have bigger deficits and slower growth than they otherwise would.



The United States has seen its current account deficit fall to nearly 2 percent of GDP, reaching the smallest as a share of the economy since the 1990s, driven in part by reductions in net U.S. oil imports. Greece, Italy, Ireland, Portugal and Spain have reversed the trend in their current account deficits and are currently running small surpluses—although the rebalancing has come at great cost for their domestic economies.

China has reduced its current account surplus as a share of its economy, but it still has further to go as a market-determined exchange rate would likely lead to additional adjustment. In addition, a significant concern is that while China has moved in the direction of rebalancing from external demand to domestic demand, much of that domestic demand has been increased investment, particularly in real estate and infrastructure, instead of in the form of higher consumption. The eventual unwinding of that investment, combined with the persistent high growth in manufacturing exports, poses a risk of increasing the imbalance.

Germany’s current account surplus exceeds China’s surplus, and indeed it has not declined since 2008 as a share of global GDP. Germany’s outsized surplus is largely attributable to its high exports beyond the borders of the euro area. Germany has not used this surplus to increase domestic demand, which could feasibly offset the contraction of demand in the weaker European economies and insure against a further weakening in the German economy itself.

⁴ Treasury’s “Report to Congress on International Economic and Exchange Rate Policies” (October 2014).

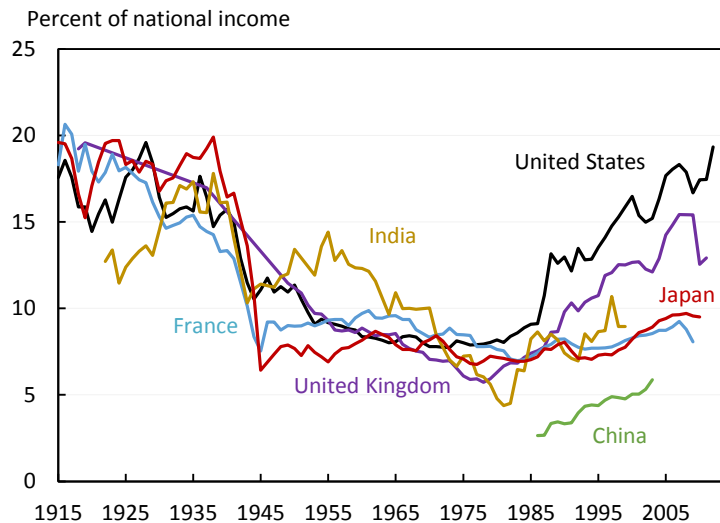
Ensuring Growth Is Shared: The Role of Inequality

Finally, it is important to remember that growth—even sustainable growth—is not enough. We must take more steps to ensure that growth is shared. This is particularly a challenge in the United States and also in Israel—two countries that have significantly greater inequality than the average OECD economy.

Inequality has increased in a wide range of countries, as shown in Figure 14, including the United States where the top 1 percent of households now receive nearly 20 percent of national income while incomes in the middle have stagnated. The growth in technology over the last few decades has increased the need for an educated work force and has driven up the wage premium for college education, exacerbating inequality. And all the while, the minimum wage has not kept pace with inflation; in real terms, the minimum wage has declined by about a fifth since the early 1980s.

As a result, there is substantial scope for policies that lead to more inclusion, many of which would also strengthen growth. These include higher minimum wages, stronger labor institutions, more progressive taxes and investments in education. The goal of promoting shared growth also has important implications for trade policy on two fronts. First, because export-related jobs pay higher on average than non-export jobs, we have sought to promote the growth of our exports at a faster rate than overall global trade growth. Second, trade benefits consumers by reducing the cost of living, which is of greater relative impact for those on the lower end of the income distribution.

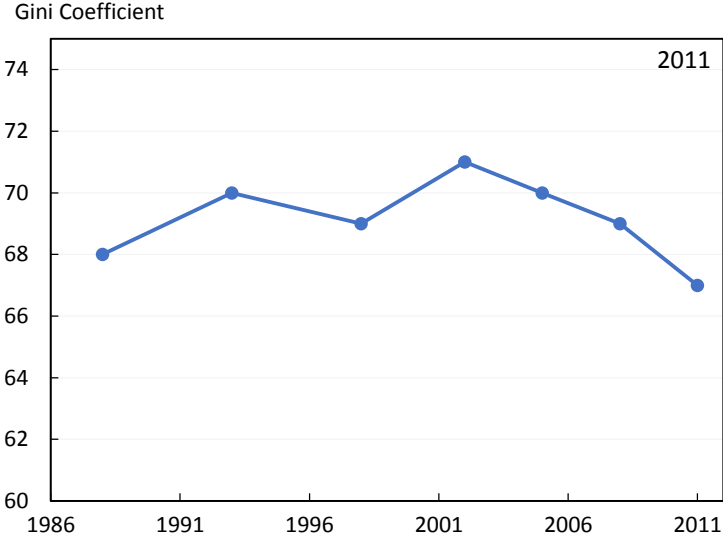
Figure 14
Top 1 Percent Income Share



But although inequality is rising *within* countries, because of large populations and rapid economic growth in emerging Asian economies, inequality appears to have been stable or possibly even decreasing when measured at a global level, as shown in Figure 15. Measured at a global level, the biggest income gains from 1988 to 2008 went to households between approximately the 15th percentile and the 65th percentile of global income.

Hundreds of millions of people have been lifted out of poverty in recent decades, and that is in many ways the most stunning economic achievement in global history. But the fact that this improvement is happening at the same time that inequality is rising within countries raises a serious challenge to the sustainability of the global economic model that helped facilitate these gains. This paradox suggests that policies to ensure inclusive growth within countries are an essential complement to growth-promoting policies themselves.

Figure 15
International and Global Inequality



Conclusion

I have addressed the outlook for the global economy and a number of lessons from the U.S. experience. But the United States of course, has its challenges too—many of which lie at the intersection of growth and inequality, manifesting themselves in our long-standing objective of raising incomes and wages for typical families. President Obama will continue to advocate for a robust agenda to address these challenges, including investing in physical infrastructure and human capital, reforming the tax system to make it more competitive, expanding trade around the world, raising the minimum wage, and fostering conditions for greater innovation. As the United States seeks to meet its own economic challenges, we look forward to continued conversations with you all and our counterparts in other nations to promote sustainable and inclusive economic growth around the world as well.

Notes to Figures

Figure 1

Note: Working-age population is defined as those persons 16 to 64 years of age in the United States, and 15 to 64 elsewhere. In countries where population is estimated on an annual basis, quarterly interpolations are used. Data as of 2014:Q3 for the United States, 2014:Q2 for all others. Where recent data on working-age population is unavailable, the working-age share of the total population is assumed to remain constant from 2013. Horizontal axis is positioned at the median recent growth rate.

Source: Eurostat; World Bank; national sources; CEA calculations.

Figure 2

Note: Working-age population is defined as those persons 15 to 64 years of age. In countries where population is estimated on an annual basis, quarterly interpolations are used. Data as of 2014:Q2. Where recent data on working-age population is unavailable, the working-age share of the total population is assumed to remain constant from 2013. Horizontal axis is positioned at the median recent growth rate. For countries that did not contract in the global financial crisis, cumulative growth is calculated since 2008:Q4.

Source: World Bank; national sources; CEA calculations.

Figure 3

Note: The sample of countries includes 30 countries, all those included in Figures 1 and 2 where sufficient real GDP data is available over the time horizon included in the chart. U.S. recessions shaded.

Source: National sources; CEA calculations.

Figure 4

Note: Actual inflation is measured by each economy's headline index of consumer prices. Market-implied expectations are forward consumer price inflation rates calculated from the market prices of inflation swaps. U.S. recessions shaded.

Source: Bloomberg Professional Service; national sources.

Figure 5

Note: Working-age population includes all person 15 to 64 years of age. The projection is calculated by CEA using growth projections from IMF and population projections from OECD.

Source: Eurostat; IMF; OECD.

Figure 6

Note: Five-year-ahead forecast is for year-over-year growth in 2015 (blue bars) and 2019 (red bars).

Source: International Monetary Fund, *World Economic Outlook* (April 2010 and October 2014 editions).

Figure 7

Note: Data for Russia covers 2001-2010 versus 2011-2012.

Source: The Conference Board, *Total Economy Database*; CEA calculations.

Figure 8

Note: Data through 2013; last data point shows average of 1999-2013.

Source: The Conference Board, *Total Economy Database*; CEA calculations.

Figure 9

Note: Data for 2014 is based on first 10 months of this year, except for Japan inflation data, which is based on average for first three months of this year (prior to the tax increase). Japan's inflation data is also adjusted for the tax increase in 1997.

Source: National sources via Haver Analytics; CEA calculations.

Figure 10

Note: Red dots represent annual averages for 1929-1935.

Source: CPB World Trade Monitor (data through September 2014); International Trade Statistics 1900-1960, Statistical Office of the United Nations (published May 1962, available at: < <http://unstats.un.org/unsd/trade/data/tables.asp#historical>>).

Figure 11

Note: The World Bank's published merchandise trade data extends through 2012, while the UN Conference on Trade and Development provides data on services trade through 2013.

Merchandise trade data for 2013 is projected using monthly data from the CBP World Trade Monitor. Global GDP and trade is projected for 2014 using the IMF *World Economic Outlook*.

Source: World Bank, World Development Indicators; United Nations Conference on Trade and Development; CBP World Trade Monitor (data through September 2014); International Monetary Fund, *World Economic Outlook* (October 2014 edition).

Figure 12

Note: GIIPS includes Greece, Ireland, Italy, Portugal and Spain

Source: National sources via Haver Analytics; CEA calculations.

Figure 13

Source: International Monetary Fund, *World Economic Outlook* (October 2014 edition); CEA calculations.

Figure 14

Source: Facundo Alvaredo, Tony Atkinson, Thomas Piketty and Emmanuel Saez, *The World Top Incomes Database*.

Figure 15

Source: Milanovic, Branko. *Global Inequality by the Numbers: in History and Now*. The World Bank Development Research Group Poverty and Inequality Team. (published November 2012, available at: < <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6259>>).