The United States and Europe: Short-Run Divergence and Long-Run Challenges

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This is an expanded version of these remarks as prepared for delivery.

It is now nearly nine years since the onset of the financial crisis. The world economy is growing, and the advanced economies have made significant progress in recovering, but that healing process has been uneven. Demand shortfalls remain across the advanced economies, as evidenced by very low interest rates and inflation, as well as unusually high unemployment rates in many countries. But longer-run supply challenges, in the form of lower productivity and investment growth, have also been pervasive across all the advanced economies. This slowdown, together with longer-run trends in rising inequality and, in some cases, falling labor force participation, has created obstacles for the typical family to see meaningful income growth.

While we are well beyond the moment of acute crisis, one of the biggest perils we face today is complacency. Challenges on both the supply and demand sides are present in most of the advanced economies and are, in many ways, interrelated. Even if specific circumstances and appropriate policy responses vary from country to country, we have a large number of tools at our disposal to deal with these issues today. That is why it is so important that the G-20 Finance Ministers declared in a recent communiqué that "[t]he global recovery continues, but it remains uneven and falls short of our ambition for strong, sustainable, and balanced growth...We will use all policy tools—monetary, fiscal and structural—individually and collectively to achieve these goals."

In my comments today, I will start by discussing the incomplete recovery in the advanced economies. I will then go on to discuss three major structural issues—productivity, inequality and labor force participation—drawing especially on evidence from the United States. In all of these cases I will share some of what we are trying to do about these issues in the United States as well as try to draw some more general lessons that may be applicable to other countries.

The Uneven Response to the Economic Crises

Growth in the advanced economies has picked up in 2014 and 2015 but has still fallen well below the International Monetary Fund's (IMF's) forecasts every year since 2010, as shown in Figure 1a. The very divergent growth rates in the wake of the financial crisis and Eurozone crisis have subsided, and the standard deviation of real growth rates across major advanced economies has trended downward, as shown in Figure 1b. This increased convergence of growth rates, however, masks the very different levels at which the advanced economies find themselves, with the vigorous policy response in the United States contributing to a relatively early recovery of

per-capita GDP and Europe's less comprehensive policy response translating into a slower and more uneven recovery, as shown in Figure 2.

Figure 1a Figure 1b Standard Deviation of Real GDP Growth Across G-10 Countries **IMF Advanced Economy Real GDP Forecast** Percent Change, Year-over-Year 2.4 3.5 2.1 Spring 2010 3.0 Spring 2012 Spring 2013 Forecast Spring 2011 Forecast 1.8 1996-2007 Average Spring 2014 2.5 1.5 Spring 2015 2.0 1.2 Forecast 0.9 Spring 2016 1.5 Forecast 0.6 1.0 0.3 0.0 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2010 2012 2014 2016 2018 2020 2022

Figure 2 Real GDP per Capita, Euro Area and United States Index (Pre-Crisis Peak = 100) 104 102 **United States** (Actual) 100 Euro Area (Predicted) 98 96 Euro Area (Actual) 94 92 90 2009 2013 2007 2011 2015 2017 2019

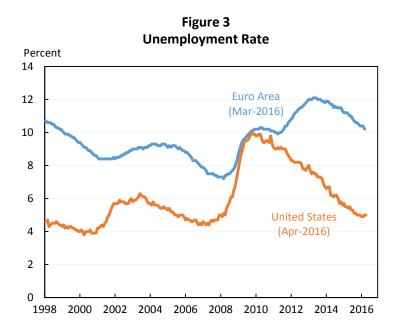
The Recovery in the United States vs.in the Euro Area

In the United States, per-capita GDP reached a peak at the end of 2007 before falling 5.5 percent in the midst of the worst economic crisis since the Great Depression. In many ways the shock that precipitated this crisis was even worse than the Great Depression: 19 percent of wealth was wiped out, about five times the amount that was lost in the Great Depression, and global trade volumes fell by 17 percent, even more than at the onset of the Great Depression. By the fourth quarter of 2013, per-capita GDP had recovered to pre-crisis levels, and in the first quarter of this year it was 3 percent above its pre-crisis peak. The unemployment rate today is 5 percent, below its pre-recession average, and real wages are rising. Overall, the current U.S. economic recovery

has outpaced both recoveries from earlier financial crises in the United States and the recent experience of many other countries.

The euro area is also growing today, with a falling unemployment rate. But, after the financial crisis was followed in quick succession by the euro area crisis, per-capita GDP is still more than 1 percent below its pre-crisis peak, a situation that means that the euro area will have suffered through nearly a decade of lost economic growth.

The euro area has long had higher structural unemployment than the United States. But today unemployment in the United States is below its pre-crisis average, while the unemployment rate in the euro area remains higher than any year from 1998 to 2009, as shown in Figure 3. In 2015 the gap between U.S. and euro area unemployment rates was nearly the largest since the late 1990s.

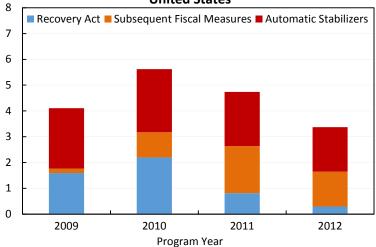


Some of these differences reflect different approaches to aggregate demand. Between 2009 and 2012, the United States passed more than a dozen expansionary fiscal measures that included a combination of individual tax cuts; business tax incentives; investments in infrastructure, energy, and research; relief for State and local governments; and expanded transfer payments. In total, these measures delivered \$1.4 trillion of discretionary fiscal stimulus, or an average of 2 percent of GDP over that four-year period. Together with automatic stabilizers, the total fiscal stimulus averaged 4 percent of GDP over that period, as shown in Figure 4. Even this amount fell short of the stimulus needed, and additional fiscal measures, as proposed by President Obama, would have further sped the recovery.

Figure 4

Fiscal Expansion as a Percentage of GDP in Each Program Year,

Percent United States



In addition, the United States cut interest rates to zero in December 2008 and kept them there for seven years. The Federal Reserve also used large-scale asset purchase programs (known as quantitative easing) to increase its balance sheet to \$4.4 trillion at the end of 2015 in addition to issuing forward guidance about prolonged low rates to provide further monetary stimulus. These macroeconomic efforts, including substantial funds for recapitalizing the banking system, numerous liquidity facilities, and early and credible stress tests to assess the magnitude of capital shortfalls in the banking system, complemented the financial rescue.

In contrast, Europe's fiscal, monetary, and financial responses have been more uneven. While fiscal imbalances prior to the crisis in some countries, like Greece, were problematic and economically damaging, these imbalances were not the cause of the crises faced by countries like Spain and Ireland. But, as the euro area crisis hit, substantial austerity policies were pushed across a number of countries despite large output gaps and monetary policy at the zero lower bound. A combination of fiscal rules, their interpretation and implementation, and government commitments have precluded significant, deliberate fiscal stimulus measures in many economies and have also led to overly rapid and premature fiscal consolidations.

Furthermore, the European Central Bank was slower to cut interest rates and early in the crisis expanded its balance sheet far less than the Federal Reserve. It even *raised* rates in 2011. The tightening of fiscal policy by European governments in the face of yawning output gaps, weak private-sector credit creation, and near-zero yields eventually led to disinflation that pressured the European Central Bank to conduct quantitative easing, although not in earnest until 2015. In addition, as the initial stress tests for large banks were not considered credible and financial policy was largely handled at the national—not currency-area—level, financial problems mingled with fiscal ones to hamper growth. Altogether, these policies led to far less supportive short-term macroeconomic policy than in the United States.

The Role of Fiscal Policy Going Forward

Today, the U.S. economy continues to heal in some areas, as evidenced by the historically large group of people working part-time for economic reasons (those whose hours were cut or who want but cannot find a full-time job) and also potentially by the decline in the labor force participation rate, a topic to which I will return. Additional fiscal expansion in the United States would be a welcome way to complete the recovery, provide insurance against the weakening global economy, deploy a more balanced set of macroeconomic tools, and invest in future productivity growth.

In the euro area, however, the demand deficiencies are considerably larger and in urgent need of addressing. The unemployment rate indicates that at least several percentage points of output are missing from the economy due to inadequate demand. Japan has also seen slowing growth and, like Europe, inflation well below the target set by its central bank.

In these areas, and in some critical emerging markets like China, the issue is not just the magnitude of demand but its composition. Countries like Germany and China have large current account surpluses but, in the case of Germany, low investment as a share of GDP and, in the case of China, low consumption as a share of GDP. This model for growth is certainly not replicable by all countries. It may also be unsustainable for these countries themselves, particularly in a world with weak global demand. When global central banks are struggling to lift growth and inflation, aggregate demand is itself a finite commodity, meaning that sizable current account surpluses have negative spillovers onto the rest of the world.

In many countries, addressing the shortfall in demand will require a balanced approach that relies more on fiscal policy than has been the case to date, either in the form of fiscal expansions or a more measured pace of fiscal consolidation that avoids large or abrupt negative shocks to demand. Such a fiscal policy can be targeted to increase business investment, public investment, private consumption, or whatever is most appropriate in given economic circumstances. And such measures would have positive net effects on global growth, creating spillovers rather than simply boosting current account surpluses and shifting demand. As such, the Juncker Commission's Investment Plan for Europe, which aims to mobilize €315 billion in new investment in Europe over three years and which is now fully operational and financing projections, is a welcome first step.

While not every country has the same degree of fiscal space, the risk today is towards excessive caution. The IMF, the European Commission, and other macroeconomic modelers agree that the stimulus associated with spending to assist and integrate refugees will be a positive short-run boost to the European economy—and it is a positive step that the European countries are not counting this spending towards their fiscal targets. But the same economic logic applies to fiscal policy more broadly.

Based on current interest rates, the judgment of capital markets is that borrowing by most countries at this point would be safe, in part because many countries have taken significant steps to reduce their long-run fiscal gaps (Italy's pension reforms, for example). Moreover, the decline in interest rates is not a new phenomenon—real interest rates have been falling since the 1980s in

major advanced economies and were already relatively low even before the extraordinary steps taken to combat the crisis, as shown in Figure 5.

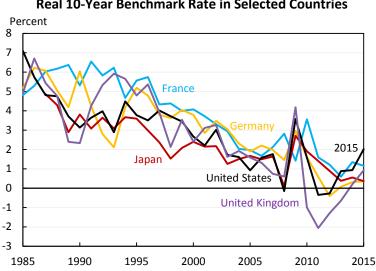


Figure 5
Real 10-Year Benchmark Rate in Selected Countries

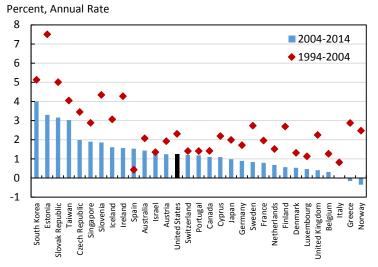
Ultimately, the goals of fiscal policy should be to support the economy and to ensure that debt as a share of GDP is sustainable—and these goals can be complementary, because increasing output can help make debt more sustainable. Boosting growth can also help lift inflation towards target in many countries—and it is nominal GDP that is the denominator of the debt-to-GDP ratio. And if necessary, short-run expansionary policies can be combined with medium- and long-term fiscal consolidations: from 2009 to 2012, the United States both passed short-run stimulus measures as well as several rounds of legislation that cut spending and raised taxes on high-income households in the medium-to-long run, reducing but not eliminating the fiscal gap over the next twenty-five years.

Supply and Demand: The Role of Productivity Growth

While there is still substantial heterogeneity across economies in terms of their cyclical position, there is an unfortunate uniformity in terms of their experience with productivity growth. Average annual productivity growth in the advanced economies slowed to 1 percent from 2004 to 2014, down from 2 percent in the previous decade—with productivity slowing in 29 of the 31 advanced economies shown in Figure 6.

Figure 6

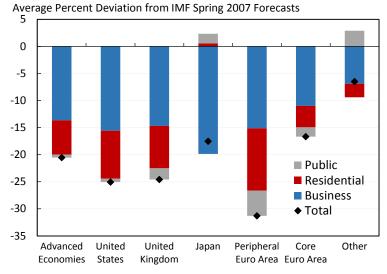
Labor Productivity Growth in Advanced Economies



The Role of Reduced Investment in the Productivity Slowdown: Demand Causes Supply

It is unlikely to be a mere coincidence that a substantial shortfall in aggregate demand and a large slowdown in productivity growth have occurred simultaneously. In fact, the causal relationship between the two phenomena likely runs both ways. Inadequate demand has contributed to a large shortfall of investment, which was 20 percent below the IMF's 2007 forecast in the advanced economies, largely reflecting a shortfall of business investment, as shown in Figure 7.

Figure 7
Decomposition of the Investment Slowdown, 2008-2014



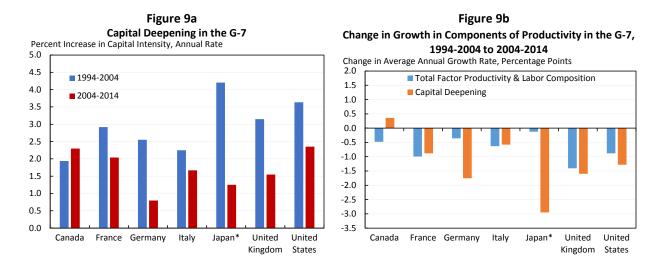
In the United States, total factor productivity growth is somewhat below its historical average, but its growth rate (on a five-year moving average basis) has been rising, as shown in Figure 8.

The largest contributor to recent low productivity growth is the decline, for the first time since World War II, in capital services per worker hour in the last five years—due both to slower investment growth and the large increase in worker hours. As a result, a worker today has *less* capital at his or her disposal than a worker five years ago. And growth in business investment has continued to slow in recent years, even declining in the first quarter of 2016.

Figure 8 Labor Productivity and Major Components, 1950-2015 Percent Change, Annual Rate (Five-Year Moving Average) 6 Capital 5 Labor Intensity Productivity 4 3 2 1 0 **Total Factor** -1 Productivity -2 1950 1960 1970 1980 1990 2000 2010

All of the G-7 countries except Canada saw appreciable slowing in their rates of capital deepening between 1994-2004 and 2004-2014, as shown in Figure 9a. Like in the United States, this slowdown in capital deepening was even larger than the slowdown in TFP growth in Germany, Japan and the United Kingdom. France and Italy have seen larger slowdowns in TFP

growth, as shown in Figure 9b.



If the productivity slowdown were caused primarily by low rates of investment, it may provide an encouraging signal for the future outlook. It would demonstrate that the economy has not

fallen short on innovative ideas or moved towards secular stagnation, but instead just needs more investment. The global nature of this problem is important. In a globalized economy, many firms will invest based on global demand. Low expectations for that demand pull down investment in all major economies, which feeds into slower growth again. Not only do we have policy tools to help push towards higher investment, but to some degree such investment slowdowns have historically been self-correcting: investment tends to be negatively serially correlated, with investment busts followed by booms and *vice versa*. In the United States TFP is essentially unrelated to its past values, while capital deepening is negatively serially correlated.

The Role of Slowing Total Factor Productivity Growth: Supply Causes Demand

Slowing total factor productivity growth has, however, also played a role in all of the G-7 economies. There is some evidence that the slowing began before the crisis, around 2004, as much of the low-hanging fruit from the information technology revolution was deployed throughout advanced economies. From this perspective, supply shortfalls in the economy in the run-up to the crisis could have led to shortfalls in demand—as a slowdown in income growth collided with high levels of debt and a slowdown in output growth, potentially resulting in pessimism that may have weighed on consumer spending and business investment. In addition, the expectation of slower productivity growth, and the slower wage growth associated with it, have potentially played a role in the post-crisis dynamics of consumption and investment as well.

Policies to Speed Productivity Growth

All of this supports an enhanced role for policies to expand productivity growth. Fiscal policies can play a role here as well: for example, expanded infrastructure investment, research funding, or business investment incentives. But a range of other measures will also be necessary.

Some measures to expand aggregate supply are common to all of our economies. For example, expanding trade would not just yield static gains grounded in comparative advantage, it would also have the potential to increase innovation through a range of channels. These include learning by exporting, greater specialization in innovative activities, access to larger markets by high-productivity firms, and expanded competition. That is why the President is pushing for Congress to pass the Trans-Pacific Partnership (TPP) and has also prioritized concluding negotiations on the Transatlantic Trade and Investment Partnership (TTIP).

Other measures vary from country to country. For example, the United States has the highest corporate tax rate of any advanced economy but does not collect a commensurate amount of revenue. Moreover, our international tax system is broken—imposing distortions on corporate decision making while collecting relatively little revenue. Cutting the top statutory corporate tax rate, expanding and reforming the tax base, reducing the preference for debt-financed investment, and establishing a minimum tax that ensures some taxation of foreign earnings, as the President has proposed, would all help U.S. productivity growth. Additionally, promoting high-skilled immigration would also increase overall productivity, with positive spillovers even to native-born workers.

The digital revolution is one of the reasons why, even amidst slowing productivity growth, the United States has enjoyed faster productivity growth than most other advanced economies. Over the last few decades, Internet-enabled technologies have been subject to overlapping traditions of regulatory forbearance and national-level regulatory harmony in the United States. In this respect, the project that the European Commission has undertaken with its Digital Single Market (DSM) initiative is an ambitious and logical next step in the development of Europe's digital economy. By diminishing internal regulatory inconsistencies and removing undue barriers to commerce, the DSM offers European economies the potential to fully realize their share of technology-enabled productivity growth and consumer benefits, complementing measures under negotiation in TTIP.

The opportunities for the European economy can, however, only be fully realized if the treatment of digital companies reflects international context in which such products and services operate. Regulatory steps that promote artificially stringent requirements outside of global norms; that punitively target one nation's companies for disparate treatment; or that unduly target companies solely because of the position they occupy in the digital ecosystem run the risk of leaving Europe's firms less productive than the current status quo. Such moves would neglect the iterative and international nature of global technological innovation and, perversely, have the effect of isolating Europe's companies and consumers from these gains.

High and Rising Inequality and the Competitive Perspective

In the long run, productivity growth is the most important factor in lifting earnings and thus the standard of living. But income growth among households also depends on the degree to which increases in productivity are shared, or, in other words, on the degree of income inequality. Here, too, the trend among advanced economies has been unfortunately uniform, with increased inequality in the majority of advanced economies. The United States has the highest levels of inequality of any of the advanced economies and has seen a faster increase in inequality than any of the other G-7 economies, as shown in Figure 10, which displays the share of income going to the top 1 percent.

Percent 20 **United States United Kingdom** 2014 Canada France 18 Italy Japan Germany 16 14 12 10 8 6 4 1975 1980 1985 1990 1995 2000 2005 2010 2015

Figure 10
Share of Income Earned by Top 1 Percent, 1975–2014

Traditional economic explanations of inequality are grounded in competitive markets, wherein workers receive wages commensurate with their productivity. According to this explanation, a combination of skill-biased technological change, a slowdown in the increase in educational attainment, and globalization have increased the demand for highly skilled workers at the same time that their relative supply has not kept pace—resulting in higher wages for these already well-paid workers and greater inequality.

An Alternative Channel for Increased Inequality: The Increase in Economic Rents and the Shift in Their Division

Many economists have recently pointed to economic rents as a potential source of inequality. Rents occur whenever capital owners or workers receive more income than they would require to undertake their production or work. Rents could play a role in rising inequality either to the degree that that the division of rents is becoming increasingly unequal or to the degree they are increasing and being captured by capital or by high earners (Furman and Orszag 2015).

The Division of Rents

Changes in the division of rents stem from institutional changes, including the decline of labor unions and the fall in the real value of the minimum wage. In the United States, the percentage of workers in unions declined from 28 percent in 1970 to around 10 percent today, the same period during which the real value of the minimum wage fell by 17 percent and the share of income going to the bottom 90 percent of Americans fell from nearly 70 percent to 53 percent, as shown in Figure 11. The decline in collective bargaining coverage has been smaller in many European countries. Moreover, many European countries have not seen the same degree of erosion in their respective minimum wages—and in many cases European countries have expanded or

established minimum wages. These institutional differences may help partly explain why inequality has risen further and faster in the United States than in Europe.

Bottom 90 Percent Income Share, 1915-2015 Percent 70 60 2014 50 Bottom 90 Percent Share of Income 40 Troy and 30 Sheflin (1985) CPS: Membership 20 2015 10 0 1915 1925 1935 1945 1955 1965 1975 1985 1995 2005 2015

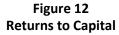
Figure 11
Union Membership as a Share of Total Employment and
Bottom 90 Percent Income Share, 1915-2015

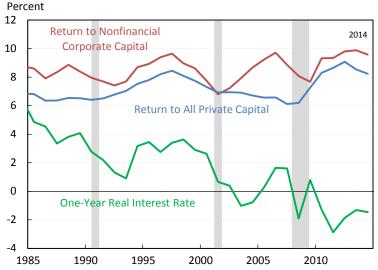
Evidence for Increasing Rents

There is also evidence that increased concentration in product markets in the United States is generating additional rents. Between 1997 and 2012, market concentration increased in 12 out of 13 sectors for which data are available, and a range of micro-level studies of sectors including air travel, telecommunications, banking, and food-processing have all found evidence of greater concentration.

It is not just data on concentration that provide evidence of rents. The sheer growth in the size of the financial sector as a share of the economy in recent decades raises the possibility that some of the financialization of the economy has been the result of increased rent-seeking rather than productive activity. This includes unproductive allocation of human capital, such as the preponderance of highly-skilled young people who are motivated by high wages to seek careers in financial services rather than other, more productive sectors of the economy.

These microeconomic trends may explain why even as the safe rate of return, as measured by government bonds, has fallen steadily since the 1980s, the rate of return on capital has held steady or even risen, as shown in Figure 12—mirroring the rise in the share of income going to capital instead of labor.





The fact that variations in the rate of return to capital have increased enormously across firms may also at least partially reflect increased concentration and the role of economic rents. And the rise of super-successful firms may also be contributing to earnings inequality, as successful firms are able to share rents with their workers by paying them more than they would receive if they were employed at less-successful firms.

Should We Be Worried About Rents?

Rents can increase the incentives to innovate, creating a tradeoff between the static efficiency that would come from lower prices and higher levels of output and the dynamic efficiency of an economy where firms undertake more innovation in order to capture supernormal returns. A firm that realizes economies of scale may achieve lower operating costs that benefit consumers through lower prices—so combating rents is not simply a question of penalizing the most successful firms, since, on their own, profits may not necessarily reflect inefficient rents.

But rents can also be harmful in a number of ways. Barriers to entry by new firms can inhibit what would otherwise be a source of innovative activity in the economy and can reduce the incentives for monopolists to innovate. Rents can also result from abuses of market power and tend to encourage rent-seeking behavior, the unproductive use of resources to capture such rewards. In these ways, rents may not be a tradeoff but could worsen both static and dynamic efficiency, worsening both equity and efficiency.

Whether we should act to reduce rents in particular areas depends on where they come from. One example of policies that create inefficient and inequitable rents is the requirement of a government-issued license to be employed in certain professions ("occupational licensing"). The share of the U.S. workforce covered by State licensing laws grew five-fold in the second half of the 20th century, from less than 5 percent in the early 1950s to 25 percent by 2008, as shown in Figure 13 (Kleiner and Krueger 2013). While licensing can play an important role in protecting

consumer health and safety, there is evidence that some licensing requirements create economic rents for licensed practitioners at the expense of excluded workers and consumers—increasing inefficiency and potentially also increasing inequality (Furman 2015). Some European countries, such as Denmark and Germany, have similar rates of licensure as the United States, though others, like France, have made some progress in reducing barriers to entry into occupations (Kleiner 2015).

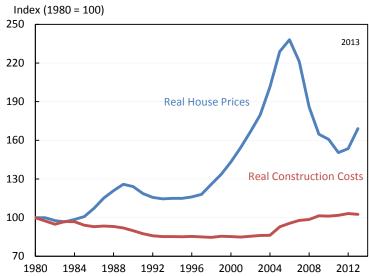
Share of Workers with a State Occupational License Percent 28 2008 24 20 16 12 8 4 0 1950s 1960s 1970s 1980s 1990s 2000 2008

Figure 13

Land-use regulation may also play a role in increased economic rents in the United States and other countries. Figure 14, from Gyourko and Molloy (2015), shows that nationwide real house prices have grown substantially faster than nationwide real construction costs since at least the mid-1980s. Numerous studies, including Glaeser and Gyourko (2003) and Gyourko and Molloy (2015), have argued that land-use regulations are what explain these occurrences of prices that substantially exceed construction costs. In other words, land-use restrictions facilitate the existence of economic rents in housing markets by artificially constraining supply.

Again, regulation in the housing market can serve legitimate, welfare-enhancing purposes, such as restrictions that prohibit industrial activities from occurring alongside or within residential neighborhoods or limitations on the size of a dwelling due to a fragile local water supply. But when excessive and primarily geared toward protecting the interests of current landowners including their property values—land-use regulations decrease housing affordability, hamper mobility, and reduce nationwide productivity and growth.

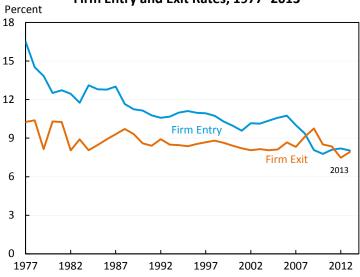
Figure 14
Real Construction Costs and House Prices Over Time



Indications of Reduced Dynamism

What makes the recent trend of decreased competition more concerning, however, is that it has occurred at the same time as a longer-term trend of reduced dynamism in the labor market and among firms in the United States—suggesting that these barriers may be playing a role in both increasing inequality and reducing productivity growth. In particular, while the United States has historically been very successful in new firm formation and growth, the trend in recent decades is going in the wrong direction, with falling entry rates (as shown in Figure 15) and commensurately older and larger firms.

Figure 15
Firm Entry and Exit Rates, 1977–2013



In addition, a range of measures of labor market fluidity—including rates of job creation and destruction, the likelihood of employee shifts between industries and occupations, and interstate mobility—are all down as well. While some of this may be indicative of a more efficient job-matching process, the rise of barriers like occupational licensing and land-use restrictions suggests a less benign explanation.

Policies to Address Inequality

One element of the response to rising inequality, regardless of its source, is expanded education. In the United States, this includes President Obama's proposals to make high-quality preschool universally available for all three- and four-year-olds as well as making two years of community college free for responsible students.

In addition, the competitive explanation for rising inequality suggests that making the fiscal system more progressive is appropriate, allowing markets to generate the maximum gains possible but helping to ensure that those gains are broadly shared via, for example, expanding tax credits for low-income workers financed by higher tax rates on high-income households. A growing body of evidence has also found that a more progressive fiscal system does not just increase after-tax incomes for low- and moderate-income households; when fiscal transfers (such as programs for health, nutrition, cash assistance, and housing support) are focused on children, they can also increase future earnings and educational outcomes.

To the degree that the "rents" interpretation of data—limited as such data are and as in need of further research as this topic is—is correct, however, it suggests that it is possible to reduce inequality without hurting efficiency by changing how the rents are divided or even to reduce inequality while *increasing* efficiency by acting to reduce these rents.

For example, if businesses have monopsony power in the labor market, they can keep wages below their efficient level. Increases in the minimum wage are one way to shift the division of rents from businesses to workers. Research has found that moderate increases in the minimum wage have little to no impact on employment because frictions in the labor matching process create match-specific rents whose division is shifted by such a change (Card and Krueger 2016). This is certainly the case in the United States, where the minimum wage is towards the low end of the advanced economies and below its inflation-adjusted values from the 1960s and 1970s, although further increases in the minimum wage in some countries may entail meaningful tradeoffs. Increased voice for workers, including greater unionization, is another way to shift the division of rents further towards employees.

At the same time, the perspective outlined above suggests that product market policies also have an important role to play. Traditional antitrust enforcement is one aspect of this, although it is important that such actions be based on what is best for consumers and not simply a penalty for success. But expanding competition and reducing rents goes well beyond traditional competition policy to include measures like reforming patent rules so that they do not inhibit innovation in the technology sector, making wireless spectrum available to a range of competitors, opening up

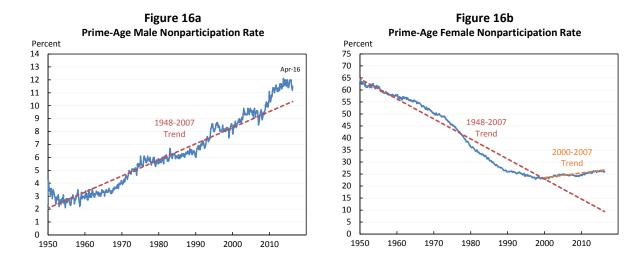
slots to make airports more competitive, and reforming occupational licensing and land-use restrictions.

Labor Force Participation

In addition to productivity growth and inequality, household incomes also depend on the fraction of people that are working: in other words, the employment-population ratio. This, itself, is a function of the labor force participation rate and the unemployment rate. The economic crisis put downward pressure on labor force participation rates, but much of the dynamic of the participation rate appears structural. All of the advanced economies face a substantial challenge from their aging populations, as the people born in the years after World War II enter their 60s and 70s and begin to retire. Accounting for differences across age groups, the experience of the advanced economies has been more heterogeneous. The United States has been relatively successful at employing young people and older people, but has had growing concerns with employment of so-called "prime-age" workers, those between 25 and 54. I want to spend some time talking about this issue because I believe it has broader implications for some of the more simplistic, traditional recommendations about structural reforms in labor markets.

The U.S. Challenge of Rising Nonparticipation by Prime Age Workers

The decline in the percentage of prime-age adults participating in the U.S. labor market is not unique to this economic recovery. Instead, it is the continuation of a troubling pattern in labor force participation going back for more than a half-century for men and about fifteen years for women. In 1953 just 3 percent of prime-age men were out of the labor force. Today, the fraction stands at 12 percent (Figure 16a). And 26 percent of prime-age women are out of the labor force, compared to 23 percent in 1999 (Figure 16b).



Part of the reason that these trends are so troubling are the decades of research on the human toll of involuntary joblessness, including its effects on life satisfaction, self-esteem, and physical health and mortality. Much of this research has been brought to the fore recently in light of the

massive rise of opioid abuse, and the associated increase in overdose deaths and suicides, among non-college-educated Americans—the same group that has seen its labor force participation decline most precipitously for decades. Recent work, including that of Anne Case and Angus Deaton (2015), on the increase in mortality rates among this group (even as other Americans have seen their life expectancy improve) has highlighted the disconnect between improvements in life expectancy in other advanced economies and the experience of the United States.

The increase in the percentage of prime-age men who do not work does not appear to be primarily caused by a reduction in labor supply. It is not high-income men who are dropping out, but those with a high school education or less. The increase is also not explained by increasing reliance on working spouses—in fact, men who are out of the labor force are increasingly unlikely to be married. And while disability insurance enrollment has increased, the increase represents a small share of the increase in the share of men not working—with the causality frequently in the direction of qualifying workers who find themselves out of work becoming more likely to apply for disability insurance rather than the other way around.

The bigger limitation of labor supply theories is that they can only explain one data point—the decline in the quantity of labor supplied. If reduced participation were solely the result of fewer people choosing to work, a leftward shift of the labor supply curve, such a shift would lead to a rise in wages as workers became scarcer. Yet relative wages for the relevant groups have gone down over this period: while those with a high-school education have seen their rates of nonparticipation rise sharply, they have also seen their relative wages fall—from 89 percent of wages for workers with a college degree or more in 1975 to 60 percent in 2015. If a large swath of less-educated men had simply chosen to stop working and relied upon their spouses' incomes, disability insurance, or something else, that should have increased the scarcity of the ones that continued to work—and, all else being equal, would have led to an increase in their relative wages.

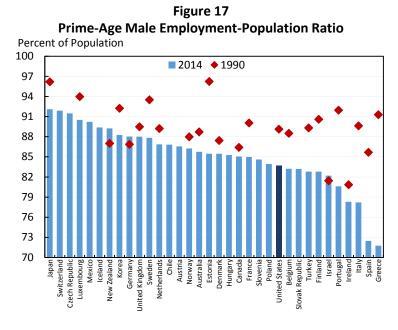
The decrease in both employment and wages suggests that the demand curve has shifted (or has shifted even more than the supply curve has shifted): reductions in the desire to employ less-skilled workers have simultaneously reduced their employment *and* lowered their wages. While the source of this decline in demand is not readily apparent, a number of possibilities exist: technological change and globalization (which have led to a decline in manufacturing employment), skill-biased technological change, and the massive increase in recent decades of formerly-imprisoned Americans (who may face lower demand for their labor) are just a few.

Many of these changes in demand, like the increased demand for skilled labor and the reduced share of manufacturing jobs, are common across a wide range of countries. But at least using available data from around 1980 to 2010, the United States ended up with both a larger decline in prime-age male labor force participation and also a larger increase in inequality than nearly any OECD member country. This suggests that demand is not destiny, and that how shifts in demand interact with institutions is also important.

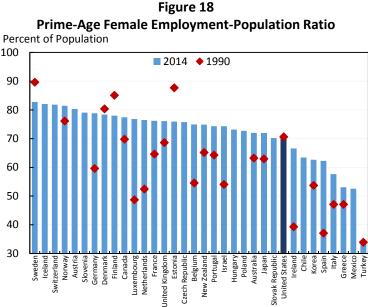
The U.S. Experience in Comparative Context

In this vein, it is useful to compare two labor markets with very different sets of institutions: the United States and France. As is well-known, labor markets in the United States are far more flexible than in France, while France has more supportive labor market policies. In the United States, 12 percent of employees are covered by collective bargaining agreements, and the remainder of private-sector employees enjoy little in the way of institutional protection from being fired. On the other hand, more than 90 percent of French workers are covered by collective bargaining agreements, and nearly all have a very substantial set of labor protections, including generous severance payments and restrictions on dismissal. The minimum wage for adults in France is around one and a half times the Federal minimum wage in the United States.

Nevertheless, in the United States the fraction of prime-age men not in the labor force is about 70 percent higher than it is in France. Even taking into account France's higher unemployment rate, France has still has had a higher fraction of prime-age men in jobs than the United States every year since 2001. In fact, the United States ranks towards the bottom of OECD countries in the fraction of prime-age men in jobs, and most of the countries with a smaller fraction of prime-age men working, like Greece, Spain, Italy, and Portugal, currently suffer from unusually high unemployment rates, as shown in Figure 17. The structural differences between the United States and other OECD countries have grown over the last 24 years: since 1990, the United States has had the second-largest increase in nonparticipation in the OECD.



As Figure 18 shows, the United States also ranks 9th out of 34 OECD countries in terms of the share of prime-age women not working. And the countries lower than the United States on this measure either have unusually high unemployment rates (like the peripheral European economies) or significant cultural differences (Turkey and Mexico). Moreover, while most other OECD countries have witnessed increasing labor force participation rates for prime-age women, the opposite is true for the United States: in 1990 we were only the 19th highest out of 24 in terms of the percentage of prime-age women out of work.



The weak position of the United States relative to the rest of the industrialized world in terms of labor force participation has persisted even though the United States has the least overall labor market regulation, the least employment protection, and the third-lowest minimum cost of labor relative to other OECD countries, as shown in Table 1.

At least part of a plausible answer about the difference between the experience of the United States and other countries is that government support for the U.S. labor market is less than that of other countries. The United States spends 0.1 percent of GDP on active labor market policies, like job search assistance and job training, which help people find jobs and retool for new jobs. This is much less than the OECD average of 0.6 percent of GDP—and less than any other OECD country except Chile and Mexico. Recent research has shown that large local negative demand shocks for labor have long-lasting effects in the United States, where many individuals leave the labor force for decades after losing a job (Autor, Dorn, and Hanson 2015). Such findings suggest that despite its flexibility and labor mobility, the American labor market does not reallocate and heal itself quickly enough to keep affected individuals from falling out of the labor market, and that there is an expanded role to play for active labor market policies.

A number of features of the U.S. labor market particularly discourage women's participation in the workforce, given that women bear a disproportionate burden of childcare and housework. The United States is the only OECD country not to guarantee paid leave, either for illness or for family reasons (such as maternity or paternity leave). And while the gross cost of U.S. childcare is about average for the OECD, subsidies for childcare in the United States are considerably below the OECD average, making the net cost of childcare among the most expensive of any advanced economy. Moreover, while the United States generally has low tax rates, our tax system imposes a relatively high tax wedge between primary and secondary earners on average.

Table 1
OECD Going for Growth Indicators, 2015

	U.S. Percentile Rank (100=Most Flexible/Most Supportive)
Measures of Labor Market Flexibility	
Overall Labor Market Regulation	100
Employment Protection for Regular Employment	100
Scope of State Intervention	94
Minimum Cost of Labor	92
Coverage of Collective Bargaining Agreements	90
Labor Taxation	71
Barriers to Entrepreneurship	62
Measures of Institutional Labor Market Support	
Nationwide Paid Leave Policy	0
Expenditure on Active Labor Market Policies	3
Net Childcare Costs, Lone Parent	6
Implicit Tax on Returning to Work, Lone Parent	9
Unemployment Benefits (1 Year)	11
Unemployment Benefits (5 Years)	11
Number of Weeks Lost Due to Sick Leave	11
Net Childcare Costs, Couples	13
Implicit Tax on Returning to Work, Second Earner	13
Tax Wedge: Single Earner vs. Second-Earner Couples	25
Public Expenditure for Childcare	29

At the very least, the differences in labor force participation between the United States and other OECD countries with less flexible labor markets suggests that the United States may have something to learn when it comes to creating conditions for meaningful employment—and that the standard view among economists about the tradeoffs between flexibility and support likely misses at least part of the story.

At the same time, the United States has been more successful in the employment of both younger and older workers, in addition to having more women in management positions than many European countries. It is possible that these represent tradeoffs: greater protections for prime-age workers may come at the expense of youth participation, or policies to bringing more women into the workforce could also increase part-time work and inhibit career advancement. Nevertheless, my main takeaway from all of this is that the answers on labor markets are considerably more complex and nuanced than any simple, ideologically conventional answer—and many of the policies either do not entail these tradeoffs at all or can be designed to minimize them.

Some Steps to Increase Labor Force Participation

Many of the policies that I have already discussed—including expanding aggregate demand, increasing education, and reducing occupational licensing barriers—would result in expanded labor force participation in ways that are applicable to a wide range of countries.

Other steps are very country-specific. In the United States, we need to deepen the "connective tissue" in labor markets, including increasing access to community college and training systems to help place people into jobs; providing better search assistance as part of the unemployment insurance system; and giving workers more flexibility to use unemployment insurance to integrate into a new job. In this respect, the United States can learn from European policies and institutions.

We need to ensure that labor markets are flexible not just for employers, but for employees as well, by providing paid leave and guaranteed sick days, as well as greater subsidies for child care and early learning. Work by Francine Blau and Lawrence Kahn (2013), for example, has found that U.S. women's labor force participation would be around four percentage points higher if we adopted family-friendly labor market policies comparable to those of other OECD countries.

In the United States, criminal justice reform is essential to deal with the fact that our incarceration rate is the highest in the world (with the exception of the Seychelles). This includes reducing mandatory minimum sentences, especially for nonviolent offenders, and improving reentry into the workforce through everything from better education and training in prison to fewer restraints on hiring following release. These measures would help remedy one of the more uniquely American aspects of the fall in labor force participation, the effects of mass incarceration.

Finally, immigration can play an important role in advanced economies in combatting the unfavorable demographic trend weighing on the growth of the labor force. Such immigration reform does not just expand the size of the workforce; it can also lead to higher productivity growth and, for many, higher wages.

Conclusion

Since the crisis began nearly nine years ago, both the United States and Europe have faced economic challenges not seen in generations. Today, the diverging states of economic affairs on the two sides of the Atlantic point both to accomplishments and challenges, both short- and long-run. Much of this divergence has been the result of deliberate choices made by policy makers, both fiscal and monetary—indicating that Europe, in particular, has additional room to take steps to shore up demand.

At the same time, both Europe and the United States face a set of longer-run structural problems: slowing productivity growth, rising inequality, and falling participation in the workforce. On many of these fronts, we have much to learn from each other. Rather than ideological rigidity, confronting both the short- and long-run challenges facing our economies will take pragmatism

and flexibility. Only by learning from one another's policy experience over the past several decades can both the United States and Europe promote robust growth that is sustained, sustainable, and broadly shared.

Notes to Figures and Tables

Figure 1a

Source: International Monetary Fund, World Economic Outlook.

Figure 1b

Note: The sample includes all G-10 countries (Belgium, Canada, France, Germany, Italy, Japan,

the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States).

Source: National sources via Haver Analytics; CEA calculations.

Figure 2

Note: For euro area, values for population are quarterly interpolations of annual data. Projections for real GDP growth are from the IMF *World Economic Outlook* (April 2016), and projections for population are from Eurostat.

Source: Eurostat; U.S. Bureau of Economic Analysis; International Monetary Fund, *World Economic Outlook*; CEA calculations.

Figure 3

Source: Eurostat; U.S. Bureau of Labor Statistics.

Figure 4

Source: Congressional Budget Office (2014); U.S. Bureau of Economic Analysis; CEA calculations.

Figure 5

Source: National sources via Haver Analytics.

Figure 6

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

Figure 7

Note: The figure shows the deviation of investment between 2008 and 2014 from forecasts made in the spring of 2007. Black diamonds indicate the average percent deviation of total investment. Colored segments show the contribution of the components of investment—business, residential, and public—to the deviation. Public-sector contributions to residential and nonresidential investment are excluded from these categories when data for these contributions are available. Peripheral Euro Area category includes Greece, Ireland, Italy, Portugal, and Spain. Core Euro Area category includes Austria, Estonia, Finland, France, Germany, Latvia, Luxembourg, Malta, the Netherlands, Slovakia, and Slovenia.

Source: International Monetary Fund, Fiscal Monitor Database; Consensus Economics; national sources via Haver Analytics.

Figure 8

Source: U.S. Bureau of Labor Statistics; CEA calculations.

Figures 9a and 9b

Note: Data for Japan are for 1994-2004 and 2004-2013.

Source: Organisation for Economic Co-operation and Development; CEA calculations.

Figure 10

Source: World Wealth and Income Database (2016).

Figure 11

Note: Total employment from 1901 to 1947 is derived from estimates in Weir (1992). For 1948 to 2014, employment data are annual averages from the monthly Current Population Survey. Source: U.S. Bureau of Labor Statistics, Union Membership Series; Troy and Sheflin (1985); U.S. Bureau of Labor Statistics, Current Population Survey; Weir (1992); World Wealth and Income Database (2016); CEA calculations.

Figure 12

Note: The rate of return to all private capital was calculated by dividing private capital income in current dollars by the private capital stock in current dollars. Private capital income is defined as the sum of (1) corporate profits ex. federal government tax receipts on corporate income; (2) net interest and miscellaneous payments; (3) rental income of all persons; (4) business current transfer payments; (5) current surpluses of government enterprises; (6) property and severance taxes; and (7) the capital share of proprietors' income, where the capital share was assumed to match the capital share of aggregate income. The private capital stock is defined as the sum of: (1) the net stock of produced private assets for all private enterprises; (2) the value of total private land inferred from the Financial Accounts of the United States; and (3) the value of U.S. capital deployed abroad less foreign capital deployed in the United States. The return to nonfinancial corporate capital is that reported by the Bureau of Economic Analysis. Inflation is calculated using the CPI-U-RS.

Source: U.S. Bureau of Economic Analysis; Federal Reserve Board of Governors; U.S. Bureau of Labor Statistics, Consumer Price Index; CEA calculations.

Figure 13

Source: Council of State Governments (1952); Greene (1969); Kleiner (1990); Kleiner (2006); Kleiner and Krueger (2013); Westat data; CEA calculations.

Figure 14

Source: Gyourko and Molloy (2015).

Figure 15

Source: U.S. Census Bureau, Business Dynamics Statistics.

Figures 16a and 16b

Source: U.S. Bureau of Labor Statistics, Current Population Survey; CEA calculations.

Figure 17

Source: Organisation for Economic Co-operation and Development; CEA calculations.

Figure 18

Source: Organisation for Economic Co-operation and Development; CEA calculations.

Table 1

Source: Organisation for Economic Co-operation and Development, *Going for Growth* 2015.

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