

THE REGIONAL ECONOMIST

*A Quarterly Review
of Business and
Economic Conditions*

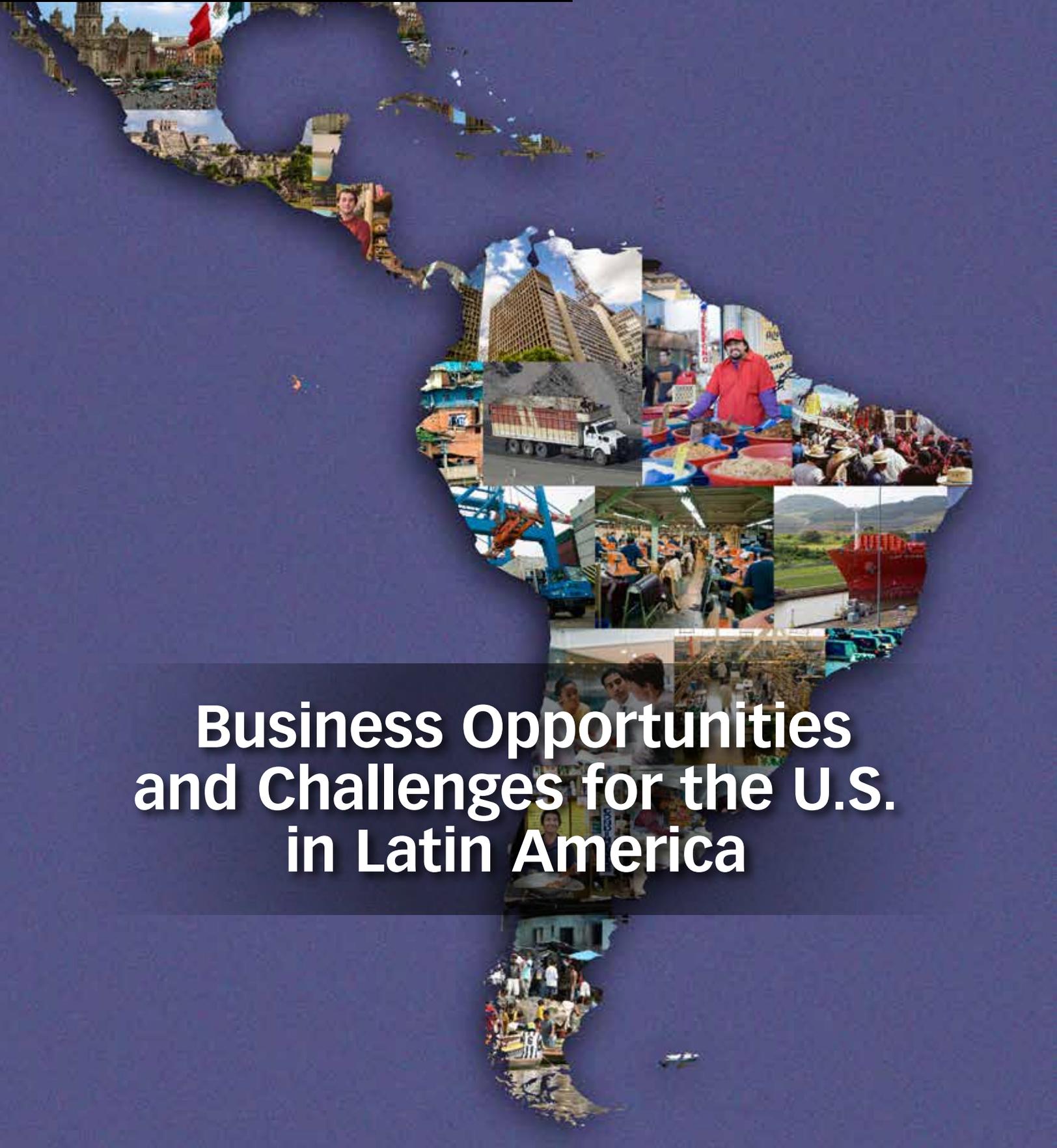
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THE FEDERAL RESERVE BANK OF ST. LOUIS
CENTRAL TO AMERICA'S ECONOMY®

Employment
Working Part Time
—But Not by Choice

Federal Budget
How the U.S. Got Here,
and Where It's Headed



Business Opportunities and Challenges for the U.S. in Latin America

4

Latin America: Challenges and Opportunities

By Alexander Monge-Naranjo

U.S. businesses that are considering trading with Latin America or investing there will find large differences between the region and the U.S., as well as large differences among the Latin American nations themselves. In this primer, the author assesses the progress being made in Latin America in job training, infrastructure, trade agreements, politics, macro stability and more.



THE REGIONAL ECONOMIST

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3 PRESIDENT'S MESSAGE

10 **Past, Present and Future of the Federal Budget**



By Fernando M. Martin

Now that the turmoil over the federal budget has quieted down somewhat, it's a good time to examine how spending and revenue have changed since the 1970s and are expected to change in the next 10 years. See where outlays are shrinking and where they are rising and how the tax burden is shifting from one group to another.

12 **Working Part Time for Economic Reasons**



By Maria Canon, Marianna Kudlyak and Marisa Reed

The unemployment rate has been declining significantly since the Great Recession ended; however, the ranks of those involuntarily working part time have been declining at a slower pace. How does this situation compare with what happened after previous recessions?

14 **Three Faces of Inflation: U.S., Japan, the Euro Area**



By Silvio Contessi and Li Li

All three of these large economies have had inflation of less than 2 percent of late. However, the underlying trends in the areas are different, as may be the causes of the low inflation.

16 **METRO PROFILE In Owensboro, Ky., the Boom Has Crested**



By Maria A. Arias and Charles S. Gascon

This Ohio River town has wrapped up a wave of development, funded by both private and public sources. As a result, the job gains that were once twice the national rate have slowed considerably.

19 ECONOMY AT A GLANCE

20 **DISTRICT OVERVIEW Why Is Economic Mobility in Memphis So Low?**

By Alejandro Badel and Julia Maues

In this second installment on economic mobility in the District, the authors zero in on Memphis, which has one of the lowest probabilities in the country for a family to move up in one generation from the bottom 20 percent of income distribution to the top 20 percent.

22 **NATIONAL OVERVIEW Elusive Recovery May Be Here To Stay**

By Kevin L. Kliesen

First-quarter weakness is not believed to be a sign of things to come. Professional forecasters and FOMC participants are sending signals that GDP growth for the rest of the year will be solid.

23 READER EXCHANGE

ONLINE EXTRA

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A Look at Inequality in Income and Net Worth

By Lowell R. Ricketts and Christopher J. Waller

While income inequality in the U.S. is high, it is much lower than income inequality across countries. A more significant problem for America may be wealth inequality—the growing disparity in net worth between those at the top and everyone else.

Tapering and Other Key Topics in U.S. Monetary Policy

The Federal Open Market Committee (FOMC) considers a wide range of information when assessing the state of the economy and deciding on the appropriate stance of monetary policy. In this article, I address some topics that have been of particular interest recently.¹

One welcome development so far this year has been that the Fed's tapering process has gone relatively smoothly in terms of market reaction, whereas the "taper tantrum" during the summer of 2013 had suggested otherwise.² The current asset purchase program began in September 2012, and last summer there were hints that the FOMC might start to pull back on its pace of purchases. As a result, long-term U.S. interest rates rose considerably—by about 100 basis points. The possibility of tapering also had global ramifications as capital flowed out of emerging markets and into the U.S. Some of the effects were reversed during the fall when the committee decided to delay the tapering. The FOMC ultimately decided at its December meeting to reduce the pace of its asset purchases beginning in January. The fact that the tapering has been relatively smooth so far is encouraging for the Fed as we continue the process of eventually returning to normal monetary policy.

Another important topic of late has been the relative softness in U.S. gross domestic product (GDP). In the first quarter, real GDP decreased at an annualized rate of 2.9 percent, according to the Bureau of Economic Analysis' latest estimate. Did the extended hard winter create a temporary weather-related drag, or did the economy slow down on a more persistent basis over the winter months? In my view, the weakness in the first quarter of 2014 can be attributed mostly to weather and inventory adjustment effects. The second half of 2013 was fairly strong in terms of GDP growth, and I expect sustained

growth in the remaining quarters of this year. While the first quarter looks like it will be an anomaly, the FOMC is watching the data closely to see if that story holds.

The FOMC also continues to keep a close eye on inflation and on developments in the labor market. While inflation has been running below the FOMC's 2 percent target over the past couple years, in recent months it has been moving back toward the target. Regarding the labor market, the FOMC has been particularly concerned about high unemployment in the U.S. since 2008-2009. The unemployment rate peaked at 10 percent in October 2009. It has since fallen to 6.1 percent, according to the June 2014 reading.

A key consideration for the health of labor markets concerns how to interpret recent changes in labor force participation (LFP). LFP has been in decline in the U.S. since 2000, largely due to the aging population. In my view, demographic factors—rather than cyclical factors—account for most of the changes in participation following the financial crisis and recession. Therefore, the falling U.S. unemployment rate provides a good signal of an improving labor market.³

One other topic of particular note is that emerging markets have been critical of U.S. monetary policy in recent years, especially during the taper tantrum. The Federal Reserve Bank of Kansas City's Jackson Hole Economic Policy Symposium in August 2013 covered issues surrounding global capital flows and the impact of U.S. monetary policy on emerging markets. The standard view on this topic is that with flexible exchange rates, free capital flows and independent monetary policy in each country, the global equilibrium is about as good as possible without international monetary policy coordination. That is, the gains from such coordination would be small. An alternative view is that there may be some unnecessary volatility in

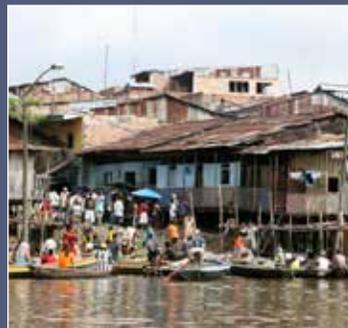
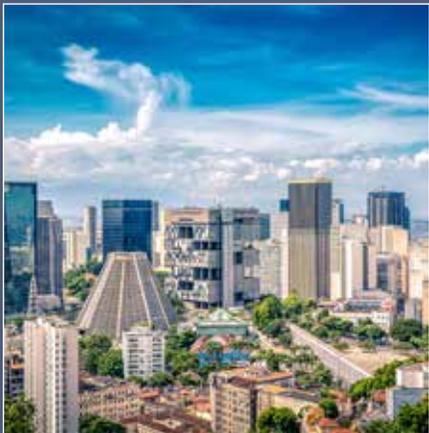


the global macroeconomic equilibrium due to U.S. policy; however, this outcome would occur only if the U.S. is interpreted as not following good policy.⁴ This is one way to frame the emerging markets' critiques, given that whether the U.S. is pursuing the right monetary policy or not is somewhat oblique in the current circumstances. The Fed has pursued several unconventional policies while the policy rate has been near zero, making it much more difficult during the current era to describe policy as a commitment to a monetary policy rule. As a result, reading the signals coming out of the U.S. has become more difficult, possibly generating unnecessary volatility in global financial markets. While there is some room for debate on this topic, I agree with the standard view, in which the scope for international monetary policy coordination to improve the global macroeconomic outcome is limited. 

James Bullard, President and CEO
Federal Reserve Bank of St. Louis

ENDNOTES

- ¹ This column is based on my article in the June 2014 edition of the OMFIF (Official Monetary and Financial Institutions Forum) Bulletin, "Smooth Ride So Far for U.S. Tapering." Vol. 5, Ed. 6, pp. 8-9.
- ² See my speech on May 16, 2014, in Little Rock, Ark., "A Tame Taper." See <http://research.stlouisfed.org/econ/bullard/pdf/Bullard-LittleRock-16-May-2014-final.pdf>.
- ³ See my column in the April 2014 issue of *The Regional Economist*, "The Rise and Fall of Labor Force Participation in the U.S." Vol. 22, No. 2, p. 3.
- ⁴ See my speech on April 7, 2014, in Los Angeles, "Two Views of International Monetary Policy Coordination." See <http://research.stlouisfed.org/econ/bullard/pdf/Bullard-APBO-USC-Marshall-April-7-2014-Final.pdf>.



Business Opportunities and Challenges for the U.S. in Latin America

By Alexander Monge-Naranjo

For a technologically advanced and capital-abundant country like the U.S., Latin America should be a fertile source of business opportunities. Latin America is not only geographically close but is rich in natural resources, has a relatively young population and possesses political institutions that are becoming increasingly democratic and stable. The conditions appear to be conducive for ample trade and international investment opportunities.¹

This article explores some of these business opportunities, which are not without significant challenges.

E Pluribus, Plures

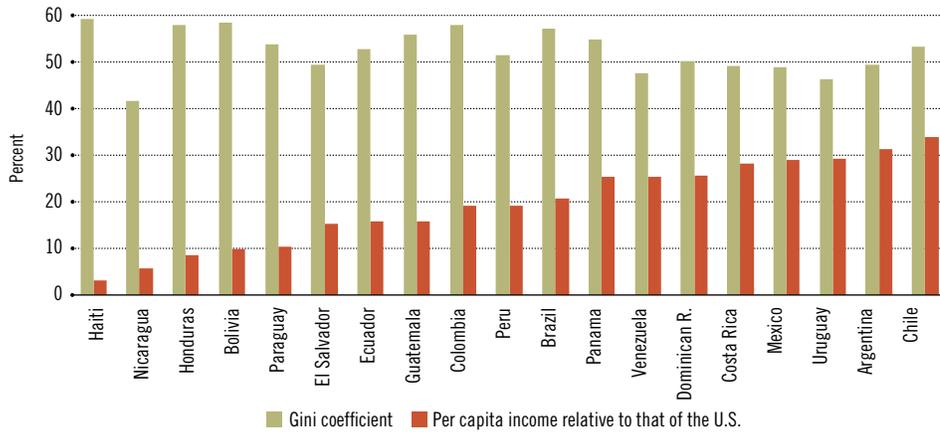
From the Rio Grande in the north to Tierra del Fuego in the south, Latin America is made up of countries with commonalities in history and language but also remarkable differences in ethnic makeup, size and cultural traits. Differences also abound in the countries' levels of income and in their investment and commercial relationships with the U.S. and the rest of the world. Understanding these large differences—with the U.S. and among fellow Latin American countries—is vital to understanding the challenges and opportunities for the U.S. south of its border.

Figure 1 shows the large per capita income differences in the region. The red bars indicate the income per capita (adjusted for purchasing power differences) relative to that of the U.S. Clearly, all countries are lagging behind the U.S., with Chile the highest at 34 percent of U.S. income and Haiti the lowest at 3 percent.

We might divide Latin America into three groups of countries: the very poor, with roughly 10 percent or less of the per capita income in the U.S. (this group would include Haiti, Nicaragua, Bolivia and Paraguay); a group in the middle, with less than 20 percent of U.S. income (El Salvador, Ecuador, Guatemala, Colombia and Peru, among others); and a group with relatively higher income—more than 20 percent of U.S. per capita income. The third group includes Panama, the Dominican Republic, Costa Rica, Mexico and Chile, countries that are aggressively pursuing international trade and foreign investment. This group also includes Uruguay and Argentina, countries that have historically been richer than other Latin American countries. Also notable in this group are Brazil and Venezuela, the first for its sheer size and the second for its abundance of oil.

Notice that the differences within the region can easily dwarf the differences between the

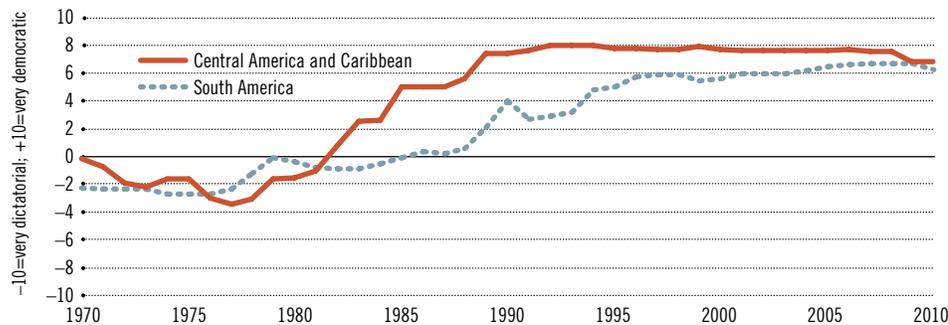
FIGURE 1
Latin America: Average Income and Inequality, 2000-2010



SOURCES: World Bank's World Development Indicators (series names: GNI [gross national income] per capita, PPP [current international \$] and Gini index). Penn World Table 7.1.

NOTE: The red bars plot the relative value of gross national income per person in a particular country to that of the U.S., adjusting for purchasing power differences of money in each country. The gold bars plot the Gini Index, which provides a measure of equality in the distribution of income in a country, with 0 indicating perfect equality (all people have an equal share of the nation's income) and 100 indicating perfect inequality (all of the nation's income goes to one individual). The Gini coefficient for the U.S. is 40.8.

FIGURE 2
Latin America: Democratization Index



SOURCE: Polity IV database: Polity 2 index.

NOTE: This index of democratization provides a measure of a nation's level of democracy, with ranges from -10 for complete dictatorship to +10 for complete democracy.

region and the U.S. While Argentines and Chileans earn just one-third of the U.S. per capita income, they earn 10 times as much as Haitians, five times as much as Nicaraguans and three times as much as Hondurans, Bolivians and Paraguayans. Those differences have remained relatively consistent over the years.

Within each country, inequality is large, too. The gold bars in Figure 1 show the average of the Gini coefficient, an indicator of inequality, for years between 2000 and 2010 for the countries in the region.² The higher the value of the coefficient, the higher the degree of inequality: A value of zero means perfect equality, while a value of 100 means perfect inequality, i.e., all the income accrues to just a single individual. Notice that more than half

of the countries have a Gini coefficient above 50 percent, with Haiti, Bolivia, Guatemala, Colombia and Brazil closer to 60 percent. Not a single country is less unequal than the U.S., which has a Gini coefficient of 40.8 percent—not even Uruguay, Argentina or Costa Rica, traditionally singled out in the region for having a middle class. Another indicator of the inequality in the region comes from the fact that Mexico and Brazil have a disproportionate number of billionaires. These two countries are consistently in the top of *Forbes* magazine's annual ranking of billionaires, alongside countries that are much richer.³

For U.S. businesses, the large degree of inequality within and between countries presents opportunities and challenges. On the one hand, the well-off, well-educated elites are natural markets for goods and services from the U.S.; these people can also provide business partners and contacts in the region. In principle (unfortunately, not so much in practice), these elites could also provide well-trained political leaders and policymakers in their countries to develop and implement policies promoting growth and development. Moreover, inequality could also mean low wages in those countries, which could be attractive for U.S. businesses producing in the region. Regarding challenges, inequality—especially if it is rooted in the lack of social mobility—can lead to political instability, which can cause disruptions, expropriation risk and other problems for business. Furthermore, lower wages are often accompanied by lack of skills and productivity.

Aside from wide inequality, another long-held characteristic of Latin American countries has been the pervasiveness of authoritarian regimes—at least in the past. Among the most remarkable changes in the region is the transition to democratic regimes in the past 30 years. Figure 2 displays the average of an index of democratization, the Polity 2 index from the Polity IV database,⁴ for South American countries and for Central American and Caribbean countries. The range of the index is -10 for complete dictatorship to +10 for complete democracy. The trends are obvious and self-explanatory, and they indicate that the proverbial Latin American dictator (e.g., Somoza, Trujillo, Banzer, Stroessner, Castro and Videla) is not the norm but a rarity these days.

The political remake of the region may change the way that the U.S. does business with it. Some of the authoritarian regimes in the past served as key contacts, providing access and stability to U.S. investors. Democratic regimes may be more bureaucratic, and the electoral process may introduce risks and volatility, as every new administration may change the policy orientation of a country. In the long term, however, investments carried out under democratic regimes can claim more legitimacy and support (e.g., legal) inside each country, as well as outside.

Remaining in the region are elements of the once-ubiquitous populism, which led countries to large fiscal and international imbalances and extensive interventionism. However, the macroeconomic stability exhibited by Latin America during the Great Recession bears witness to the overall policy progress made by the region. In the past, Latin American countries consistently crashed in every global recession. Economic policy, however, is an aspect in which there is still progress to be made.

Protectionism vs. Openness

After macroeconomic and balance-of-payments crises in the 1980s, the countries in the region started abandoning the inward model of import substitutions and began adopting openness to international trade and foreign direct investment (FDI) as backbones of their development strategies. A study in 2011 conducted by economists Francisco Buera, Alexander Monge-Naranjo and Giorgio E. Primiceri found that policy reversals of this type can be explained by rational learning models, whereby policymakers learn from the experience of their own countries and from those of nearby countries. The economists' results also imply that openness can be sustained only if the countries are successful in growing; if not, at least some of the countries will revert to protectionist policies. Such propositions will be useful in examining the recent policy choices in Latin America.

Given the failure of a comprehensive, global, multilateral free-trade framework, i.e., the Doha or Uruguay rounds of the World Trade Organization (WTO) negotiations, countries around the world have sought bilateral trade agreements. Latin American countries have been part of this strategy, and a free-trade agreement (FTA) with the

U.S. has been a major issue of contention. The table lists the different Latin American countries, different measures of their size and whether they have an FTA with the U.S.

Out of the 20 countries in the group, the U.S. has FTAs with 12, or 60 percent of them. Weighted by GDP, however, the fraction is smaller—47 percent; weighted by population, it's 46 percent. The percentage drops even further—to 29 percent—when land mass, with all its natural resources, is used to define the weights. An additional 60 percent of the land mass would be added if the U.S. signed an FTA with MERCOSUR (Brazil, Argentina, Uruguay and Paraguay). Such a pact has proved to be very elusive, however.

Trade numbers indicate that Latin America is both an important source of imports (almost 20 percent) and an important destination of U.S. exports (almost 25 percent).⁵ For FDI, the results are different. The region provides a negligible amount of FDI in the U.S., but this is somewhat expected, since sources of FDI tend to be firms in developed countries that have a technological or marketing edge with respect to the host economy. More surprising, Latin America receives only 6 percent of all FDI from the U.S. This is precisely the margin in which FTAs could make the biggest impact as they provide the credibility that markets will remain open for the multinational firms. If so, there could be considerably more FDI in Latin America from the U.S. as a result of FTAs.⁶

Clearly, for the U.S. there is ample room to extend the commercial links with Latin American countries, especially with MERCOSUR, a group of countries with high productivity in agricultural sectors. Unfortunately, doing so is particularly challenging as each side accuses (correctly) the other of protectionism. On one side, Brazil and Argentina, along with other emerging countries, have pushed for developed countries, including the U.S., to dismantle the widespread use of subsidies for agriculture. On the other hand, the U.S. has pushed for openness in manufacturing and services, which has been rejected by Brazil and Argentina. Indeed, a new challenge for Americans doing business in Latin America is the emergence of the Bolivarian Alliance for Latin America (ALBA for its Spanish initials). Founded by Venezuela and Cuba in 2004 to advance free trade in the region but excluding the U.S., the

organization now includes Bolivia, Ecuador and Nicaragua, and it has some influence in Brazil and Argentina.⁷

In addition to being excluded from ALBA, the U.S. also faces the challenge that the Chinese have become a competitor for the U.S. as a source of investment in most of Latin America, not only in ALBA countries. In the past few years, the Chinese have provided the financing and technological support for infrastructure and for the development and extraction of natural resources, all of which could have been of strategic value for the U.S.

FTAs would not correct all the problems of doing business in the region. With or without them, international trade in the region remains on average a long and costly endeavor, partly because of bureaucracy and partly because of subpar infrastructure. These problems affect not only international business but domestic business transactions, too.

Doing Business in Latin America: Not Easy

Explaining why some countries are poorer than others is not a simple task, as multiple elements are typically entangled. In the case of Latin American countries, however, several economists have argued that barriers to conducting business are the culprits for remaining underdeveloped.⁸ In that vein, in this section I will explore the Doing Business⁹ survey of the World Bank, which regularly collects information from entrepreneurs and managers operating in a large set of countries about the costs of doing business there.

Figure 3 shows overall country rankings for 2013 for a number of countries in the region; the figure includes the U.S., Canada and Puerto Rico for comparison. The graph shows very clearly that the bulk of Latin American countries fare poorly in terms of business climate. The best-ranking countries in Latin America are Chile, Peru and Colombia, all of which are placed in the high 30s or low 40s of all countries in the world. Mexico and Panama are next, and then most of the Latin American countries have rankings between 80 and 130, putting them behind many developed and developing countries in the world. The worst places to conduct business in the region—and also very badly ranked in the world as a whole—are Bolivia, Haiti and Venezuela.

A closer look at the data reveals many reasons why doing business in Latin America is challenging, not only for domestic entrepreneurs but also for foreign ones, including those coming from the U.S. Relative to the U.S. and Canada, starting up a new business in the region takes many more days and is much more costly. It takes more time and other real costs to get construction permits and electricity and to enforce the repayment of a debt. Moreover, the expected recovery of debt from legal procedures is much lower.

Some of these countries, most notably Chile and Panama, have begun addressing these problems and have significantly improved their business climates in the past few years. Moreover, from the perspective of foreign investors, some of these problems can be ameliorated by the implementation of an export-processing zone (EPZ), which is a legal mechanism that insulates foreign export-oriented firms from the host country's business-climate weaknesses. EPZs and other more-discretionary benefits have been credited with the success that some countries have had in attracting FDI. Yet, concern remains about the fiscal sustainability of those schemes. Moreover, EPZs can be incompatible with the regulations of the WTO, which seeks to provide equal treatment for firms of the different trade partners.

Incidence of Free-Trade Agreements between the U.S. and Latin American Countries, 2014

Country	Area		Population 2013		Country's GDP		Free-Trade Agreement with U.S. 1=Yes, 0=No
	Total km ²	% of Latin American Total	Number	% of Latin American Total	Per Capita Relative to U.S. (in 2010, PPP)	% of Latin American Total	
Argentina	2,780,400	13.9%	41,660,417	6.9%	31%	9.6%	0
Bolivia	1,098,581	5.5%	10,461,053	1.7%	10%	0.8%	0
Brazil	8,515,767	42.5%	201,032,714	33.5%	21%	30.7%	0
Chile	756,096	3.8%	17,556,815	2.9%	34%	4.4%	1
Colombia	1,141,748	5.7%	47,387,109	7.9%	19%	6.7%	1
Costa Rica	51,100	0.3%	4,667,096	0.8%	28%	1.0%	1
Cuba	109,884	0.5%	11,061,886	1.8%	32%	2.6%	0
Dominican R.	48,442	0.2%	10,219,630	1.7%	26%	1.9%	1
Ecuador	283,560	1.4%	15,439,429	2.6%	16%	1.8%	0
El Salvador	21,040	0.1%	6,108,590	1.0%	15%	0.7%	1
Guatemala	108,889	0.5%	15,438,384	2.6%	16%	1.8%	1
Haiti	27,750	0.1%	9,893,934	1.7%	3%	0.2%	1
Honduras	112,492	0.6%	8,555,072	1.4%	9%	0.5%	1
Mexico	1,972,550	9.9%	118,395,054	19.7%	29%	25.1%	1
Nicaragua	130,375	0.7%	5,788,531	1.0%	6%	0.2%	1
Panama	75,517	0.4%	3,661,868	0.6%	25%	0.7%	1
Paraguay	406,752	2.0%	6,800,284	1.1%	11%	0.5%	0
Peru	1,285,216	6.4%	30,475,144	5.1%	19%	4.3%	1
Uruguay	176,215	0.9%	3,324,460	0.6%	29%	0.7%	0
Venezuela	916,445	4.6%	31,648,930	5.3%	25%	5.9%	0
Total	20,018,819	100%	599,576,400	100%	—	100%	12
Averages:							
Simple (unweighted)	—	—	—	—	20%	—	60%
Weighted by population	—	—	—	—	23%	—	46%
Weighted by country's GDP	—	—	—	—	—	—	47%
Weighted by country's area	—	—	—	—	—	—	29%

SOURCE: Author's elaboration with data from the Penn World Table 7.1. and the U.S. Department of State.

NOTE: Not all numbers will add up to 100 due to rounding.

Demographics and Human Capital

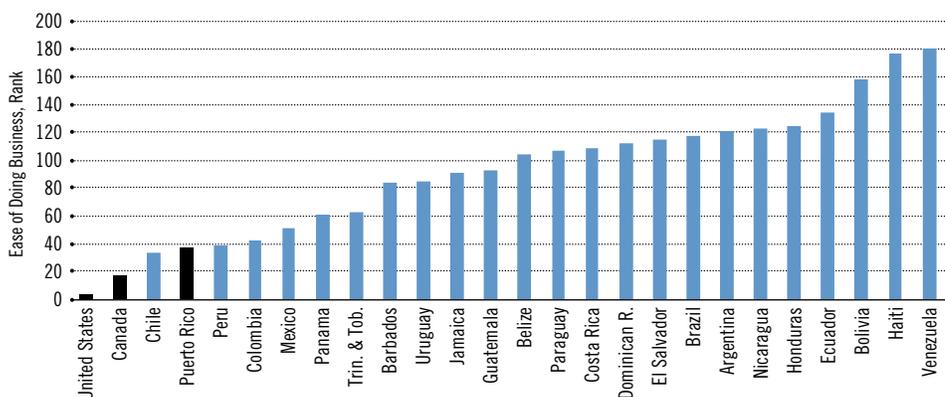
For U.S. businesses considering a presence in Latin America, the demographics of the region are an opportunity, and the formation of human capital is a challenge.

The table shows that, as of 2010, Latin America had less than twice the population but more than twice the land of the U.S. In each square kilometer in the U.S., there are 32 people; in Latin America, there are fewer than 30. It is true that the population in the region is growing faster than that of the U.S., but there are two additional considerations to put this trend in perspective for the U.S. First, since the 1980s, the relative growth of the Latin American population has slowed down, most drastically since 1990. Second, and more important, the population in Latin American countries is much younger than in the U.S. As of 2012, Latin America had practically the same number of seniors (older than 65) as did the U.S. but about 2.2 times the number of inhabitants younger than 65.

All of this presents the U.S. with a number of opportunities. Most obvious, the U.S. could continue using migration to maintain a much younger population than all other developed countries have. Among other pay-offs, young migrants could in principle help alleviate the pressures on the pension system. A related challenge would be in controlling immigration flows that are undesired for both parties. A similar opportunity is the use of temporary workers, not only in agricultural sectors but also in industry and

FIGURE 3

Doing Business in Latin America, World Rankings 2013



SOURCE: Doing Business Survey: Ease of Doing Business Rank, 2013.

NOTE: The graph represents the relative position of all Latin American countries (blue bars) to all other countries in the world. For example, a ranking of 40 indicates 39 countries are better and 149 countries worse in terms of ease of doing business. The black bars, corresponding to the U.S., Canada and Puerto Rico, have been included as points of reference.

especially in services. Finally, and related to the issues discussed in the previous sector, an ample supply of younger workers in Latin America can provide U.S. business with the opportunities to keep some production operations in the region.

The formation of human capital, in particular education, in the region is another important source of opportunities and challenges. On the one hand, enrollment and attainment rates have improved significantly in primary education (where enrollment is almost universal) and also in secondary education (where enrollment rates are getting close to those in the U.S.). There also has been growth in enrollment at the college level; as of 2010, almost 40 percent of the relevant-age cohorts of the region were enrolled or had been enrolled in some form of postsecondary education.

Some scholars¹⁰ are skeptical about such rapid growth in the *quantity* of education, however, saying that the *quality* of education in these situations is often low and that students don't learn productive skills. Those concerns are valid. The 2009 outcomes of the Organization for Economic Cooperation and Development's Program for International Student Assessment (PISA) indicate that the region lags in reading, math and science.¹¹ Even Chile, which outperforms the rest of the region, is way behind the U.S., the OECD average and even the world average. The results are particularly bad for countries such as Panama and Peru; such a poor educational climate could cancel out those countries' good business

environments in the eyes of U.S. executives.

For U.S. businesses, the lack of an extensive well-trained labor force is a two-fold limitation. First, the lack of skilled workers can make it difficult for producers to find suitable workers. Second, until Latin America finds a way to extend the acquisition of skills to a higher fraction of its workers, the region's people will not have the income to become one of the major consumer markets for the goods produced by U.S. businesses.

Taking Stock

For the U.S., Latin America is a rich source of opportunities and challenges. To recap, the opportunities include: a strong and solid move toward democratization, macro stability, growing consumer markets, improving schooling achievements and a young population—all in the context of an enhanced incidence of free-trade agreements. Among the challenges: dealing with a subpar business climate, subpar infrastructure and a labor force that still struggles because of poor training and schooling—all of these amid a growing skepticism in some countries of the benefits of trade with the U.S.

The outlook is much better than a few decades ago, but there is still a long way to go before the business of the U.S. is to do business with Latin America. 

Alexander Monge-Naranjo is an economist at the Federal Reserve Bank of St. Louis. For more on his work, see <http://research.stlouisfed.org/econ/monge-naranjo>.

ENDNOTES

- For instance, for standard models of international trade, see the undergraduate textbook by Feenstra and Taylor; for models of foreign direct investment, see the paper by Burstein and Monge-Naranjo.
- These data were taken from the World Bank's World Development Indicators. The numbers reported are derived by averaging the different years for which the Gini coefficient was available for each country. Data are available at <http://data.worldbank.org/data-catalog/world-development-indicators>.
- An infographic of these data is available at <http://b-i.forbesimg.com/ricardogeromel/files/2013/03/billionaire-map.jpg>.
- The Polity IV is a widely used database in political sciences to measure a country's state of democracy. It includes measures on the competitiveness, openness and level of participation in elections. The database is available at www.systemicpeace.org/inscrdata.html.
- The data were taken from the Bureau of Economic Analysis, www.bea.gov.
- Within the import substitution schemes of the '50s, '60s and '70s, Latin American countries used trade barriers as an incentive to induce "jumping tariff FDI," i.e., the establishment of operations within the Latin American country by multinational firms to circumvent trade barriers and thereby serve the local market. On the contrary, nowadays, FTAs can be useful for FDI that is motivated to serve multiple markets, including the source country.
- Trade policies, interestingly, differ between countries along the Atlantic coast and those along the Pacific. For a description of these differences, see <http://online.wsj.com/news/articles/SB10001424052702303370904579296352951436072>.
- See the paper by Cole, Ohanian, Riascos and Schmitz.
- Data and the description of information for the Doing Business surveys can be found at www.doingbusiness.org.
- See Pritchett for a notable example of skepticism concerning the quantity/quality dichotomy in education growth.
- The data from PISA are available at <http://pisa2009.acer.edu.au/downloads.php>.

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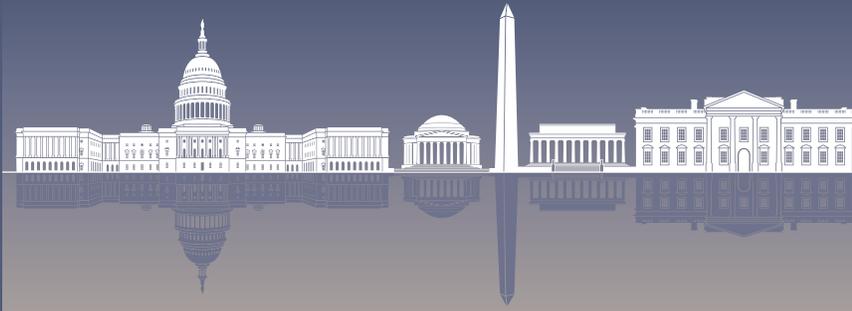
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The Federal Budget: How the U.S. Got Here, and Where It Is Headed

By Fernando M. Martin



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In response to the 2007-08 financial crisis and the recession that followed,¹ the federal government took a series of large-scale fiscal measures, which drove the deficit to unprecedented levels for the postwar period. These measures included, chiefly, the Economic Stimulus Act of 2008 and the American Recovery and Reinvestment Act of 2009. Subsequent measures were undertaken to curb the growing deficit, such as the Budget Control Act of 2011, the American Taxpayer Relief Act of 2012 and the Bipartisan Budget Act of 2013. The political context during this

(CBO); included are projections for fiscal years 2014 until 2024.³

Federal revenue as a percentage of GDP peaked during the 1990s. Due to a series of tax provisions enacted throughout the 2000s, revenue in the period 2008-2014 was substantially below its historical average. Most of the drop was due to reductions in the tax rates imposed on individual income. In January 2013, these tax cuts were reversed for high-income earners, while they were made permanent for everyone else.⁴ Revenue also fell because of the temporary

pre-existing trends that dominate the budget outlook.

Relative to the U.S. economy, defense spending has been on a decline since the end of the Korean War in 1953. This trend has been interrupted by periodic episodes of military conflict and buildup. Regardless, over the past two decades, defense spending over GDP has been persistently below 5 percent. Current projections estimate it will continue falling, averaging 2.9 percent of GDP in 2015-2024.

As a result of the economic stimulus package enacted in the American Recovery and Reinvestment Act of 2009, nondefense discretionary spending increased significantly in 2009-2012, reaching a peak of 4.5 percent of GDP in 2010.⁵ Currently, the CBO projects this type of spending to decline steadily as a percentage of GDP over the next decade, to an average of 2.8 percent for 2015-2024, mainly due to the spending caps set by the Budget Control Act of 2011.

In contrast to the declining trends in discretionary spending, mandatory expenditures have been growing consistently.⁶ Items in this category include Social Security, Medicare, Medicaid, unemployment insurance and assistance programs. In the wake of the last recession, mandatory spending rose substantially, from an average of 10.1 percent of GDP in 2001-2007 to 12.6 percent of GDP in 2008-2014. A substantial fraction of this increase was due to expansions of Social Security and Medicare. Smaller parts of the increase stemmed from programs like Medicaid and unemployment insurance, although the effects of the latter have been diminishing as the unemployment rate returns to normal. Over the next decade and beyond, mandatory spending as

The outlook for the next 10 years shows that both revenue and expenditures will reach historically high levels for a period without a major military conflict. ... The added tax burden is expected to fall mostly on income earned by individuals.

period was characterized by significant turmoil, including ongoing debates on whether to raise the debt ceiling, uncertainty about the reversal of tax cuts, fears of a “fiscal cliff,” etc.

The inevitable consequence of the large deficits since 2008 was a substantial increase in government debt as a percentage of gross domestic product (GDP), from 35 percent in 2007 to a projected 74 percent this year.² Arguably, the political discussion over fiscal issues has quieted down in recent months, and uncertainty about the federal budget outlook has greatly diminished. Thus, it seems timely now to study the overall fiscal response to the crisis and look at the implications of current budget projections for the next decade. The table displays major components of the federal budget, averaged over six periods since 1971. The source of the data is the Congressional Budget Office

reduction in the Social Security payroll tax for employees in 2011 and 2012. Moving forward, the federal government’s revenue is projected to rise significantly, mostly due to scheduled increases in taxes on individual income. Over the next decade, the CBO expects federal revenue over GDP to average 18.1 percent and reach 18.3 percent in 2024.

After reaching a peak during the 1980s, federal expenditures over GDP were on a downward trend until the recession hit. Outlays as a percentage of GDP were 18.8 percent in 2001-2007, climbed to 22.1 percent in 2008-2014 and are projected to average 21.5 percent in 2015-2024, climbing to 22.1 percent by 2024. At first glance, the recent increase in spending appears permanent, rather than a temporary response to the economic downturn. However, looking at the composition of expenditures reveals

a percentage of GDP is projected to continue growing, mostly due to further expansions of Social Security, Medicare and Medicaid. By 2024, the combined size of Social Security and major health-care expenditures will be almost 12 percent of GDP. Current long-term CBO projections estimate this fraction to surpass 15 percent by 2038.

The remaining spending category is net interest. The steady drop in interest rates since the 1980s implied a declining financial burden of servicing the public debt. In the 2000s, the impact of interest payments on the budget was significantly lower than in the preceding two decades. However, given the rapid accumulation of debt in response to the deficit policies implemented during the last recession and the expected rise in interest rates, interest payments over GDP are projected to increase

The outlook for the next 10 years shows that both revenue and expenditures will reach historically high levels for a period without a major military conflict (of the magnitude of the Civil War, for example, or the two world wars). The added tax burden is expected to fall mostly on income earned by individuals, as opposed to hikes in Social Security contributions or corporate taxes.

Although discretionary spending will continue declining as a fraction of the economy, entitlements will drive total expenditures persistently higher than prerecession levels. Since the growth of spending is expected to outpace the growth in revenue, deficits will continue to pile up, and the public debt will keep on growing. Coupled with an expected increase in interest rates, the burden of servicing the public debt will

ENDNOTES

- ¹ As dated by the National Bureau of Economic Research, the last recession lasted from December 2007 until June 2009.
- ² These figures refer to “debt held by the public,” which excludes holdings by federal agencies (e.g., the Social Security Trust Funds).
- ³ Projections as of April 2014. The fiscal year in the United States begins Oct. 1 and ends Sept. 30 of the subsequent year and is designated by the year in which it ends. Before 1977, the fiscal year began July 1 and ended June 30.
- ⁴ High earners are defined as those earning more than \$400,000 a year or \$450,000 for those filing joint tax returns.
- ⁵ Nondefense discretionary expenditures include spending on national parks, education, social services, transportation, public works, etc.
- ⁶ Mandatory expenditures are defined as those determined by laws other than appropriation acts.

U.S. Federal Budget (Percentage of Gross Domestic Product)

	Revenues					Outlays							Deficit	Debt Held by the Public
	Individual Income	Social Insurance	Corporate Income	Other	TOTAL	Defense	Other Discretionary	Social Security	Major Health Care**	Other Mandatory	Net Interest	TOTAL		
1971-1980	7.9%	5.0%	2.5%	2.0%	17.4%	5.4%	4.5%	3.8%	1.2%	3.3%	1.5%	19.6%	2.2%	25.7%
1981-1990	8.1%	6.2%	1.6%	1.7%	17.6%	5.6%	3.8%	4.4%	2.0%	3.0%	2.8%	21.6%	3.9%	35.1%
1991-2000	8.3%	6.4%	1.9%	1.5%	18.2%	3.7%	3.4%	4.3%	3.1%	2.4%	2.8%	19.7%	1.5%	43.8%
2001-2007	7.7%	6.2%	1.8%	1.3%	17.1%	3.6%	3.6%	4.1%	3.6%	2.4%	1.6%	18.8%	1.8%	34.3%
2008-2014*	7.2%	5.8%	1.5%	1.4%	15.8%	4.2%	3.8%	4.7%	4.7%	3.3%	1.4%	22.1%	6.3%	62.1%
2015-2024*	9.0%	5.8%	2.0%	1.3%	18.1%	2.9%	2.8%	5.2%	5.6%	2.5%	2.5%	21.5%	3.3%	74.4%

* Fiscal years 2014 to 2024 are projected.

** Includes spending on Medicare (net of offsetting receipts), Medicaid, the Children’s Health Insurance Program and subsidies offered through new health insurance exchanges.

SOURCE: Congressional Budget Office.

NOTE: Some totals do not add up to 100 because of rounding.

significantly. The CBO estimates this fraction to go from an average of 1.4 percent in 2008-2014 to 2.5 percent in 2015-2024, climbing to 3.3 percent by 2024. These projections assume nominal interest rates on Treasury bonds will return close to their precrisis levels within the next five years. For example, the annual interest rate on a 10-year Treasury note is expected to increase to 5 percent by 2018, slightly above the 2001-2007 average. However, it is possible that the downward trend in interest rates since the 1980s (due, for example, to financial innovation that made bonds and other liquid assets more perfect substitutes for cash) may imply that interest rates will return to a lower level once the economy fully recovers. Thus, current projections may be overstating the impact of future net interest payments on the deficit.

become a larger component of the budget. How much larger will depend critically on the future evolution of interest rates. Current CBO projections estimate average deficits of 3.3 percent of GDP for 2015-2024, which is almost twice the precrisis 2001-2007 average but about half the 2008-2014 average. Debt in the hands of the public is projected to continue growing as a percentage of GDP, albeit at a much slower pace than during the last recession. By 2024, it will reach close to 80 percent, a figure not seen since 1948, after the end of World War II. [Ω](#)

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Is Involuntary Part-time Employment Different after the Great Recession?

By Maria Canon, Marianna Kudlyak and Marisa Reed



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In the period around the 2007-09 recession, the unemployment rate reached its peak at 10 percent in October 2009. In April 2014, the rate was 6.3 percent, suggesting that the U.S. economy continues to recover from the Great Recession. Although the unemployment rate seen in headlines is one of the most-cited indicators of the health of the labor market, economists and policymakers also examine alternative measures of labor underutilization.

These alternative measures are published by the Bureau of Labor Statistics (BLS). The so-called extended measures of the unemployment rate range from U-1 through U-6, with U-3 being the official, or “headline,” unemployment rate. (See sidebar.) The U-6 category includes those working part time for economic reasons—the focus of this article; U-6 also includes unemployed individuals and the out-of-the-labor-force individuals who are marginally attached to the labor market. One of the recent concerns is that while the number of unemployed individuals and the marginally attached individuals has been decreasing since 2009, the number of individuals who are working part time for economic reasons (PTER) has remained elevated (almost 7.5 million workers in April 2014).

An individual is counted as PTER if he or she works fewer than 35 hours per week, wants to work full time and cites slack business conditions or inability to find a full-time job as a reason for not working full time. Consequently, if a large number of people are working part time for economic reasons, the economy is not using its full labor potential even though the official statistics count such workers as employed.

In this article, we examine the data on

PTER in the aftermath of the Great Recession and compare those numbers with data from earlier recessionary periods. We found that the ratio of PTER to unemployment behaves similarly to the way it behaved previously during a recession: It increases at the business cycle trough and reaches its highest point at the business cycle peak.

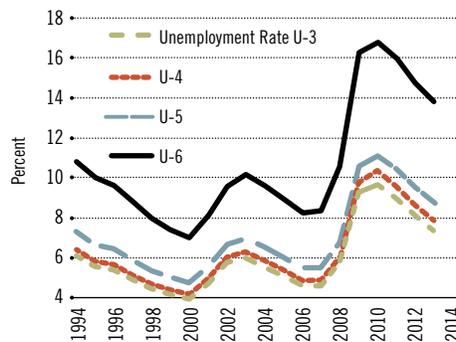
Defining PTER

We used monthly microdata from the Current Population Survey (CPS). The survey asks respondents about their hours worked in the previous week; the respondents are then classified as part-time (0-34 hours) or full-time (35+ hours) workers. If they are employed, currently at work (as opposed to being sick or on leave, for example) and usually work fewer than 35 hours (at all jobs), they are asked if they would like to work full time. If they answer “yes,” then they are

asked the main reason they work part time; their answers are coded as either economic or noneconomic. The economic reasons for remaining employed part time despite wanting a full-time job include slack work, only being able to find part-time work and seasonal work.¹ If they give an economic reason, they are asked if they are available to work full time. Their availability and desire to work full time indicate the extent to which economic conditions affect their employment; essentially, they are involuntarily working part time instead of full time. Additionally, the PTER group in U-6 includes those who usually work full time but actually worked part time for an economic reason in the week that the survey was conducted.

In Figure 1, we note that U-3 and U-6 have slowly moved downward since April 2010. The gap between these two series has remained wide since the beginning of 2009,

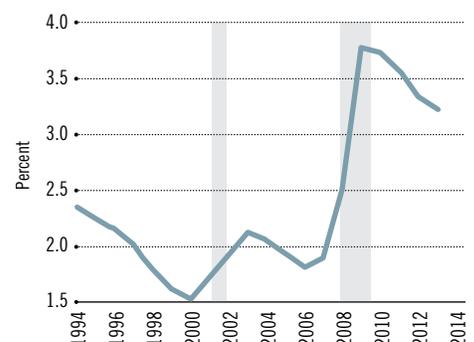
FIGURE 1
Unemployment Rates



NOTE: The figure shows the official unemployment rate (U-3) and some of the alternative measures of labor underutilization from the Bureau of Labor Statistics (BLS). All data points are the annual averages of the monthly SA (seasonally adjusted) series. See the sidebar for an explanation of U-4 – 6.

SOURCES: BLS/Haver Analytics.

FIGURE 2
Employed Part Time for Economic Reasons, Population Shares



NOTE: The figure shows the number of people employed part time for economic reasons as the share of the civilian noninstitutional working-age population. All data points are annual averages of the monthly NSA (not seasonally adjusted) series. The shaded areas represent recessions.

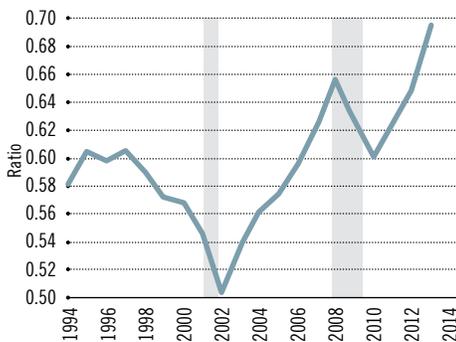
SOURCES: BLS/Haver Analytics.

and U-6 still remains at significantly higher levels than observed in the past. Figure 1 also shows U-4 and U-5. By comparing the alternative measures of labor underutilization, we can see that discouraged workers (included in U-4) and marginally attached plus discouraged workers (included in U-5) do not account for a large share of U-6 (which includes U-4 and U-5). Instead, most of the difference between U-3 and U-6 is due to workers who are employed part time for economic reasons, which we see when moving from U-5 to U-6.

Figure 2 shows those who are working part time for economic reasons as a share of the civilian noninstitutional working-age population. The ratio appears countercyclical: increasing during the recessions (from peaks to troughs), and decreasing afterward. As can be seen, the fraction of PTER as a share of the population was higher in the latest recession than in the previous recession. During the Great Recession, the series reached 3.8 percent in 2009 and then declined to 3.2 percent in 2013.

Figure 3 shows the ratio of those working part time for economic reasons to the number of unemployed workers. The ratio appears procyclical: decreasing during recessions and increasing afterward. That is, during recessions PTER grows at a slower rate than unemployed workers. The fraction of PTER to the number of unemployed workers was about 10 percentage points higher at the trough of the Great Recession than at the

FIGURE 3
Ratio of Employed Part Time for Economic Reasons to Unemployed



NOTE: The figure shows the ratio of people employed part time for economic reasons to unemployed workers. All data points are the annual averages of the monthly NSA (not seasonally adjusted) series. The shaded areas represent recessions.

SOURCES: BLS/Haver Analytics.

trough of the 2001 recession. (In contrast, the fraction of PTER as a share of the population [Figure 2] was twice as high in the 2007-09 recession than in the previous recession.)

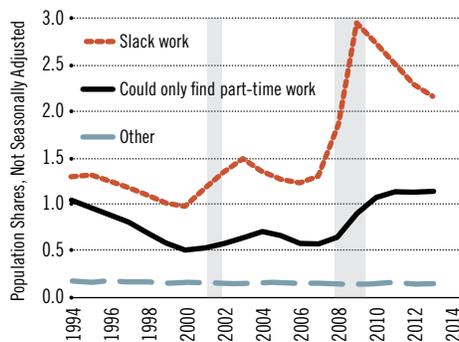
Notably, 1 percent of the total population has not been working full time since 2009 because it can find only part-time work. (See Figure 4.) This level is similar to the ones observed in previous downturns. In contrast, the share of the population citing slack work/business conditions spiked in 2009 but has since been declining. Slack work/business conditions are affecting a significantly higher fraction of the population than after the 2001 recession.

Conclusion

As the economy continues its recovery from the Great Recession, we expect the number of those working part time for economic reasons to fall. However, it is probable that the ratio of PTER to unemployment will continue to increase as it has historically done. That is because, during the recoveries, the number of unemployed people typically declines faster than the number of those working part time for economic reasons, as reflected in the persistent gap between U-3 unemployment and U-6. ¹

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FIGURE 4
Employed Part Time for Economic Reasons, by Reason



NOTE: The figure shows PTER by reason as share of civilian noninstitutional working-age population. All data points are the annual averages of the monthly NSA (not seasonally adjusted) series. The shaded areas represent recessions. "Other" includes job started/ended during the survey week, as well as seasonal work.

SOURCE: CPS.

Official Unemployment Rate Is Only One Measure of Labor Underutilization

The Bureau of Labor Statistics (BLS) publishes a variety of measures of labor underutilization based on data from the Current Population Survey (CPS). The best-known of these is U-3, which is considered to be the official unemployment rate and the one to which the news media, politicians and most of those in the general public refer. But there are five other measures:

- U-1:** persons unemployed 15 weeks or longer, as a percent of the civilian labor force;
- U-2:** job losers and persons who completed temporary jobs, as a percent of the civilian labor force;
- U-3:** total unemployed, as a percent of the civilian labor force;
- U-4:** total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers;
- U-5:** total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers; and
- U-6:** total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers.

To be counted as part of the official unemployment rate (U-3), a person must not be employed and must have actively searched for work in the past four weeks. The BLS defines persons marginally attached to the labor force as those who are not working or searching for work but who desire and are available to work and have looked for work in the past 12 months. The BLS defines discouraged workers as a subset of marginally attached persons who cite a job-market-related reason for not searching for work. The BLS counts those who desire and are available for full-time work but are currently working part time as employed "part time for economic reasons."

ENDNOTE

¹ Noneconomic reasons include child care problems, other family/personal obligations, health/medical limitations, school/training, retired/Social Security limit on earnings and full-time workweek is fewer than 35 hours.

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Three Faces of Low Inflation: U.S., Japan and the Euro Area

By Silvio Contessi and Li Li



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For most central banks, maintaining inflation close to an explicit or implicit inflation target is a matter for the medium and long term. Therefore, it is not unusual to observe periods of inflation above target, followed by periods of inflation below target.

In the past year, perhaps temporarily, several economies have experienced inflation below 2 percent (a common inflation target), whether inflation is measured by the consumer price index (CPI) year-over-year growth rate (as used by the U.S. federal government, Japan and the euro area, as well as by several smaller advanced economies) or the personal consumption expenditures (PCE) chain-type price index growth rate (used in the United States by the Federal Reserve). However, inflation has been trending quite differently in various economies—up in Japan, down in Europe and relatively stable in the United States (but a bit below the Fed's 2 percent target). In this article, we decompose and analyze CPI inflation rates as recorded for their main components in April 2014. We used the CPI measure to improve comparability across countries, although several important differences across measures remain.

First, consider the United States, where inflation has decreased in the past two years. The year-over-year inflation rate measured by the headline CPI (which includes food and energy costs) was 2.29 percent in April 2012, dropped to 0.92 percent in October 2013 and then rose to 1.96 percent in April 2014; the corresponding figures for PCE were 1.98, 0.8 and 1.62 percent. Similarly, in the euro area, the year-over-year inflation rate measured by the Harmonized Index of Consumer Prices (HICP) was 2.6 percent in April 2012 and dropped to 0.7 percent in

April 2014.¹ In contrast, Japan is experiencing inflation growth. While Japan's average inflation rate in 2012 was negative, it reached 3.41 percent in April 2014—the highest rate since the 1990s.

The figure shows the contributions of inflation components to headline inflation rates in the United States, the euro area and Japan in April 2014. The size of each bubble in the figure indicates the weight or relative importance of each component to the price indexes. For example, in the goods and services basket of the United States, food and beverages account for about 15 percent of the items, while housing accounts for about 41 percent. The center of a circle represents the respective (x,y) point of a certain category. The y-axis represents the inflation contributions of each component to total CPI/HICP inflation rates. (For example, in the United States, the inflation component for housing contributed more than half of the total 1.96 percent CPI inflation rate in April 2014.) The x-axis represents the percentage-point change of inflation rates from the previous year. (For example, for the dot representing food and beverages, the value on the x-axis is the year-over-year inflation rate only for these goods in April 2014 minus the year-over-year inflation rate for them in April 2013; if the inflation of food and beverages is falling between April 2013 and April 2014, then the dot will be in one of the left quadrants).

The U.S. CPI inflation rate fell below 2 percent in 2013 and early 2014. As shown in the figure, each component's inflation rate did not change much from 2013 to 2014, except for the energy and the transportation and communication components. According to the finer breakdown of CPI represented by blue

bubbles, the inflation rate of the housing component increased by 0.58 percentage points, while the transportation and communication component increased by 2.98 percentage points. The rest of the components are clustered close to the vertical line separating the quadrants. Due mostly to those two components, inflation rates increased from 1.10 percent in April 2013 to 1.96 percent in April 2014. In the euro area, however, the majority of the yellow bubbles move downward and toward the left-hand side, indicating that the HICP inflation rate is trending down in April 2014 relative to April 2013. Japan shows a completely different picture, with most bubbles in the top-right quadrant. If we plotted the same graph moving everything back 12 months, most bubbles on Japan's figure would be in the bottom-left quadrant instead. Because most of the bubbles are in the right quadrants in the graph, there is a very visible shift associated with "Abenomics" (the set of new policies of Japanese Prime Minister Shinzo Abe), namely that prices are growing across categories of goods and services.

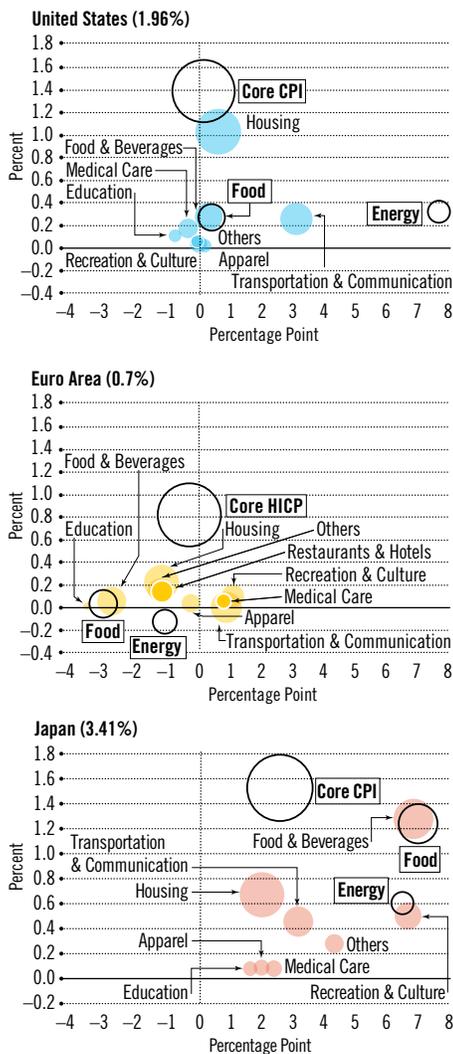
What to Make of These Breakdowns?

The first message is that while these three large economies have recently experienced inflation below 2 percent, the underlying trends appear quite different, and the low inflation rates in the three areas may have different explanations. The euro area is facing the biggest danger of creeping disinflation, while the United States and Japan are experiencing either stable or mildly increasing prices across a wide spectrum of goods and services.

Second, several studies have shown that there is a growing global component to domestic inflation deriving from food and

energy prices (noncore items). However, food and energy prices are contributing differently to domestic inflation in the three areas. Imagine there was a large global shock (due to, say, military tension) that caused a large increase in oil prices. Then, in all areas we would likely observe the dot corresponding to energy in the upper-right quadrant because energy inflation would be growing and its impact on total inflation

Contributions to Changes in Headline CPI Inflation (April 2013–April 2014)



NOTE: In these pictures, headline inflation is broken down according to two classifications of goods and services. The empty bubbles represent the breakdown in core, food and energy CPI/HICP inflation. The full bubbles represent a finer breakdown of the same index. In addition, to help comparability across countries, we regrouped some categories as follows: In the euro area, housing includes housing, water, electricity, gas and other fuel, furnishings, household equipment and routine household maintenance. In Japan, housing includes housing, furniture and household utensils.

SOURCES: Bureau of Labor Statistics, Eurostat, Statistics Japan and authors' calculation.

would be increasing. What we observe in the three areas, however, is that energy and food prices are not behaving in the same way in the three areas. Energy prices are growing in the United States and Japan, but decreasing in the euro area. (See energy in the figure.) Also, food prices are rising rapidly in Japan, are stable in the United States, but are decreasing in the euro area. (See food in the figure.) These different directions suggest that the current inflation behavior in the United States, the euro area and Japan may be responding more to domestic conditions than to global conditions.²

Why does the behavior of inflation matter for citizens? While slow price growth improves purchasing power of consumers, it also aggravates the real cost of repaying outstanding public and private debt, which is normally fixed in nominal terms and not indexed to inflation. Unfortunately, the large debt levels reached after the global financial crisis have not been worked out yet. On the producers' side, because nominal wages tend to move down only with difficulty, low inflation may increase the real wages and costs for producers, which may affect the recovery in progress.

Finally, there are important lessons learned from historical deflationary experiences, including the recent monetary history of Japan. While inflation expectations in the United States—and even in the euro area—are currently anchored at or close to 2 percent, if people begin anticipating declining rather than rising prices, the reversal of these expectations can prove very difficult to achieve. Obviously, inflation rates that are positive but closer to zero for a longer period carry bigger risks of altering inflation expectations.

While the recent low inflation rates may end up being just a temporary phenomenon in some advanced economies, it remains important to monitor and to understand their evolution, in particular their connection to inflation expectations. Ω

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ENDNOTES

- 1 The HICP is a weighted average of price indexes in euro area countries; unlike the U.S. CPI, it takes into consideration both urban and rural consumers and excludes rental-equivalent costs of owner-occupied housing.
- 2 For a more formal analysis of global factors in domestic inflation, see Macklem.

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As Owensboro, Ky., Wraps Up Wave of Development, Hiring Slows Down

By Maria A. Arias and Charles S. Gascon



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The Owensboro, Ky., metropolitan statistical area (MSA), in northwestern Kentucky, does not have a major airport, nor is it located along an interstate highway. Being on the Ohio River, however, the area has traditionally attracted large industrial companies, as the river provides a major transportation route. The riverfront, a significant asset for the community, has been the focus of the MSA's economic growth in recent years; its revitalization has spurred investments and job growth in the downtown and neighboring areas.

The redevelopment of Owensboro was ignited by a \$40 million federal grant for shoring up the bank of the Ohio River where it passes through downtown.

The Owensboro MSA, with a population of about 116,400 people and a labor force of about 59,450, is the smallest MSA in Kentucky. The city of Owensboro, however, is the fourth-largest city in the state, with a population of about 58,400. Henceforth, we will refer to the MSA when talking about Owensboro; the MSA includes Daviess, Hancock and McLean counties.

Between 2003 and 2013, population in the MSA increased 5.1 percent, slower than the growth rates in both Kentucky (6.8 percent) and the nation (9 percent). Daviess County, where 84 percent of the MSA's population resides, registered the fastest population growth during this period (6.2 percent), followed by Hancock County (3.1 percent); on the other hand, McLean County's population declined 3.6 percent. Per capita personal income, although still below the national average, grew 44.2 percent between 2002 and 2012 to \$36,641, faster than the 37.5 percent growth seen nationwide.

Economic Drivers

Public and private investments have played a role in Owensboro's economic growth over the past 10 years. A \$40 million federal grant that was announced in

2005 to stop the riverfront from eroding any further and to restore downtown's riverbank ignited the recent wave of large investments, which have reinvigorated the region. The local government publicly funded numerous infrastructure improvements and new amenities worth \$120 million through a 4 percent tax increase on insurance products starting in 2009. Renovations, expansions

Owensboro's economy showed resilience through the recession; it quickly expanded during the first two years of the recovery, mainly due to public and private investments in the community, with employment gains twice the national rate. But since the first quarter of 2012, job growth has virtually stopped.

and new construction that were funded privately, almost entirely from local sources, are worth nearly as much. Altogether, these investments equal about 7 percent of the region's annual output.

The downtown initiative helped mitigate some of the effects of the Great Recession in the region, attracting new businesses and stimulating employment growth,

particularly in the service-providing sectors. Employment in Owensboro declined 4.8 percent during the recession, less than in Kentucky (5.8 percent) and in the nation (5.4 percent). During the four years after the recession, until December 2013, total nonfarm employment in Owensboro grew 6.7 percent, again faring better than both Kentucky and the nation. The fastest grow-

ing sectors during this four-year period were professional and business services (33.7 percent growth), financial services (33.5 percent), and natural resources and construction-related jobs (9.7 percent).

Such significant growth in financial services during the years after the crisis is striking, especially when the sector's national employment grew by merely



A new 447-bed hospital was opened in June 2013 at a cost of \$385 million by the Owensboro Medical Health System, the largest local employer.

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2 percent during the same four years. About one-third of the sector's workers in the MSA are employed by U.S. Bank's national mortgage servicing center, which has expanded over the past five years.

The MSA's top employer, Owensboro Medical Health System, has also contributed to economic growth with the construction of a 447-bed hospital. A \$385 million project, the hospital opened in June 2013 and is expected to employ about 500 additional health care workers by June 2018.

Fueled by the gradual completion of the downtown redevelopment and by new attractions such as the bluegrass music museum and the events center, regional and business-related tourism have recently gained strength, according to anecdotal reports.

A Comparison with Peer Regions and the U.S.

Peer Regions	Per Capita Income	10-Year-Average Growth
Albany, Ga.	\$33,956	3.9%
Dubuque, Iowa	\$40,371	4.4%
Elmira, N.Y.	\$38,056	5.2%
Jonesboro, Ark.	\$34,266	4.7%
Kokomo, Ind.	\$34,107	1.9%
Lewiston-Auburn, Maine	\$37,018	3.1%
Owensboro, Ky.	\$36,641	4.4%
Pine Bluff, Ark.	\$32,776	5.2%
Sumter, S.C.	\$32,973	4.4%
Victoria, Texas	\$43,735	5.8%
U.S.	\$43,735	3.8%

NOTE: Data can be found in FRED, using these series IDs: Albany (ALBA513PCPI); Dubuque (DUBU219PCPI); Elmira (ELMI336PCPI); Jonesboro (JORPCPI); Kokomo (KOKO018PCPI); Lewiston-Auburn (LEWI623PCPI); Owensboro (OWNPCPI); Pine Bluff (PBFCPI); Sumter (SUMT945PCPI); Victoria (VICT048PCPI); and U.S. (A792RC0A052NBEA).

Manufacturing continues to be important in the MSA, even though the MSA's economy has become more diversified and service-oriented. The manufacturing sector accounts for 16 percent of total employment, and it grew 5.5 percent during the four years ending December 2013, driven by overall growth in Hancock County. Aluminum, auto parts, agriculture and food processing, biotechnology, paper products, natural gas transmission, and bourbon are the main industries expanding in the region.

Current Conditions

Owensboro's economy showed resilience through the recession; it quickly expanded during the first two years of the recovery, mainly due to public and private investments in the community, with employment gains twice the national rate. But since the first quarter of 2012, job growth has virtually stopped. Between that quarter and the first quarter of 2014, employment grew by only 0.2 percent, well below the 1 percent growth for the state as a whole and the 3.2 percent for the nation overall.

Looking more closely at the sectors, construction, retail and government employment are the three sectors that showed a slight upward trend as of the first quarter of 2014 when compared with the previous year. Other sectors showed either no growth or declines over the same period. In particular, job growth slowed in both financial services and in education and health care—two of the fast-growing sectors during the early recovery. Growth appears to have slowed once the expansion of U.S. Bank and Owensboro Medical Health System were completed last year. Business contacts in the region also cited external factors, such as increasing regulatory changes and rising

MSA Snapshot

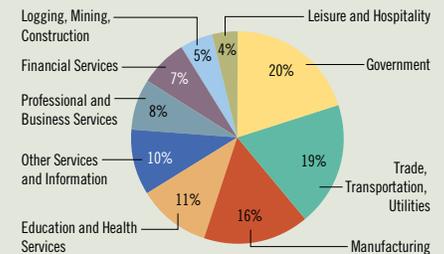
Owensboro, Ky.

Population	116,401
Labor Force	59,457
Unemployment Rate	7.1%
Personal Income (per capita)	\$36,641
Gross Metropolitan Product	\$4.02 billion
Educational Attainment (bachelor's degree or higher)	17.7%

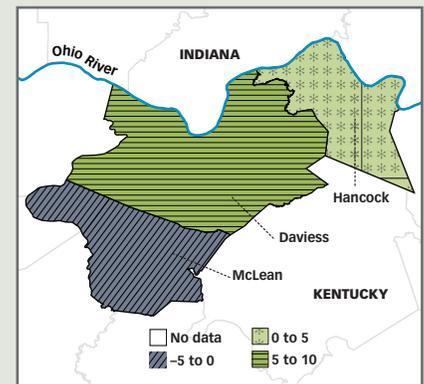
LARGEST LOCAL EMPLOYERS

1. Owensboro Medical Health System
2. Daviess County Public Schools
3. U.S. Bank Home Mortgage
4. Owensboro Public Schools
5. Audubon Area Community Services Inc.

NONFARM EMPLOYMENT BY SECTOR

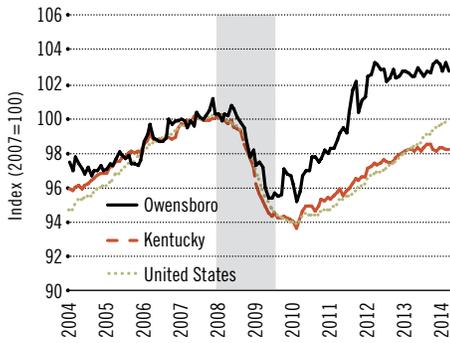


OWENSBORO MSA POPULATION GROWTH BY COUNTY (PERCENT; 2003-2013)



NOTES: Population, employment, personal income per capita and gross metropolitan product data are from the Census Bureau, Bureau of Labor Statistics and Bureau of Economic Analysis. These MSA-level data series are accessible in the St. Louis Fed's economic database, FRED (Federal Reserve Economic Data). For the data, see these FRED series (IDs in parentheses): population (OWNPOP); labor force (OWNLFF); unemployment rate (OWNUR); personal income (OWNPCPI); government (OWNGOVT); trade, transportation and utilities (OWNTRAD); manufacturing (OWNMFG); education and health services (OWNEDUH); other services (OWNSRVO); information (OWNINFO); professional and business services (OWNPBSV); financial services (OWNFIRE); construction, mining and natural resources (OWNRRMN); and leisure and hospitality (OWNLEIH). Educational attainment data are from the Kentucky Center for Education and Workforce Statistics. To access FRED, go to <http://research.stlouisfed.org/fred2>. To view a data dashboard tracking the economic conditions in Owensboro, go to <http://research.stlouisfed.org/dashboard/818>.

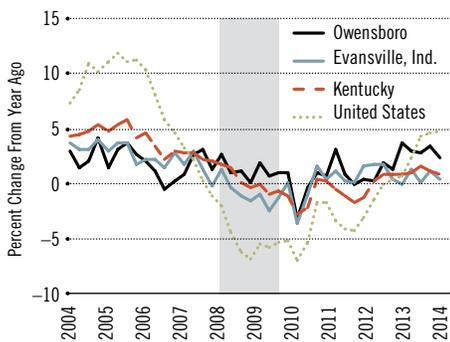
FIGURE 1
Nonfarm Payroll Employment



SOURCE: Bureau of Labor Statistics.

NOTE: Data can be found in FRED, using these series IDs: Owensboro (OWNNA); Kentucky (KYNA); and U.S. (PAYEMS). To access FRED, go to <http://research.stlouisfed.org/fred2>. The gray bar represents a recession.

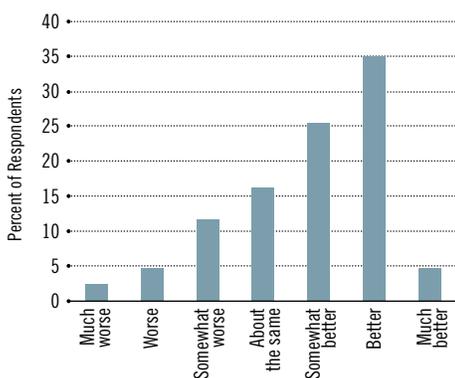
FIGURE 2
House Price Index



SOURCE: Federal Housing Finance Agency.

NOTE: Data can be found in FRED using these series IDs: Owensboro (ATNHPIUS36980Q); Evansville (ATNHPIUS21780Q); Kentucky (KYSTHPI); and U.S. (USSTHPI). The gray bar represents a recession.

FIGURE 3
Expectations about Local Economic Conditions in 2014 (Compared with 2013)



SOURCE: Survey of Owensboro business contacts.

NOTE: Data obtained from 45 business contacts surveyed in Owensboro. See Endnote 1 for details about the survey.

labor costs, as reasons why employment has stayed about the same or increased slowly.¹

When compared with peer regions—a group of MSAs with similar characteristics—Owensboro continually ranks among the top half in terms of per capita income, output and employment growth.² In 2012, the last year for which data are available, Owensboro had the third-largest economy, as measured by gross metropolitan product, following Dubuque, Iowa, and Albany, Ga. The Owensboro MSA ranked in the middle on per capita income and on average income growth, both for the 10 years ending in 2012.

Lately, the aluminum industry has seen a surge in demand due to the increased need for high-grade and light-weight aluminum for auto parts, due to the recent rise in auto production. Bourbon distilling is also expanding, not only because of increased demand for the product but also because of government tax incentives to create jobs.

Rising energy costs, however, have become a major challenge for industrial plants and other energy consumers, including several business contacts. Aluminum smelters, which until recently consumed the majority of the power produced and transmitted at local plants, are now allowed to buy energy from the wider wholesale market instead of being restricted to the local grid. As a result, the cost of excess capacity in the local area is being passed on to consumers. One local coal-fired power plant has already been idled, too.³

Going Forward

A recent survey of business contacts in Owensboro indicated general optimism about the local economy: 65 percent of contacts expect economic conditions to improve this year, 16 percent expect conditions to remain the same as last year's and



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The aluminum industry in the area is growing, thanks to increased auto production. The smelters had been major customers of power producers in the area. However, the smelters are now being allowed to buy energy from the larger wholesale market, leading to the idling of one local coal-fired power plant.

19 percent expect conditions to worsen. Severe winter weather affected many parts of the country, including Owensboro. Just over one-third of the contacts noted that first-quarter sales did not meet their expectations. However, about 60 percent of the contacts expect 2014 sales to be higher or somewhat higher than last year's, with a quarter expecting sales to remain similar to last year's.

While firms' plans on hiring were generally upbeat, they were more or less consistent with the trend seen in the data—slow and stable job growth. Employers' main concerns surrounding their hiring decisions going forward are increasing labor costs and availability of skilled labor; the latter is related to the MSA's low educational attainment rate. The percentage of Owensboro's population with a bachelor's degree or higher is 17.7 percent, compared with 21 percent for Kentucky and 28.5 percent for the nation as a whole.

On the upside, about a quarter of the contacts reported that downtown development had a direct positive effect on their

For economic data on other MSAs in the Eighth District, along with reports on economic conditions in those cities, go to this special page on our website: <http://research.stlouisfed.org/regecon/>.

business, typically from increased visibility of the region and higher foot traffic and sales. Notably, about half of contacts reported that development has improved quality of life in the area, helping to retain (and attract) businesses and workers. As a result, anecdotes suggest demand for housing is high, particularly for mid-range housing.

Although some see rising house prices as a positive sign, others are concerned that businesses and consumers will be affected by rising rents. Last year, house prices grew 2.9 percent in Owensboro, compared with 1.1 percent in the state overall and 0.7 percent in nearby Evansville, Ind. ¹

Charles S. Gascon is a regional economist, and Maria A. Arias is a research associate, both at the Federal Reserve Bank of St. Louis.

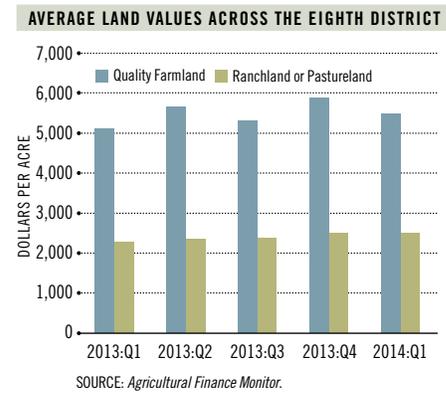
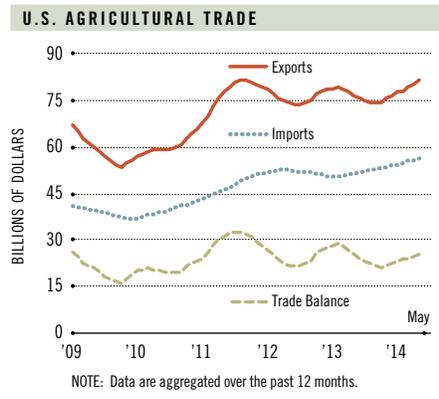
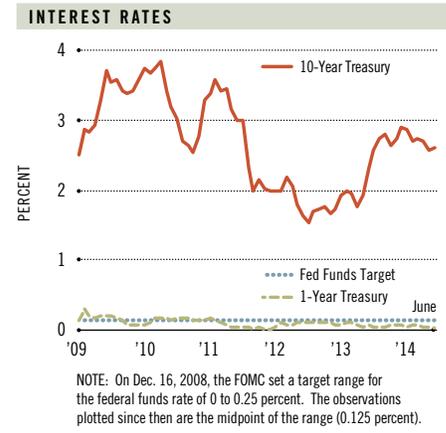
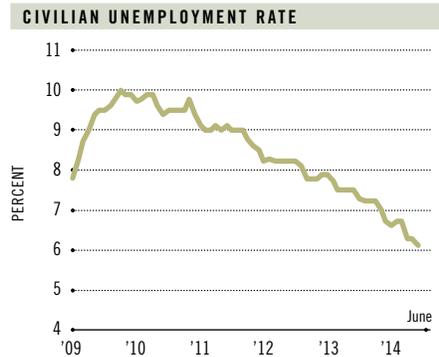
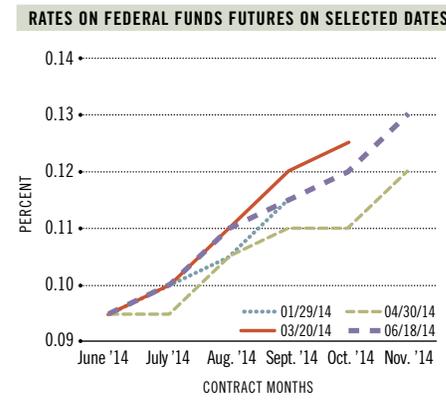
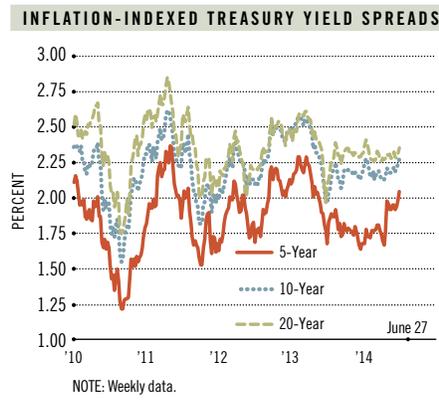
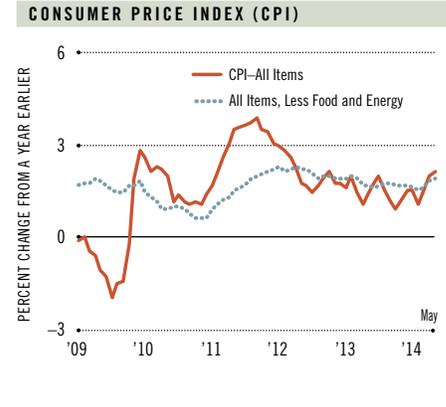
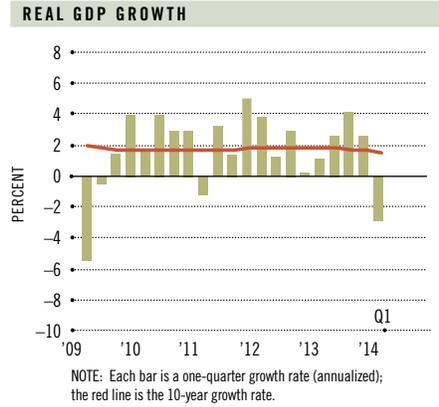
ENDNOTES

- 1 Anecdotal information in this report was obtained from a voluntary survey of business contacts in Owensboro between May 5 and May 15. In total, 45 contacts completed the survey conducted by the Federal Reserve Bank of St. Louis. The results should be interpreted with caution, as the sample of respondents may not be fully representative of businesses in Owensboro.
- 2 The peer regions were selected by the Greater Owensboro Economic Development Corp. because their population is similar to Owensboro's and they are neither a state capital nor are located on an interstate highway. The peers are: Albany, Ga.; Danville, Va.; Dubuque, Iowa; Elmira, N.Y.; Jonesboro, Ark.; Kokomo, Ind.; Lewiston-Auburn, Maine; Pine Bluff, Ark.; Sumter, S.C.; and Victoria, Texas. See Brake and Coomes for more details.
- 3 Big Rivers Electric Corp. idled a power plant in Hancock County at the end of April and postponed idling a second one until early 2015, according to the company's 2013 annual report.

REFERENCE

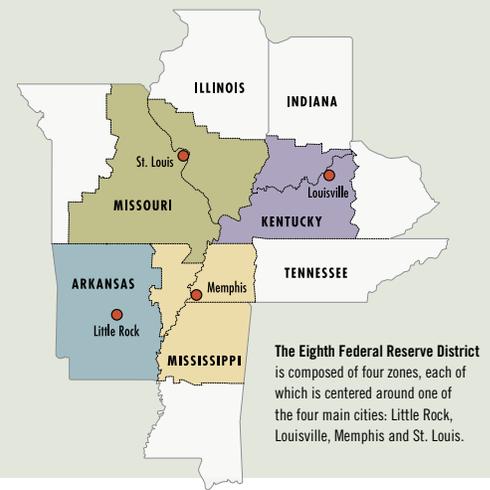
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Eleven more charts are available on the web version of this issue. Among the areas they cover are agriculture, commercial banking, housing permits, income and jobs. Much of the data are specific to the Eighth District. To see these charts, go to www.stlouisfed.org/economyataglance.



Why Is Economic Mobility in Memphis among the Lowest in the Nation?

By Alejandro Badel and Julia Maues



In the previous issue of the District Overview, we used economic mobility data from a study by economists Raj Chetty, Nathaniel Hendren, Patrick Kline and Emmanuel Saez (CHKS hereafter) to compare economic mobility in the U.S. versus the Eighth District. We focused on an indicator of economic mobility that measures a family's probability of moving from the bottom 20 percent of the income distribution to the top 20 percent in one generation.¹ We found that the probability of doing this for people born in the Eighth District was 6.4 percent, which is lower than the national average of 8.1 percent. We also found that in Memphis, Tenn., one of the four largest metro areas in the District, the probability of moving up was among the lowest in the country, at 2.8 percent, while in 14 counties of the District located in Mississippi, the probability was even lower.²

In this issue, we introduce some factors that may be part of an explanation for the differences in income mobility across locations. Then, we look at potential explanations for the low economic mobility in Memphis. As before, we shape our analysis based on the results of the CHKS study, released earlier this year.

CHKS analyzed a set of 37 variables that can potentially help explain geographic differences in economic mobility. The economists highlighted five broad factors that seem to have the greatest statistical association with economic mobility. These factors are: (1) the share of black population and the degree of segregation; (2) income inequality as measured by the Gini Index; (3) quality of the school system; (4) social capital; and (5) family structure.

Analyzing how economic mobility is related to these factors is an important step

toward building good theories of mobility. However, one must keep in mind that a strong statistical association does not guarantee that there is a causal nexus between potentially explanatory factors and economic mobility. The main concern is that economic mobility and the potentially explanatory factor may both be caused by a third variable.³

In this District Overview, we highlight the first factor: racial composition. We picked this factor for three reasons. First, CHKS found racial configuration to be strongly related to mobility at a national level. Second, this channel seems important for Memphis as this commuting zone has one of the highest shares of black population in the country: 43.2 percent. Third, studies of intergenerational economic mobility have found that upward mobility in the United States is lower for black households.

The figure plots the share of black population in the commuting zone and the probability of moving up. The data are looked at in two different ways: Panel A shows the universe of all commuting zones in the country, while Panel B focuses only on those commuting zones where the population is at least 30 percent black.

Panel A shows that both the level and the dispersion of economic mobility fall as we look at commuting zones with higher shares of black population. The added trend line shows that the average of these observations decreases from about 11 percent to about 2.5 percent as the black population share increases.

Since our question is about mobility in Memphis, Panel B focuses exclusively on commuting zones that are comparable to Memphis' in terms of the black population share. We picked those with a share above

30 percent and represented Memphis with a red marker.

Our first observation from Panel B is that mobility in all of these commuting zones is quite low. According to the data, knowing that a commuting zone has a black population above 30 percent is sufficient for inferring that the commuting zone has a probability of moving up of no more than 7 percent, which is well below the national average of 8.1 percent. This is a striking observation and the main fact highlighted by this District Overview.

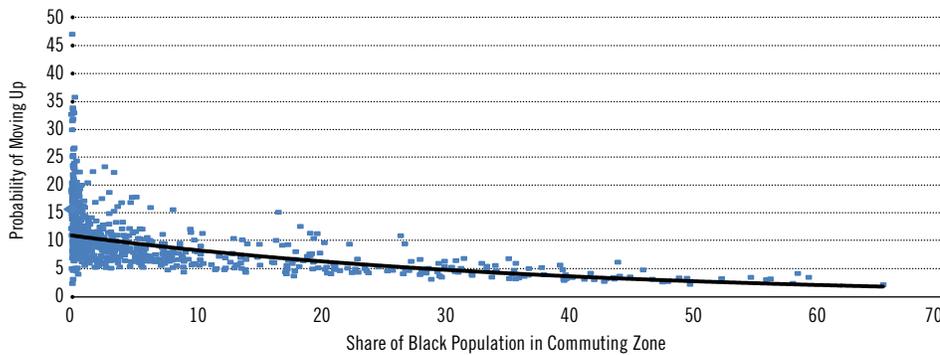
In fact, looking only at racial composition and using the fitted trend line as a guide, a commuting zone with a 43.2 percent black population is expected to have a probability of moving up of 3.5 percent. The fact that mobility in Memphis is roughly 1 percentage point below this trend line suggests that other factors besides racial composition are reducing mobility in this commuting zone relative to other commuting zones with a high black share. We leave an investigation of other potential factors for future research on the economy of the Eighth District.

How can racial composition affect mobility? Unfortunately, there is no consensus about mechanisms that could be linking black share to upward mobility in a commuting zone. One potential link between these variables is as follows: If there is a racial gap in economic mobility such that black people have lower mobility than other people, then a higher fraction of black people in a particular commuting zone reduces measures of mobility for the commuting zone as a whole. This is simply known as a composition effect.

Some evidence for this composition effect can be found in a recent paper by economist

PANEL A

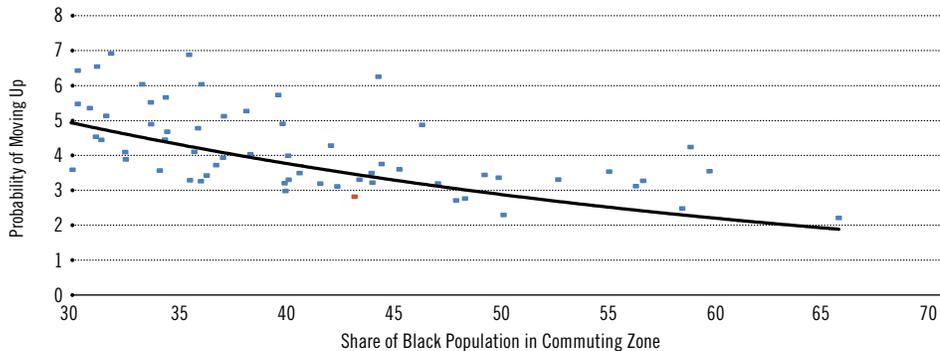
Black Population Share and Mobility: All Commuting Zones



SOURCE: www.equality-of-opportunity.org.

PANEL B

Black Population Share and Mobility: Selected Commuting Zones



SOURCE: www.equality-of-opportunity.org.

NOTE: Plotted only for commuting zones with a black population share of at least 30 percent. The red marker corresponds to Memphis.

Bhashkar Mazumder at the Federal Reserve Bank of Chicago. Looking at intergenerational income and earnings data from the Bureau of Labor Statistics, the Census Bureau and the Social Security Administration, Mazumder found that some measures of intergenerational mobility were persistently lower for black people in the U.S. between 1984 and 2007. The study also explored the potential role of educational attainment, family structure and parental wealth in explaining the black-white differences in mobility.

Conclusion

Racial composition seems important for understanding the low economic mobility observed in Memphis with respect to the U.S. as a whole. We point at a composition effect as the simplest possible mechanism that can produce a causal relationship between black population share and economic mobility. Under this mechanism, understanding the

sources of the black-white gap in mobility seems a priority for future research on mobility across commuting zones. [📄](#)

Alejandro Badel is an economist and Julia Maues is the economic content manager in Public Affairs, both at the Federal Reserve Bank of St. Louis. For more on Badel's work, see <http://research.stlouisfed.org/econ/badel>.

ENDNOTES

- ¹ CHKS arrived at this indicator by considering, for each commuting zone, the group of 14- to 20-year-olds whose family income was in the bottom 20 percent of the national income distribution in 1996-2000. The indicator is the fraction of that group that, as grown-ups (i.e., by ages 29-32), had a family income in the top 20 percent of the national income distribution.
- ² These 14 counties are located in the commuting zones of Clarksdale, Miss., Yazoo City, Miss., and Greenville, Miss., where the measured probability of moving up was 2.7, 2.5 and 2.2, respectively. See Badel and Maues for further details.
- ³ For example, suppose a particular commuting zone has an environmental issue (such as high industrial pollution) that causes residents to have frequent respiratory infections. These infections could lead children in that commuting zone to perform badly in school, resulting in lower test scores, which would reduce the "quality of the school system." The same infections could lead to lower community event attendance, lowering "social capital." Finally, in the long run, these recurring health issues may lead to reduced economic mobility for children from this area. However, neither (3) nor (4) were the cause; the cause was the environmental issue.

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Recovery Seems To Have Finally Taken Root

By Kevin L. Kliesen

The forward momentum exhibited by the U.S. economy over the second half of 2013 came to a screeching halt in the first quarter of 2014. Real gross domestic product (GDP), after increasing at a 3.4 percent annual rate over the second half of 2013, unexpectedly declined at a 2.9 percent annual rate in the first quarter of 2014. Few forecasters believe that the first-quarter dip in economic activity is a precursor to the next recession. Rather, most attribute the poor economic performance to temporary factors. Indeed, strength was evident elsewhere. The pace of consumer spending and job growth both registered solid gains in the first quarter, while the unemployment rate edged lower, inflation remained tame, and stock prices surged to record highs. Accordingly, most professional forecasters and Federal Open Market Committee (FOMC) participants expect a solid rebound in the second quarter—and good growth into the second half of the year, as well.

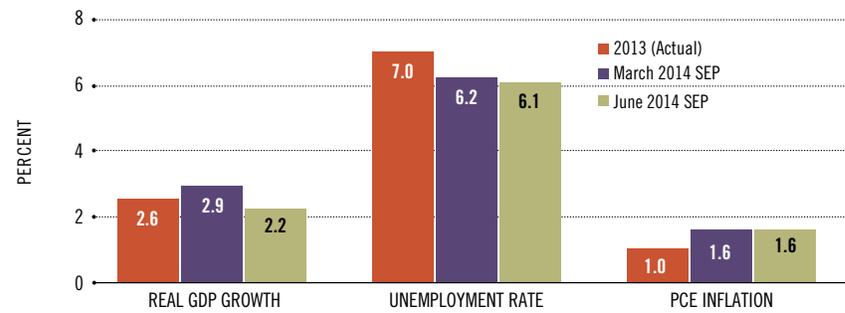
Is the elusive recovery finally here to stay?

Weak GDP: It Wasn't Just the Weather

The GDP weakness stemmed largely from adverse weather conditions, which affected housing activity, certain categories of retail sales and the shipment of goods across a large portion of the country. However, first-quarter growth was also weak because of sizable declines in business spending on equipment, a sharp fall in U.S. exports and a paring of inventories—suggesting that factors besides weather were at work. These other factors may be related to concerns about a less-accommodative monetary policy (the Federal Reserve's "taper") and doubts about the underlying strength of the U.S. housing sector in the face of a modest uptick in mortgage interest rates and higher house prices. Some people have also been worried that the global economy would not grow as fast in 2014 as earlier projections had suggested.

The consensus of professional forecasters as of early July was that real GDP growth

The FOMC's Summary of Economic Projections (SEP) for 2014



NOTE: Projections are the midpoints of the central tendencies. The projections for real GDP growth and inflation are the percentage change from the fourth quarter of the previous year to the fourth quarter of the indicated year. Inflation is measured by the personal consumption expenditures (PCE) chain-price index. The projection for the unemployment rate is the average for the fourth quarter of the year indicated.

would rebound to about 3.3 percent in the second quarter. Despite some mixed signals, the April and May data are generally consistent with this forecast. In particular, sales of motor vehicles thus far in 2014 are on pace to be the highest in several years, the housing data in April looked a bit better, industrial production was strong in May, and confidence among businesses and consumers is steadily improving.

As evident by the surge in equity prices and the below-average levels in the St. Louis Fed's Financial Stress Index, financial market conditions are also supportive of growth. Interest rates on 10-year Treasury securities remain low, helping to support expenditures on interest-sensitive goods like automobiles, appliances and housing. Indeed, many housing economists and industry analysts continue to foresee a considerable pickup in housing starts and home sales over the second half of 2014.

The strong pace of job gains this year has added to the optimism. Through the first six months of 2014, nonfarm payroll employment gains averaged about 231,000, noticeably higher than last year's average monthly gain of 194,000. Similarly, the unemployment rate dropped from an average of 7 percent in the fourth quarter of 2013 to 6.1 percent in June 2014, and the annualized growth of hours worked through the first six months of 2014 (3.6 percent) was nearly double its year-earlier pace (1.9 percent). Most forecasters expect continued solid job growth and a falling unemployment rate throughout the remainder of 2014.

Despite healthy job growth, other aspects of U.S. labor market conditions bear close

watching. First, growth of real labor compensation (wages, salaries and benefits) has averaged 0.1 percent per year from 2010 to 2013. Second, labor productivity growth—a primary determinant of how fast living standards rise over time—has averaged 1 percent over the past three years. Most forecasters see this as a temporary dip. If not, strong, sustainable real GDP growth will be elusive.

Inflation: Stirring, Not Shaking

In late 2011, the FOMC's preferred inflation measure, the year-to-year percentage change in the personal consumption expenditures price index, began to slow unexpectedly. From September 2011 to October 2013, inflation declined from a little less than 3 percent to 0.8 percent. Since then, inflation has begun to creep up—rising to about 1.8 percent in May 2014. For the most part, forecasters and financial market participants expect inflation to inch upward in 2014 but remain below the Fed's 2 percent inflation target. One risk is that crude oil prices, which have been steadily strengthening since the first of the year, will rise even further if global growth begins to accelerate. However, the U.S. Energy Information Administration is projecting that—in view of rising domestic production of crude oil—gasoline prices will fall from an average of \$3.67 per gallon in May to \$3.61 per gallon by September. [Q](#)

Kevin L. Kliesen is an economist at the Federal Reserve Bank of St. Louis. Lowell R. Ricketts, a senior research associate at the Bank, provided research assistance. See <http://research.stlouisfed.org/econ/kliesen> for more on Kliesen's work.

ASK AN ECONOMIST

B. Ravikumar is an economist and vice president at the Federal Reserve Bank of St. Louis, where he has worked since 2011. The native of India has degrees in physics, electrical engineering, industrial engineering and economics. His research currently focuses on macroeconomics, international trade and economic development. He is the co-editor of the *Journal of Economic Dynamics and Control* and is the associate editor of the *European Economic Review*. He is also a visiting professor of economics at Washington University in St. Louis. For more on his research, see <http://research.stlouisfed.org/econ/ravikumar>.



B. Ravikumar

Q: What are the obstacles and potential opportunities for economic growth in India?

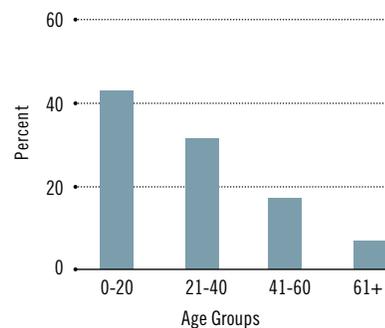
A: There are two main obstacles. The first is labor regulations. Developing economies usually transition from agriculture to manufacturing. But the transition in India has been to the service sector. This is due in part to labor regulations. For instance, a firm with 100 or more workers has to seek permission from the government to reassign the workers to different tasks, to lay off workers or to close the firm. Such regulations impede large-scale manufacturing operations that could employ thousands of workers producing unskilled-labor-intensive products. As a result, the movement of workers from agriculture to manufacturing is practically nonexistent. This is evident in the share of labor force in agriculture in India: It is almost 50 percent. That is a large number.

The second is infrastructure. This is a well-known problem. Decades of underinvestment have left the country with dire deficits in critical areas, such as railways, roads, ports, airports, electricity and water. In the World Economic Forum's Global Competitiveness Report for 2013-14, India ranked 85 out of 148 countries for infrastructure.

The opportunities are extensive. The first one, which people usually are aware of, is that India is well-equipped with talent in science and engineering. The second, not so well-known, is the size and age distribution of the consumers. The chart above depicts the age distribution of the population. Just to give you some perspective, there are more than 600 million people in India aged 25 or younger. How big is that? Well, if you added up the entire populations of the U.S., Mexico and Canada, you wouldn't come to even 500 million. So, India is a big market. And this, of course, will be the working-age population in the next few decades, when these millions will be not only earning but also spending. These are potentially good opportunities not only for India but also for U.S. firms that sell consumer goods abroad.

To overcome the obstacles and take advantage of the opportunities, India has to be more efficient at managing its resources. Economists use total factor productivity (TFP) to measure such efficiency. A country with a high TFP produces more with a given amount of inputs, such as capital and labor, than does a country with a low TFP. The economic reforms since 1991 have indeed increased India's efficiency. Before the reforms (1960-1991), TFP growth accounted for 15 percent of GDP growth, but between 1991 and 2011 TFP growth accounted for almost 25 percent of the GDP growth. So, the prognosis based on TFP looks promising for India's future.

India: A Young Populace



SOURCE: 2011 Census of India Population Enumeration Data. See www.censusindia.gov.in/2011census/population_enumeration.aspx.

LETTERS TO THE EDITOR

This is in response to President James Bullard's column in the April 2014 issue, titled "The Rise and Fall of Labor Force Participation in the U.S." Read the column, at www.stlouisfed.org/publications/re/pastissues/?issue=2014/2.

Dear Editor:

His views on the labor force participation (LFP) rate touched on a subject frequently in the news this year: Where is our economy headed, and where are the workers?

Economists have been analyzing data on workforces for a long time; so, please forgive me if I oversimplify or connect less important items to the changes in the LFP rate, items like increased high school dropout rates, failed educational systems, growth of our prison population, and increased mergers and acquisitions.

According to reports:

- The U.S. now ranks near the top of the list of advanced economies when it comes to high school dropout rates.
- Too few of our students are achieving at a level to make our country competitive internationally. Proficiency in reading and math are either falling or falling behind the proficiency rates in competing countries.
- The federal prison population has grown by 800 percent since 1980. The result is overcrowding, budget busting and early release.
- Some manufacturers are bringing their work back to the U.S. after having moved overseas years ago. However, some are complaining that they can't find enough Americans with the right training to work in their plants anymore.

John Foote, retired from Washington University in St. Louis, McDonnell Center for Space Sciences

This is in response to "The Liquidity Trap: An Alternative Explanation for Today's Low Inflation," which also appeared in the April 2014 issue.

Dear Editor:

This was such a good read! Thank you!

Matthew DeBow of Rumson, N.J., who works in marketing for a software company

We welcome letters to the editor, as well as questions for "Ask an Economist." You can submit them online at www.stlouisfed.org/re/letter or mail them to Subhayu Bandyopadhyay, editor, *The Regional Economist*, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166-0442.



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N E X T I S S U E

Oil Prices and Gasoline Prices: Why They Don't Always Move in Sync



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Oil prices are one of the main drivers of the U.S. business cycle, and gasoline prices are one of the primary avenues through which oil prices pass through to consumers. But the manner in which gasoline prices are affected by fluctuations in oil prices can vary by region and by the time of the year. The lead article in the October issue of *The Regional Economist* will examine these asymmetries over time and space.

Two More Ways to Keep Current on the Economy and Key Data

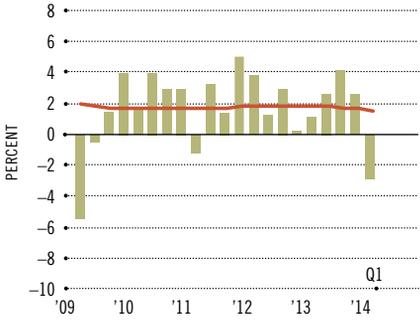
Into blogging? So are we. The St. Louis Fed recently launched its first two blogs, one for a general audience interested in current economic issues, and the other for the people who can't get enough of our signature economic database, FRED. The *St. Louis Fed on the Economy* blog features a variety of voices from around the St. Louis Fed—economists and other experts in their fields (housing, community development and education, to name a few). Readers of the blog are invited to post comments to keep the conversation going. Look for new posts every Monday, Tuesday and Thursday at www.stlouisfed.org/on-the-economy. Meanwhile, each post in *The FRED Blog* features a different, topical graph from our main database, Federal Reserve Economic Data. With it are a very brief explanation to give context to the graph and instructions on how to re-create such a graph. New FRED blog posts appear on Mondays and Thursdays at <http://fred-blog.stlouisfed.org>.

FOLLOW THE FED
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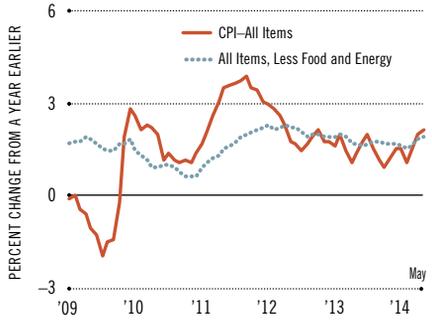
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REAL GDP GROWTH

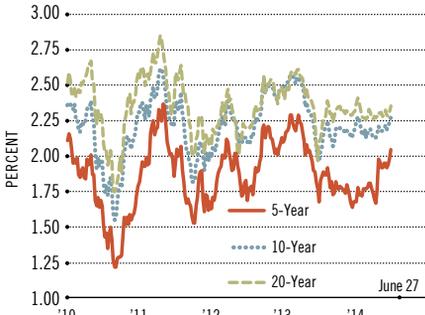


NOTE: Each bar is a one-quarter growth rate (annualized); the red line is the 10-year growth rate.

CONSUMER PRICE INDEX

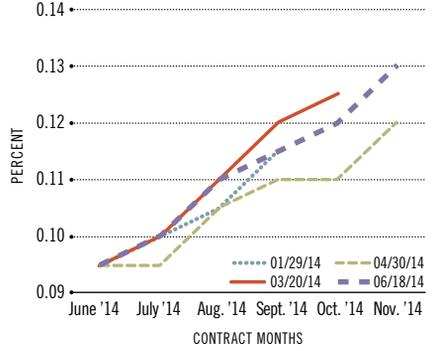


INFLATION-INDEXED TREASURY YIELD SPREADS



NOTE: Weekly data.

RATES ON FEDERAL FUNDS FUTURES ON SELECTED DATES



CIVILIAN UNEMPLOYMENT RATE

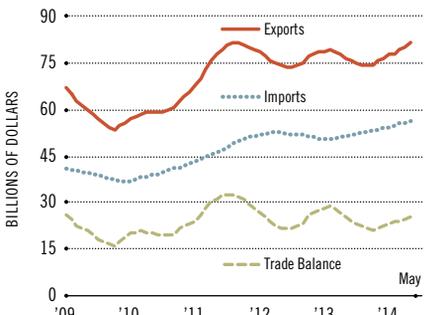


INTEREST RATES



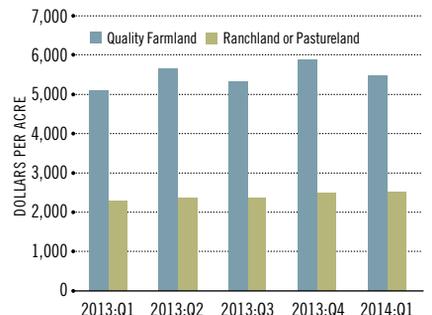
NOTE: On Dec. 16, 2008, the FOMC set a target range for the federal funds rate of 0 to 0.25 percent. The observations plotted since then are the midpoint of the range (0.125 percent).

U.S. AGRICULTURAL TRADE



NOTE: Data are aggregated over the past 12 months.

AVERAGE LAND VALUES ACROSS THE EIGHTH DISTRICT



SOURCE: Agricultural Finance Monitor.

U.S. CROP AND LIVESTOCK PRICES / INDEX 1990-92=100

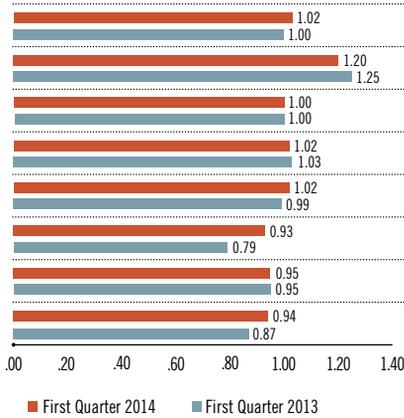


COMMERCIAL BANK PERFORMANCE RATIOS

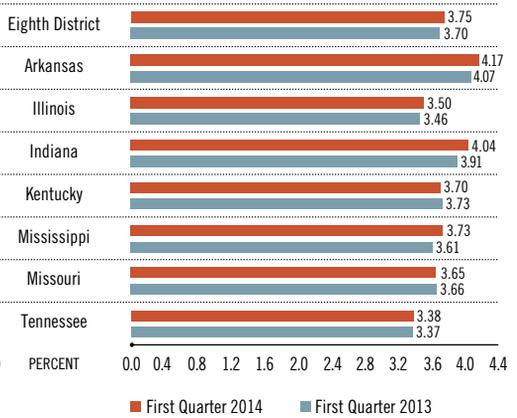
U.S. BANKS BY ASSET SIZE / FIRST QUARTER 2014

	All	\$100 million-\$300 million	Less than \$300 million	\$300 million-\$1 billion	Less than \$1 billion	\$1 billion-\$15 billion	Less than \$15 billion	More than \$15 billion
Return on Average Assets*	0.99	0.92	0.90	0.93	0.92	1.01	0.97	0.99
Net Interest Margin*	3.10	3.75	3.74	3.75	3.74	3.83	3.79	2.94
Nonperforming Loan Ratio	2.50	1.68	1.68	1.70	1.69	1.79	1.75	2.72
Loan Loss Reserve Ratio	1.69	1.67	1.68	1.64	1.65	1.57	1.61	1.72

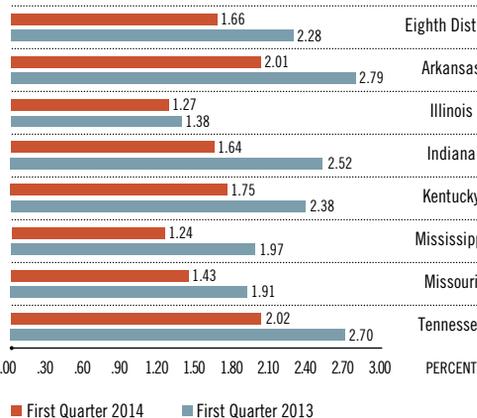
RETURN ON AVERAGE ASSETS*



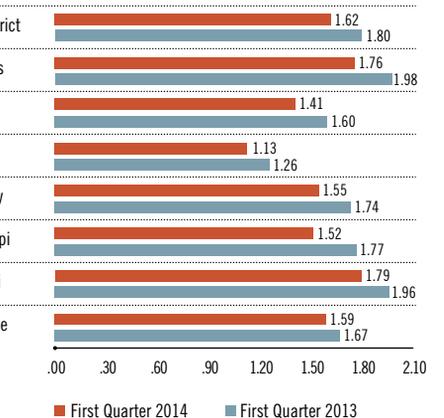
NET INTEREST MARGIN*



NONPERFORMING LOAN RATIO



LOAN LOSS RESERVE RATIO



NOTE: Data include only that portion of the state within Eighth District boundaries. SOURCE: FFIEC Reports of Condition and Income for all Insured U.S. Commercial Banks * Annualized data

For additional banking and regional data, visit our web site at: www.research.stlouis.org/fred/data/regional.html.

REGIONAL ECONOMIC INDICATORS

NONFARM EMPLOYMENT GROWTH / FIRST QUARTER 2014

YEAR-OVER-YEAR PERCENT CHANGE

	United States	Eighth District †	Arkansas	Illinois	Indiana	Kentucky	Mississippi	Missouri	Tennessee
Total Nonagricultural	1.7%	1.0%	0.9%	0.6%	1.4%	0.1%	0.8%	1.4%	1.7%
Natural Resources/Mining	4.1	-0.4	-2.1	-1.8	3.0	-1.0	0.4	1.7	NA
Construction	2.9	0.1	2.3	0.3	-2.5	0.1	4.6	-0.4	NA
Manufacturing	0.6	0.5	-0.4	-1.3	2.6	-0.8	1.9	0.7	0.8
Trade/Transportation/Utilities	2.0	0.6	1.0	-0.1	1.1	-0.2	1.6	0.4	1.7
Information	-1.2	-1.5	-3.8	-1.2	-1.6	-2.0	-1.3	-1.6	-1.0
Financial Activities	0.8	0.6	0.8	0.5	1.9	-2.2	-0.7	1.4	1.0
Professional & Business Services	3.8	3.2	1.3	2.7	4.5	2.0	-1.7	3.9	5.4
Educational & Health Services	1.6	1.0	1.6	0.8	0.9	0.9	1.1	1.4	0.7
Leisure & Hospitality	3.1	2.2	3.9	1.1	2.4	-0.1	1.3	3.5	4.2
Other Services	0.6	1.1	1.6	1.7	1.4	0.9	-0.9	-0.2	1.1
Government	-0.2	-0.1	-0.3	0.0	-0.5	0.3	0.1	0.7	-0.9

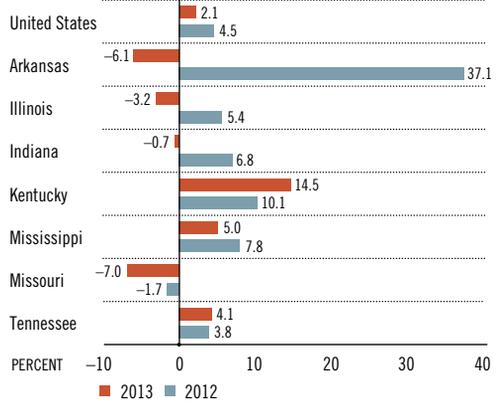
† Eighth District growth rates are calculated from the sums of the seven states. For Natural Resources/Mining and Construction categories, the data exclude Tennessee (for which data on these individual sectors are no longer available).

UNEMPLOYMENT RATES

	I/2014	IV/2013	I/2013
United States	6.7%	7.0%	7.7%
Arkansas	7.1	7.5	7.5
Illinois	8.6	9.0	9.2
Indiana	6.1	6.9	7.9
Kentucky	7.8	8.1	8.2
Mississippi	7.5	8.0	9.0
Missouri	6.4	6.1	6.7
Tennessee	6.9	7.9	8.2

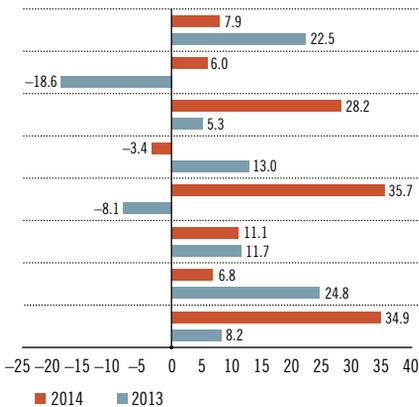
EXPORTS

YEAR-OVER-YEAR PERCENT CHANGE



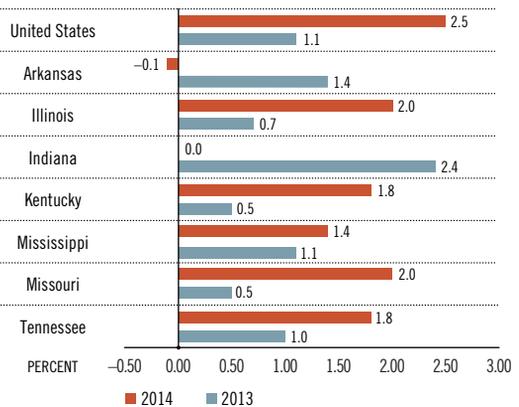
HOUSING PERMITS / FIRST QUARTER

YEAR-OVER-YEAR PERCENT CHANGE IN YEAR-TO-DATE LEVELS



REAL PERSONAL INCOME* / FIRST QUARTER

YEAR-OVER-YEAR PERCENT CHANGE



All data are seasonally adjusted unless otherwise noted.

*NOTE: Real personal income is personal income divided by the PCE chained price index.