BACKGROUNDER

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Stagnant Wages: What the Data Show

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Abstract

Wages have grown over the past few years at rates similar to historical trends. The frequently repeated claim that wages are "stagnant" is at odds with six measures of wages and compensation, which indicate that hourly and weekly real wages (wages adjusted for price inflation) have grown between 1 percent and 2 percent per year since the beginning of 2013. Rather than engaging in fruitless attempts to raise wages directly, policymakers can benefit workers by removing laws and regulations that have artificially increased the prices of consumer goods.

Recent data show that wages have been growing at rates comparable to their long-term trends. Measuring average wages accurately is more difficult than it sounds, so this *Backgrounder* examines six metrics of wage and compensation to present a complete picture.[1]

Since the beginning of 2013, wages have grown between 1.1 percent and 1.9 percent per year. Over longer horizons reaching back to the 1960s, wages and compensation have usually grown between 0.7 percent and 2 percent per year. Thus, recent wage trends are typical of the modern era.

Are Wages Stagnant?

A widely repeated narrative is that wage growth in recent years has been terrible. Many economists and journalists have written about how slowly wages are growing—and have often claimed that they are not growing at all.[2] Yet six common indicators published by the Bureau of Labor Statistics show strong wage growth in the past three years. Why the discrepancy?

Key Points

- Contrary to conventional wisdom, wage growth is not stagnant, according to any of six measures published by the Bureau of Labor Statistics.
- Hourly and weekly wage growth since the beginning of 2013 have been between 1 percent and 2 percent per year, which is in the typical range of historical growth rates.
- Each measure of wages and compensation has advantages and drawbacks. One learns most by looking at several measures together.
- Government attempts to increase wages directly fail because they do not increase worker productivity or remove price distortions in the marketplace.
- Regulatory reforms that lower prices for major consumer goods, such as housing, transportation, and health care, will effectively raise real wages. Usually, the way to lower prices is to remove government barriers to competition and the growth of supply.

This paper, in its entirety, can be found at **http://report.heritage.org/bg3074**

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One reason why wages appear to be growing more slowly is that inflation has been low, especially since oil and gas prices have dropped. Since January 2013, inflation has averaged just 1.02 percent per year. This is less than half the rate of inflation from 2000 through 2007, and it means that nominal wage raises are smaller than they would be with typical inflation.

However, what matters for well-being is the real (inflation-adjusted) value of wages.[3] Low inflation means that receiving a nominal raise of 2 percent in 2015 increases a worker's real income more than a 3 percent raise would have in 2004.

The analysis in this *Backgrounder* uses the Personal Consumption Expenditures (PCE) deflator, which is the most accurate measurement of the general cost of living. The other common inflation measure, the Consumer Price Index (CPI), is known to be biased upward.[4] Since 1960, the gap between the two measures has averaged 0.5 percent per year, although in the past few years it has narrowed to less than 0.25 percent.[5] Thus, if someone reports current wage growth of 0.7 percent using the CPI, the same data would show at most 0.95 percent growth using the PCE.

Wage Growth in 2013 and 2014

The consensus among six common measures of compensation (see Box 1) is that wages have been growing between 1.1 percent and 1.9 percent per year since the beginning of 2013. At the median, 1.15 percent rate, average wages would rise 41 percent in 30 years.

The six wage metrics cover slightly different concepts. Chart 1 shows how the different metrics report recent wage growth. Four of the metrics are clustered tightly around 1.1 percent, with two others significantly higher. The differences among the measures reflect both statistical noise and differences in the concepts measured.

Although current wage growth is not setting any records, it is much better than zero growth, and it is not stagnant by historical standards. Like employment

1. This *Backgrounder* updates Salim Furth, "Stagnant Wages: Fact or Fiction?" Heritage Foundation *Backgrounder* No. 2993, March 11, 2015, http://www.heritage.org/research/reports/2015/03/stagnant-wages-fact-or-fiction. That initial *Backgrounder* errantly included the metric Employer Costs of Employee Compensation (ECEC), which is not intended for time series comparisons. In this update, I substituted the appropriate Employment Cost Index (ECI) for the ECEC. The change of metrics made little difference in the analysis. Wages grew rapidly in the first half of 2015 thanks to low prices, and my characterizations of recent wage growth have changed accordingly.

2. See, for example, Adam Hersh, "Why Wages Are Not Rising as Job Growth Increases," MarketWatch, January 12, 2015, http://www.marketwatch.com/story/why-wages-are-not-rising-as-job-growth-increases-2015-01-12 (accessed October 1, 2015); Spencer Jakab, "Jobs Market Slack Has Roots in Fed," *The Wall Street Journal*, June 14, 2015, http://www.wsj.com/articles/jobs-market-slack-has-roots-in-fed-1433440927 (accessed October 1, 2015); Larry Mishel, as quoted by Robert Pear, "Health Care Gains, But Income Remains Stagnant, the White House Reports," *The New York Times*, September 16, 2015, http://www.nytimes.com/2015/09/17/us/politics/census-bureau-poverty-rate-uninsured.html (accessed October 1, 2015); Greg Gardner, "UAW Faces Painful Trade-Offs in Stagnant Wage Economy," *Detroit Free Press*, September 16, 2015, http://www.freep.com/story/money/cars/chrysler/2015/09/16/uaw-faces-painful-trade-offs-stagnant-wage-economy/32498807/ (accessed October 1, 2015); and Tim Worstall, "Don't Sweat Rising Inequality and Stagnant Wages: It's All About to Reverse Itself," *Forbes*, September 26, 2015, http://www.forbes.com/sites/timworstall/2015/09/26/dont-sweat-rising-inequality-and-stagnant-wages-its-all-about-to-reverse-itself/ (accessed October 1, 2015).

3. Throughout the *Backgrounder*, concepts are inflation-adjusted and seasonally adjusted unless otherwise specified. Where I refer to nominal-dollar or current-dollar amounts, I do so explicitly.

4. Part of the reason why the PCE is more accurate is that it constantly updates consumers' purchasing habits. However, since these data are reported later than consumer price data, the CPI is available sooner and thus receives more attention. Accessible discussions include Timothy Taylor, "Consumer Price Index vs. Personal Consumption Expenditures Index," Conversable Economist, January 17, 2012, http://conversableeconomist.blogspot.com/2012/01/consumer-price-index-vs-personal.html (accessed October 1, 2015), and "An Unusual Good News Inflation Story," *The Economist,* March 29, 2013, http://www.economist.com/blogs/freeexchange/2013/03/divergence-between-cpi-and-pce-prices (accessed October 1, 2015). More technical treatments include Advisory Commission to Study the Consumer Price Index, "Toward a More Accurate Measure of the Cost of Living," report to the Committee on Finance, U.S. Senate, December 4, 1996, http://www.ssa.gov/history/reports/boskinrpt.html (accessed October 1, 2015); Craig Hakkio, "PCE and CPI Inflation Differentials: Converting Inflation Forecasts," Federal Reserve Bank of Kansas City *Economic Review* (1st Quarter, 2008), http://www.kansascityfed.org/Publicat/Econrev/PDF/1q08Hakkio.pdf (accessed October 1, 2015); and Clinton P. McCully, Brian C. Moyer, and Kenneth J. Stewart, "Comparing the Consumer Price Index and the Personal Consumption Expenditures Price Index," U.S. Department of Commerce, Bureau of Economic Analysis *Survey of Current Business*, November 2007, http://www.bea.gov/scb/pdf/2007/11%20November/1107_cpipce.pdf (accessed October 1, 2015).

5. Calculations made with the CPI for All Urban Consumers. Other CPI series will give slightly different results.

Six Ways to Measure Pay

The Bureau of Labor Statistics publishes six measures of pay:

- **Hourly compensation.** Includes wages, stock options, benefits, and employer payroll taxes. Published since 1947.[*]
- **Employment cost.** Measures the cost of labor from the employer's perspective. Does not incorporate changes in the composition of the workforce, so it is more reliable for short-term comparisons and less reliable for long-term ones. Published since 1991.[†]
- **Average hourly earnings of all employees.** Includes all employees, excludes benefits and taxes, and covers the non-farm private business sector. Published since 2006.[‡]
- **Average hourly earnings of production and nonsupervisory employees.** Excludes managers and many salaried workers. Unreliable during the 1980s and 1990s due to changing sample. Published since 1964.[§]
- **Average weekly wages.** Based on high-quality administrative data covering all employees eligible for unemployment insurance. Excludes benefits. Published since 1975.[**]
- **Median weekly earnings.** Computed from household survey data; excludes benefits. Half of earners earn less and half earn more than the median. Published since 1979.[††]

* U.S. Department of Labor, Bureau of Labor Statistics, "Labor Productivity and Costs," http://www.bls.gov/lpc/ (accessed September 30, 2015).

† U.S. Department of Labor, Bureau of Labor Statistics, "Employment Cost Trends," http://www.bls.gov/ncs/ect/ (accessed September 30, 2015).

‡ U.S. Department of Labor, Bureau of Labor Statistics, "Current Employment Statistics—CES (National)," http://www.bls.gov/ces/ (accessed September 30, 2015).

§ Ibid.

** U.S. Department of Labor, Bureau of Labor Statistics, "Quarterly Census of Employment and Wages," http://www.bls.gov/qcew/ (accessed September 30, 2015).

†† U.S. Department of Labor, Bureau of Labor Statistics, "Labor Force Statistics from the Current Population Survey," http://www.bls.gov/cps/ (accessed September 30, 2015).

and gross domestic product (GDP), wages were slow to recover from the Great Recession and earn no praise for the policies enacted in response to the recession.

Future wage growth could fall substantially, however, if oil prices rise again. Workers and consumers have benefited especially from low oil prices recently, but those are one-time gains and should not be expected to continue.

Wage Growth Since 2000

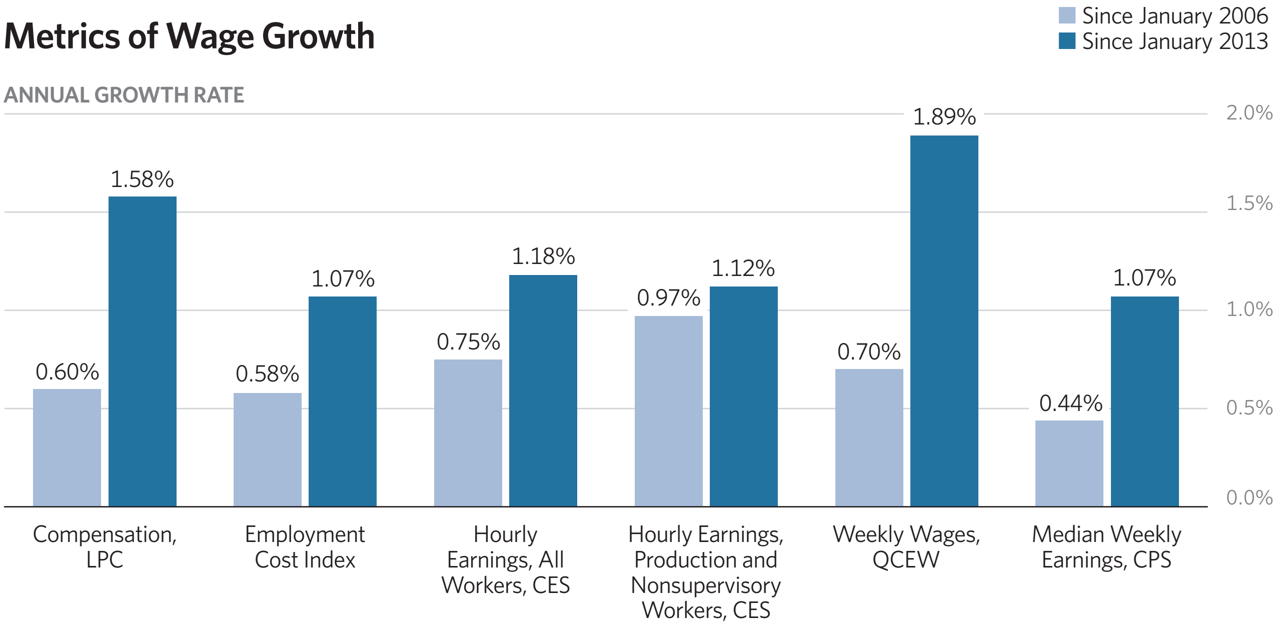
Although current wage growth is in line with historical averages, wages may be merely recovering ground lost to the recession.

Wage growth since 2006—the first year in which all six data sources are available—has been lower than most historical averages, an expected outcome given the recent recession. Even so, wage growth was still positive. The six metrics are distributed between 0.4 percent and 1 percent, with four of them clustered around 0.65 percent.

Going back to 2000, including an additional business cycle in the measurements, yields an average wage growth of about 0.85 percent per year, in line with historical trends. Median weekly wages has lagged behind the other four metrics since 2000.

CHART 1

Metrics of Wage Growth



Sources: See text box, "Six Ways to Measure Pay."

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Wage Growth Since 1948

How high has wage growth been historically? Fewer data are available for earlier decades, and the available data are less in agreement. Chart 2 shows growth periods for several measures of wages and compensation since 1948 (the first post-war business cycle peak[6]) or their earliest availability.

The longest series available details hourly compensation, which grew 2.8 percent per year from 1948 to 1973, then slowed to 1.1 percent per year from 1973 to 1990. From 1990 to 2007, the most recent business cycle peak, compensation grew 1.7 percent annually.

Wage data are available since 1964. Splicing together two metrics[7] gives real wage growth of 1.0 percent per year from 1964 to 2007. Over that period, hourly compensation grew by 1.7 percent per year. Before 1980, the gap between compensation and wage growth was large: Hourly compensation grew 2.0 percent per year from 1964 to 1980, and wages grew 0.7 percent per year. About one-third of the gap is explained by the rapid growth of non-wage benefits: In 1964, 10.3 percent of compensation was non-wage; in 1980, it was 15.5 percent. However, two-thirds of the gap cannot be easily explained.

From 1980 to 2007, hourly compensation and weekly wages grew side by side. Compensation grew 1.5 percent per year, and weekly wages 1.2 percent, with the gap substantially explained by the continued growth of non-wage compensation. However, median weekly earnings from the Current Population Survey (CPS) rose only 0.7 percent per year. The most likely reason for the large gap between average and median wages is that the productivity, and thus wages, of high earners grew significantly faster than average during the 1980s.[8]

Prospects for Wage Growth in 2016

Hiring and employment finally showed signs of a robust recovery in 2014, due in part to the

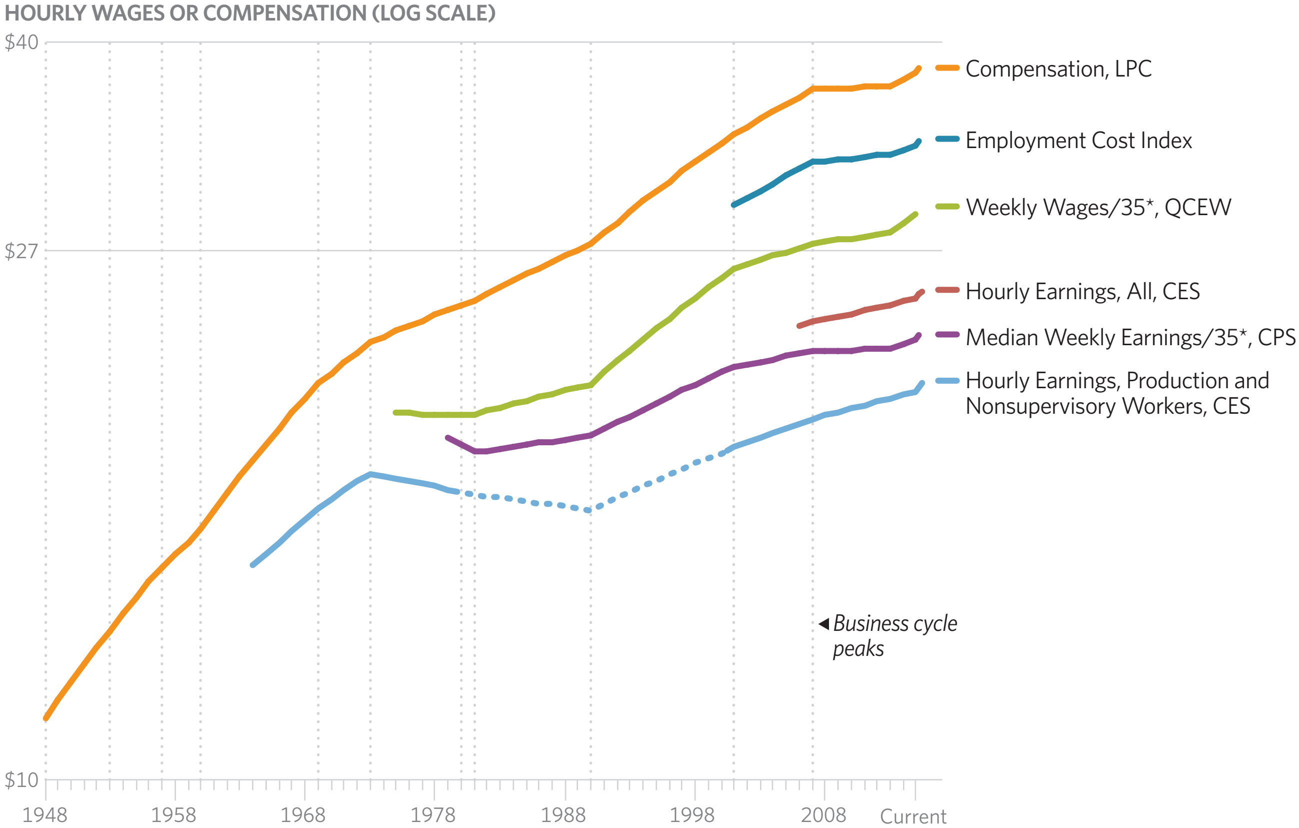
6. Business cycle peaks are designated by the National Bureau of Economic Research.

7. I combined "Average Hourly Earnings of Production and Nonsupervisory Employees" from 1964 to 1975, with "Average Weekly Wages from the Quarterly Census of Employment and Wages" from 1975 to 2007. The former series is unreliable during the 1980s and 1990s because its sample grew steadily to include more low-wage workers. The latter series is unavailable before 1975.

8. The growth of CPS median weekly earnings collapsed in the 1980s, down to just 0.3 percent per year. It rebounded from 1990 to 2007, averaging 0.9 percent per year. This *Backgrounder* does not engage the extensive debate about average wage growth within demographic groups, some of which have performed better than others.

CHART 2

Wage Growth Since 1948



* Divided by 35 for comparison with hourly data.
Notes: Data have been interpolated using business cycle peaks and two recent dates in order to highlight long-term trends. Data on "Hourly Earnings, Production and Nonsupervisory Workers, CES" is unreliable for the 1980s and 1990s because its sample grew steadily to include more low-wage workers.
Sources: See text box, "Six Ways to Measure Pay."

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termination of extended unemployment benefits.[9] Low commodity prices allowed real wages to grow rapidly in 2014 and 2015. Should one expect the recovery to strengthen in 2016? In particular, will 2015's strong real wage growth continue?

The good news, as shown above, is that wage growth has already arrived. Even indicators that exclude high-wage earners have grown at a healthy pace since January 2013. The bad news is that the gains from low oil prices are probably played out, and there are no compelling reasons to believe that wage growth will accelerate much.

One reason why wages are unlikely to accelerate is that they did not drop much during the Great Recession.[10] Another is that average wage growth can be ordinary even when the typical individual's wage growth is strong, because attractive labor markets bring more low earners into the workforce.[11]

9. Salim Furth, "How Much Did Extended Unemployment Insurance Increase Unemployment?" The Daily Signal, January 29, 2015, http://dailysignal.com/2015/01/29/much-extended-unemployment-insurance-increase-unemployment/.

10. Michael W. Elsby, Donggyun Shin, and Gary Solon, "Wage Adjustment in the Great Recession," National Bureau of Economic Research *Working Paper* No. 19478, September 2013, http://www.nber.org/papers/w19478 (accessed October 1, 2015).

11. The reverse can occur during recessions: Low-productivity workers are laid off, and the average wage rises despite falling employment. In 12 months during the Great Recession, real wages rose 3.4 percent thanks to low-wage layoffs and falling prices, but that is not an economy to emulate.

Yet there is also no reason to believe that wage growth will be stagnant in 2016 and beyond. Rising labor productivity, not cyclical factors, drives long-run trends in wage growth. Although the Great Recession has overshadowed the economy for the past six years, one will better predict the years ahead by taking a long view of the past rather than by extrapolating from the recovery.

Why Do Wages Seem Stagnant?

Given that straightforward data unanimously show historically typical wage growth over the past few years, it is surprising that a cottage industry has grown up around making wages appear to be stagnant. Such analysts arrived at their claims that wages are stagnant by:

- **Inviting readers to implicitly compare economy-wide averages to individual wage growth.** As individuals gain work experience, their own wages rise faster than the national average. Because people enter the labor force with low wages and retire with higher wages, the average grows much more slowly than most individuals' personal experience. Wage growth of 1 percent for an individual might be stagnant, but for the economy it is typical.

- **Using an inferior inflation measure.** Most wage growth pessimists use a CPI series, which systematically understates wage growth. Using the wrong measure can make wage gains seem smaller, but it should actually make the current era look better than it is, compared with the past, because the gap between the CPI and PCE has fallen in the past several years.

- **Using different starting points.** In one graph[12] from the Center for American Progress, wage gains are dated from February 2010, the trough of the Great Recession. Recessions can do strange things to average wages, since deflation can occur and low-wage individuals are more likely to lose their jobs. From February 2008 to February 2010, wages grew 1.6 percent per year, but that was in the context of the worst labor market collapse in a generation.

- **Conflating household income with individual wages.**[13] The decrease in labor force participation lowers incomes independently of wage trends. During an era when employment rates are trending downward, wages will grow faster than household incomes. Some policies that would raise wages, such as increasing the minimum wage, would decrease employment, with an ambiguous effect on total income.

Bad Policy Advice

High wage growth is universally applauded, but many proposals for raising wages are poorly reasoned. One common argument is to choose a period of historically high wage growth, such as the 1960s or the 1990s, and then cherry-pick one or two policies that were in place at the time. Misplaced nostalgia for the 1960s might make pundits pine for strong unions or a large manufacturing sector, but those same pundits would blanch at bringing back most other aspects of the 1960s economy: race and gender segregation in most workplaces, a military draft, low social spending, and high marginal tax rates.

Another understandable mistake is to use policy to try to raise productivity. Productivity is indeed the engine of wage growth, and government has sometimes played a role in disseminating new ideas and practices, although it has just as often inhibited or outlawed their spread. However, productivity growth is largely outside the control of policy, and government stock-picking is notoriously inaccurate and invites corruption. Thus, the record of government productivity policies is mostly one of failure. Government is at its best when protecting property rights and policing anti-competitive monopolies to foster an environment where productivity can flourish on its own. The data show that productivity growth leads to wage growth as predicted by economic theory.[14]

Finally, trying to raise wages through macroeconomic management is a recipe for rapid failure. The aggressive monetary policy of the late 1960s led to temporary wage growth, but soured into "stagflation," a period of high inflation and low growth that persisted for a decade and contributed to the low

12. Hersh, "Why Wages Are Not Rising as Job Growth Increases."

13. Pear, "Health Care Gains, But Income Remains Stagnant, the White House Reports."

wage growth of the 1980s. Stimulus spending and tax code gimmickry are like pushing on a string: The gains to one sector or region are losses to others. High minimum wages have harsh trade-offs for those at the margins of the labor force and cannot, in any case, improve the trend.

Good Policy Advice

Can government do anything at all to help wages? Perhaps counter-intuitively, the most promising area for raising real wages lies in lowering the prices of big-ticket consumer goods. The largest expenses for most American families are housing, transportation, food, and health care. In each of these categories, existing policies have artificially raised prices that consumers pay, so reforming those policies can improve Americans' real incomes.

- **Housing.** Housing costs are needlessly high in urban and suburban areas where zoning and permitting are restrictive. Low-density restrictions, parking minimums, and neighbor vetoes raise the price of housing. Lack of school choice also pushes up housing costs, since parents implicitly pay for good schools in their mortgages. At the federal level, policymakers should review whether Department of Housing and Urban Development grants are used to enable unaffordable housing policies at the local level.

- **Transportation.** For suburban and ex-urban commuters, transportation costs are higher than they should be due to fuel-economy standards.[15] Restrictions on oil and natural gas drilling make gasoline prices higher and more volatile. For urban commuters, transportation is overpriced thanks to public-sector unions[16] and taxi cartels.

- **Food.** Food costs in the U.S. are much lower than in the past[17] and lower than in many other developed countries thanks to relatively open trade laws. However, some improvements are possible, especially ending the Depression-era subsidies and protectionism, which raise consumer prices for milk, sugar, and other foodstuffs.[18]

- **Health care.** The health care and health insurance sectors are tied to government policy in too many ways to count. Mandates for lower prices that ignore the basic laws of supply and demand will fail. The only hope for lower costs is to implement competition-based reforms.[19]

Regulatory reforms in these areas would either allow suppliers to create the same output using fewer inputs (for instance, less time spent on building permits), or allow new suppliers to compete with existing ones. In each case, consumers have more choices at lower prices, allowing them to stretch their wages further.

Conclusion

Real wage growth over the past three years has been typical of historical averages. By examining several measures of aggregate wage growth, one gains a more complete picture of historical and recent trends. Although the historical data are well-known and recent data are widely available, many pundits

14. Stephen Rose, "Was JFK Wrong? Does Rising Productivity No Longer Lead to Substantial Middle Class Income Gains?" Information Technology & Innovation Foundation, December 2014, http://www.itif.org/publications/was-jfk-wrong-does-rising-productivity-no-longer-lead-substantial-middle-class-income-g (accessed October 1, 2015), and James Sherk, "Productivity and Compensation: Growing Together," Heritage Foundation *Backgrounder* No. 2825, July 2013, http://www.heritage.org/research/reports/2013/07/productivity-and-compensation-growing-together.
15. Diane Katz, "CAFE Standards: Fleet-Wide Regulations Costly and Unwarranted," Heritage Foundation *WebMemo* No. 3421, November 28, 2011, http://www.heritage.org/research/reports/2011/11/cafe-standards-fleet-wide-regulations-costly-and-unwarranted.
16. Stephen Smith, "Five Union Work Rules That Harm Transit Productivity," Market Urbanism, May 15, 2011, http://marketurbanism.com/2011/05/15/five-union-work-rules-that-harm-transit-productivity/ (accessed October 1, 2015).
17. Mark J. Perry, "As Share of Income, Americans Have the Cheapest Food in History and Cheapest Food on the Planet," Carpe Diem, July 3, 2010, http://mjperry.blogspot.com/2010/07/as-share-of-income-americans-have.html (accessed October 1, 2015).
18. Mario Loyola, "Sugar Shakedown: How Politicians Conspire with the Sugar Lobby to Defraud America's Families," Heritage Foundation *Backgrounder* No. 2929, July 17, 2014, http://www.heritage.org/research/reports/2014/07/sugar-shakedown-how-politicians-conspire-with-the-sugar-lobby-to-defraud-americas-families.
19. Kevin D. Dayaratna, "Competitive Markets in Health Care: The Next Revolution," Heritage Foundation *Backgrounder* No. 2833, August 19, 2013, http://www.heritage.org/research/reports/2013/08/competitive-markets-in-health-care-the-next-revolution.

have written about "stagnant wages." That description of the recent trends gives the false impression that the recovery, although delayed and incomplete elsewhere, is absent in wages. A better conclusion is that wage growth is mediocre but real; the same can be said of GDP and employment growth.

Wage growth in the last year has been strong due to falling prices of oil and related commodities. However, that bonus for workers and consumers is a one-time benefit. To encourage strong wage growth in 2016 and beyond, policymakers should enact regulatory reforms that lower the cost of living, especially in the major consumer spending categories, which can help to stretch each hour's wage further, effectively raising real wages.

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