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Economic Outlook and Forecast 2016

Greater Richmond Relocation Council

April 12, 2016

Question 1

Do you believe the Great Recession has ended?

a. Yes

b. No

c. Not sure

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Overview

- National growth
  - Remains modest
  - Labor market continues to improve
  - No recession in 2016
- Virginia employment is growing faster than the nation
  - Northern Virginia slightly slower than the state
  - Richmond much faster than the state

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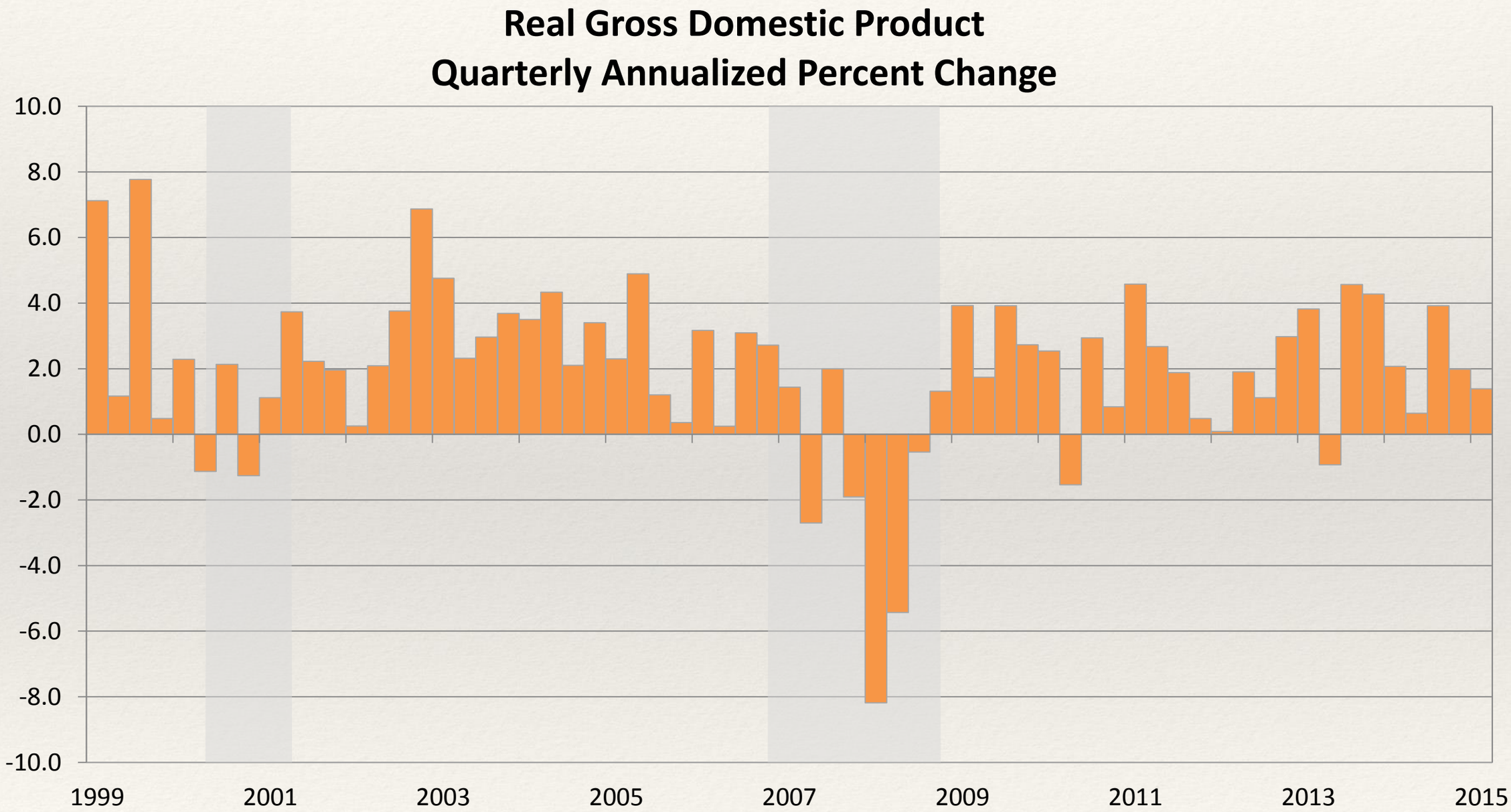
Real GDP Growth is Modest



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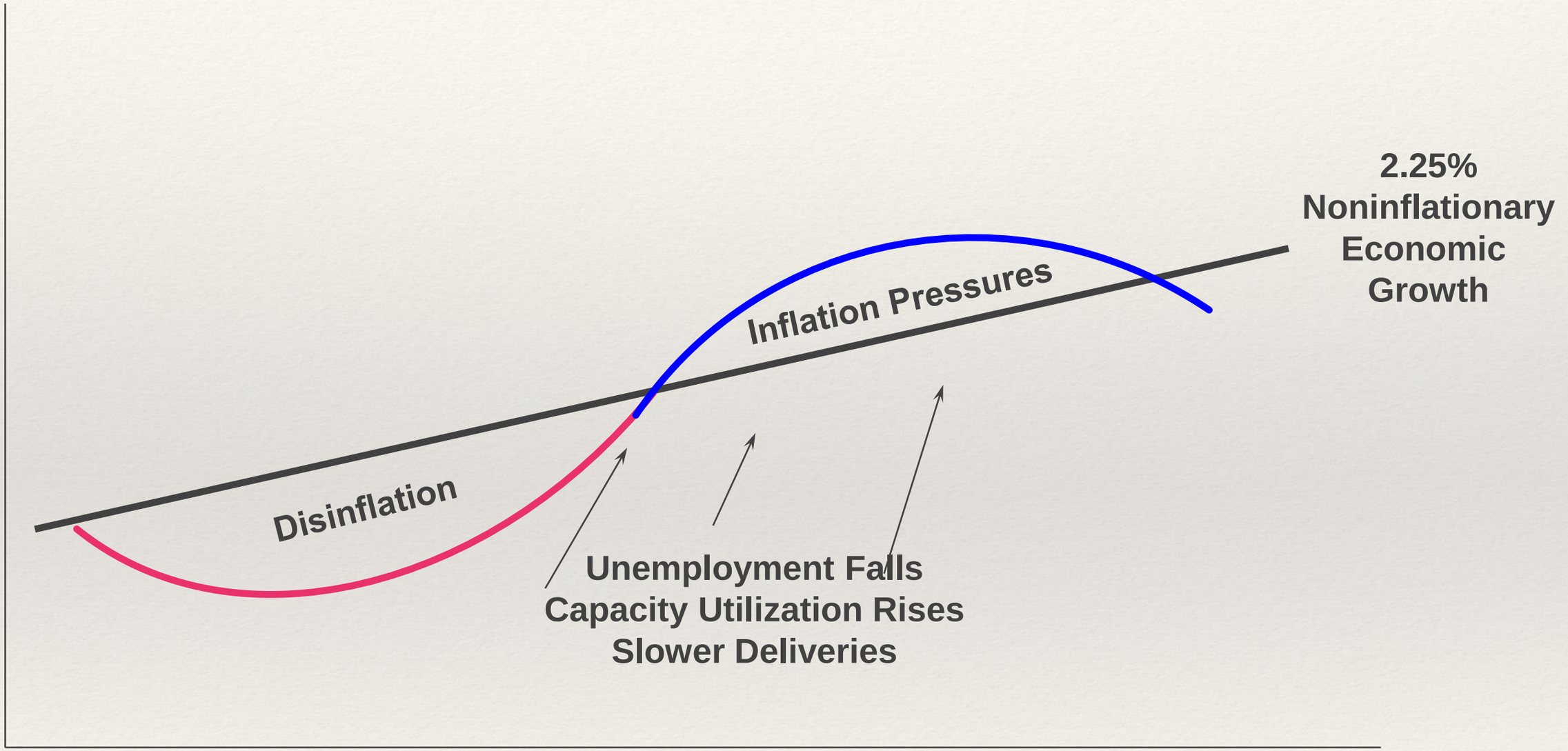
The Fed's Goal: 2.25% Real GDP Growth?



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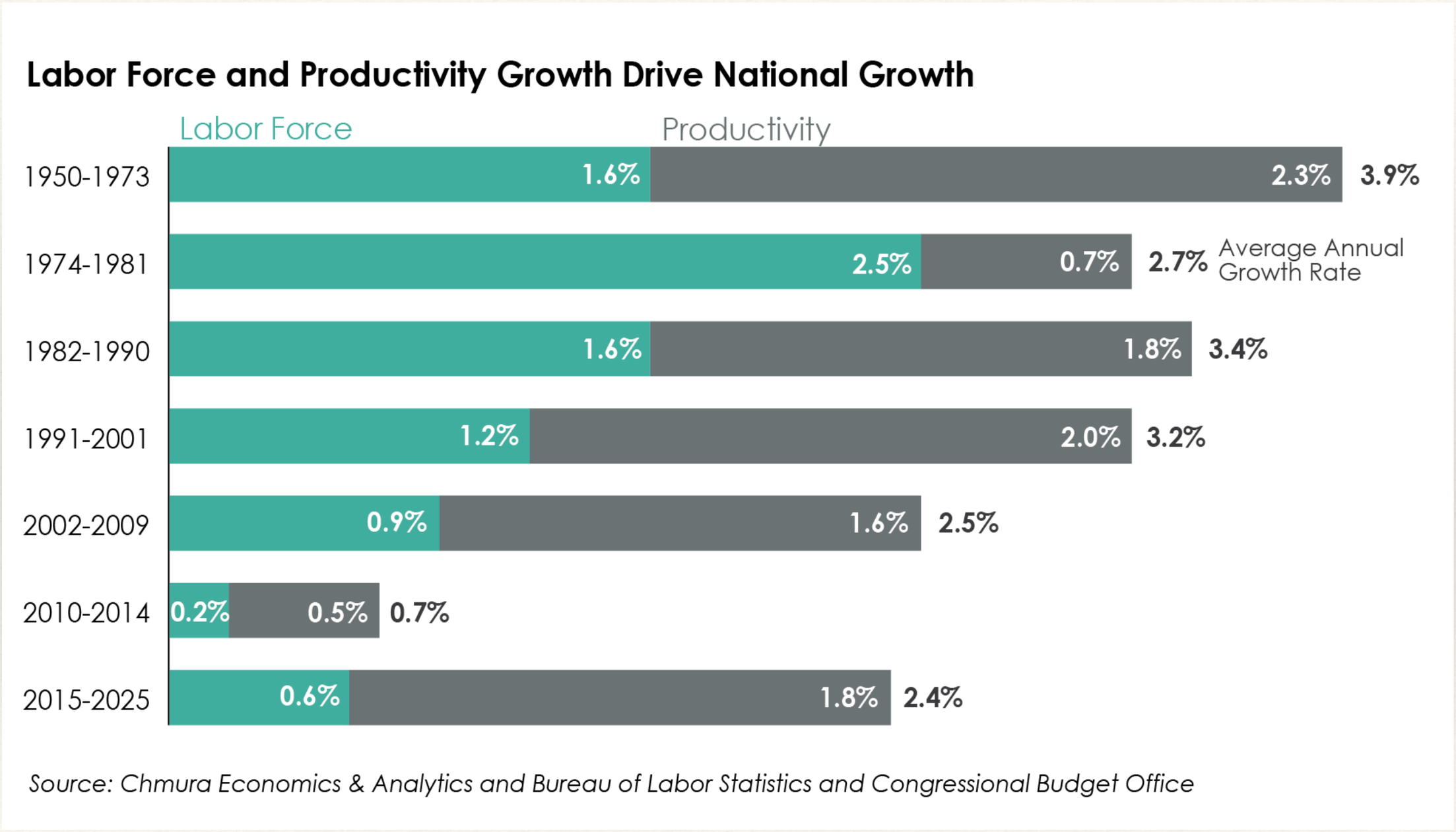
How Fast Can the Economy Grow?



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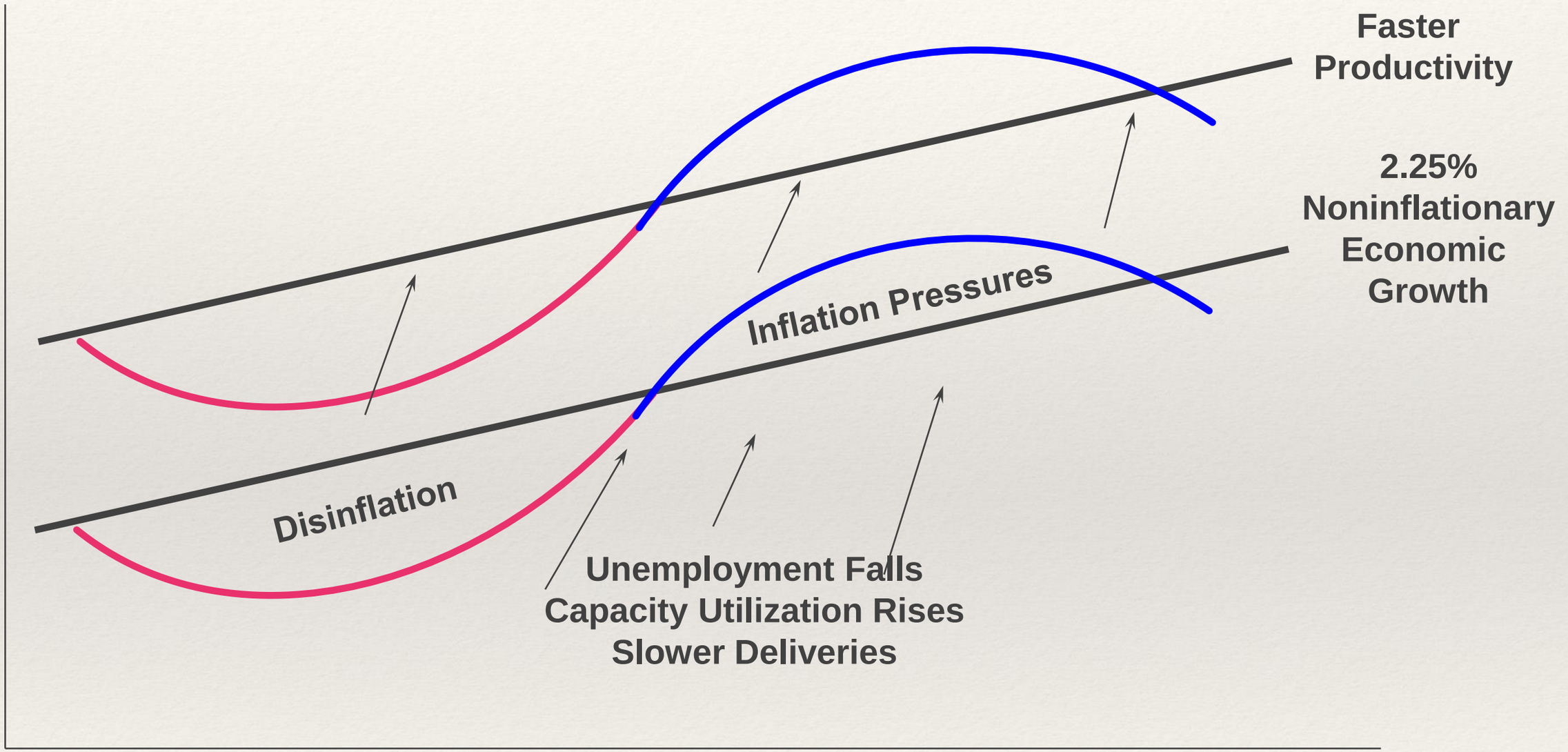
The Fed's Goal: 2.25% Real GDP Growth?



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What Impacts Productivity Growth?

- Inventions
- Innovation (lean manufacturing, medical advances)
- Technology adoption
- Regulatory burden

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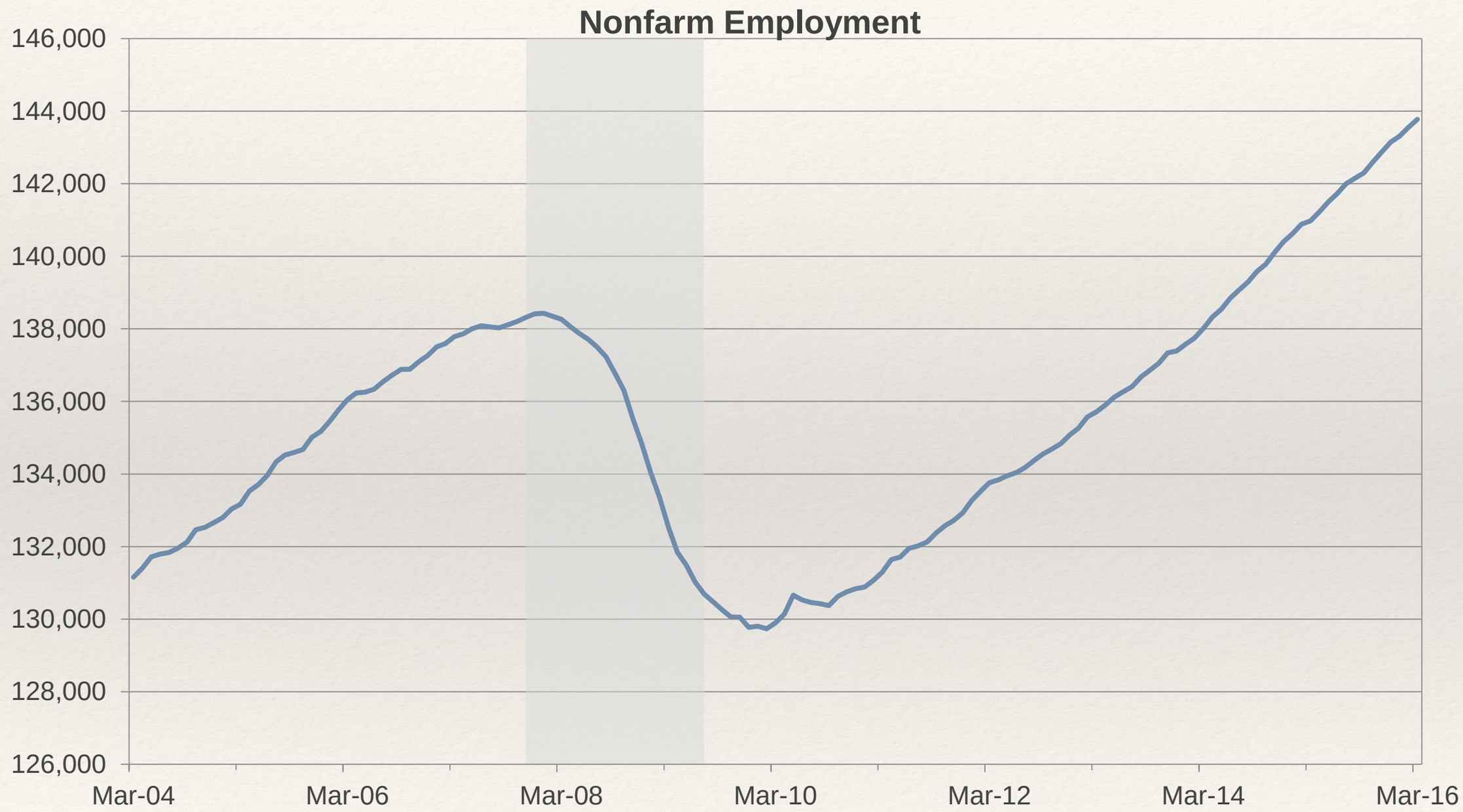
Recession Ended in June 2009; Employment Hit Previous Peak Mid-2014



Source: U.S. Department of Labor
Data through March 2016

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Question 2

When do you expect the next recession to start?

a. 2016

b. 2017

c. 2018

d. 2019

e. After 2019

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Unemployment Rate has been Declining

Source: U.S. Department of Labor
Data through March 2016

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Unemployment Rate not as Low as it Seems

HOUSEHOLD DATA

Table A-15. Alternative measures of labor underutilization [Percent]

Measure	Not seasonally adjusted			Seasonally adjusted					
	Mar. 2015	Feb. 2016	Mar. 2016	Mar. 2015	Nov. 2015	Dec. 2015	Jan. 2016	Feb. 2016	Mar. 2016
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	2.6	2.2	2.3	2.4	2.1	2.1	2.0	2.1	2.1
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	2.9	2.7	2.6	2.7	2.5	2.4	2.3	2.4	2.4
U-3 Total unemployed, as a percent of the civilian labor force (official unemployment rate)	5.6	5.2	5.1	5.5	5.0	5.0	4.9	4.9	5.0
U-4 Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	6.0	5.6	5.5	5.9	5.4	5.4	5.3	5.3	5.3
U-5 Total unemployed, plus discouraged workers, plus all other persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force	6.8	6.3	6.1	6.7	6.1	6.1	6.2	6.0	6.0
U-6 Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force	11.0	10.1	9.9	10.9	9.9	9.9	9.9	9.7	9.8

NOTE: Persons marginally attached to the labor force are those who currently are neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the past 12 months. Discouraged workers, a subset of the marginally attached, have given a job-market related reason for not currently looking for work. Persons employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule. Updated population controls are introduced annually with the release of January data.

Source: Bureau of Labor Statistics

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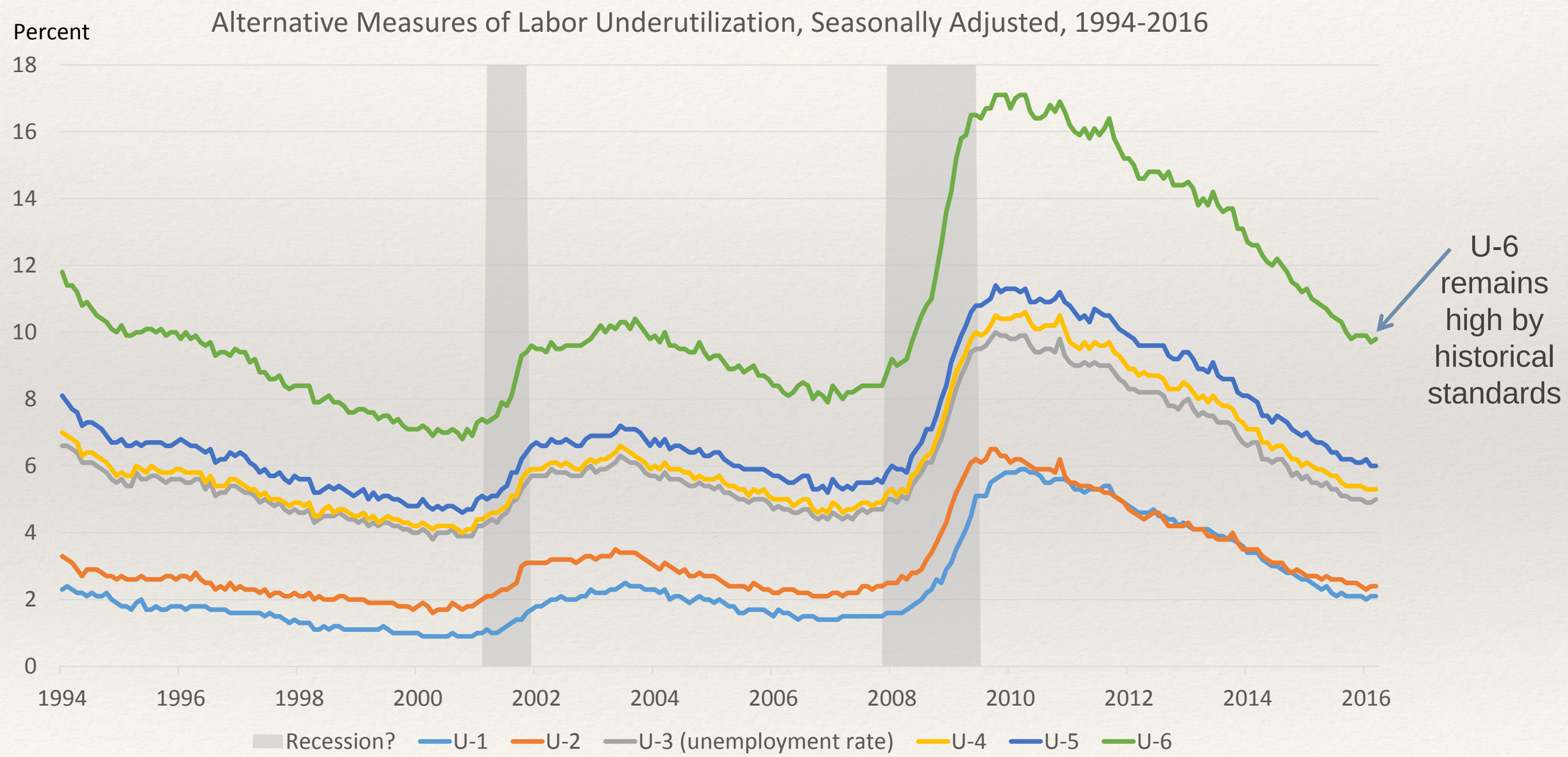
Slack Remains in Labor Market



Source: Bureau of Labor Statistics

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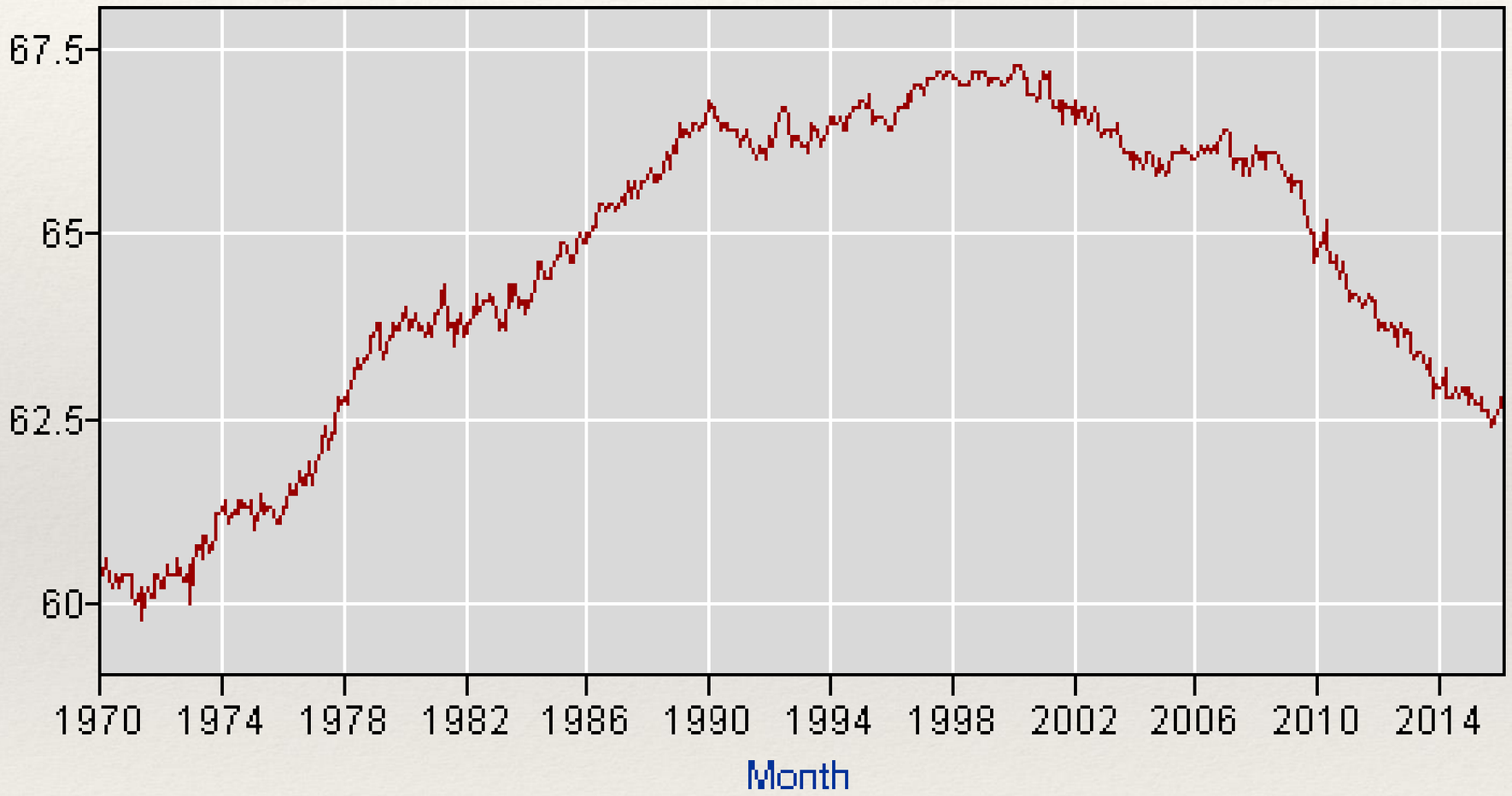
Labor Market is Weaker than Unemployment Rate Suggests

Participation Rate: % 16 years and over in the labor market



Source: U.S. Department of Labor Statistics.
Data through March 2016

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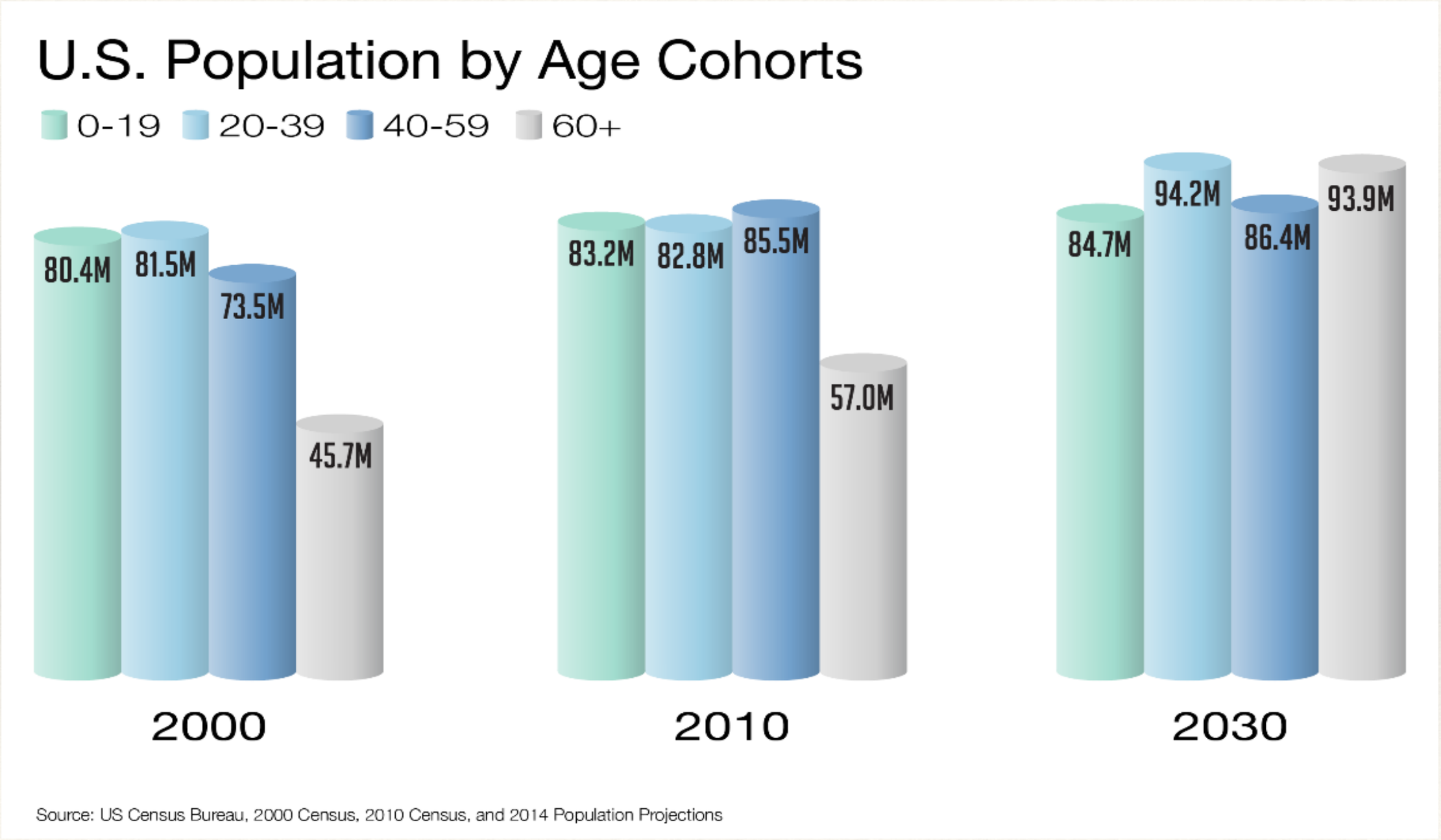
The Graying of America



Source: US Census Bureau, 2000 Census, 2010 Census, and 2014 Population Projections

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Question 3

Of your customers in the past year, what is the most common reason behind their relocation?

a. Long-term employment change
b. Temporary job change
c. Family reasons
d. Retirement
e. Layoff
f. Other

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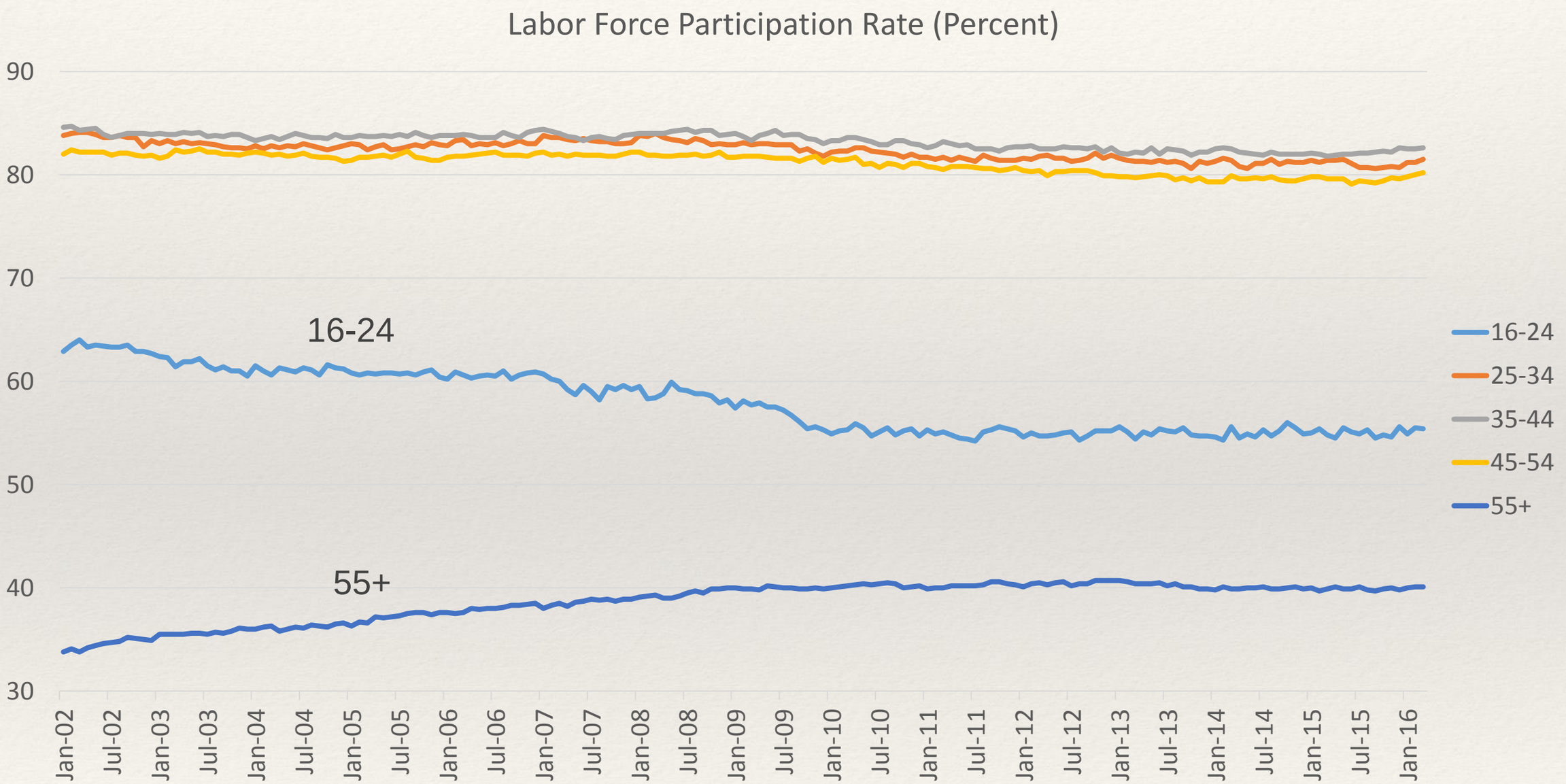
Youth Dropping out of Labor Force

By Age Cohort



Source: U.S. Department of Labor Statistics
Data through March 2016

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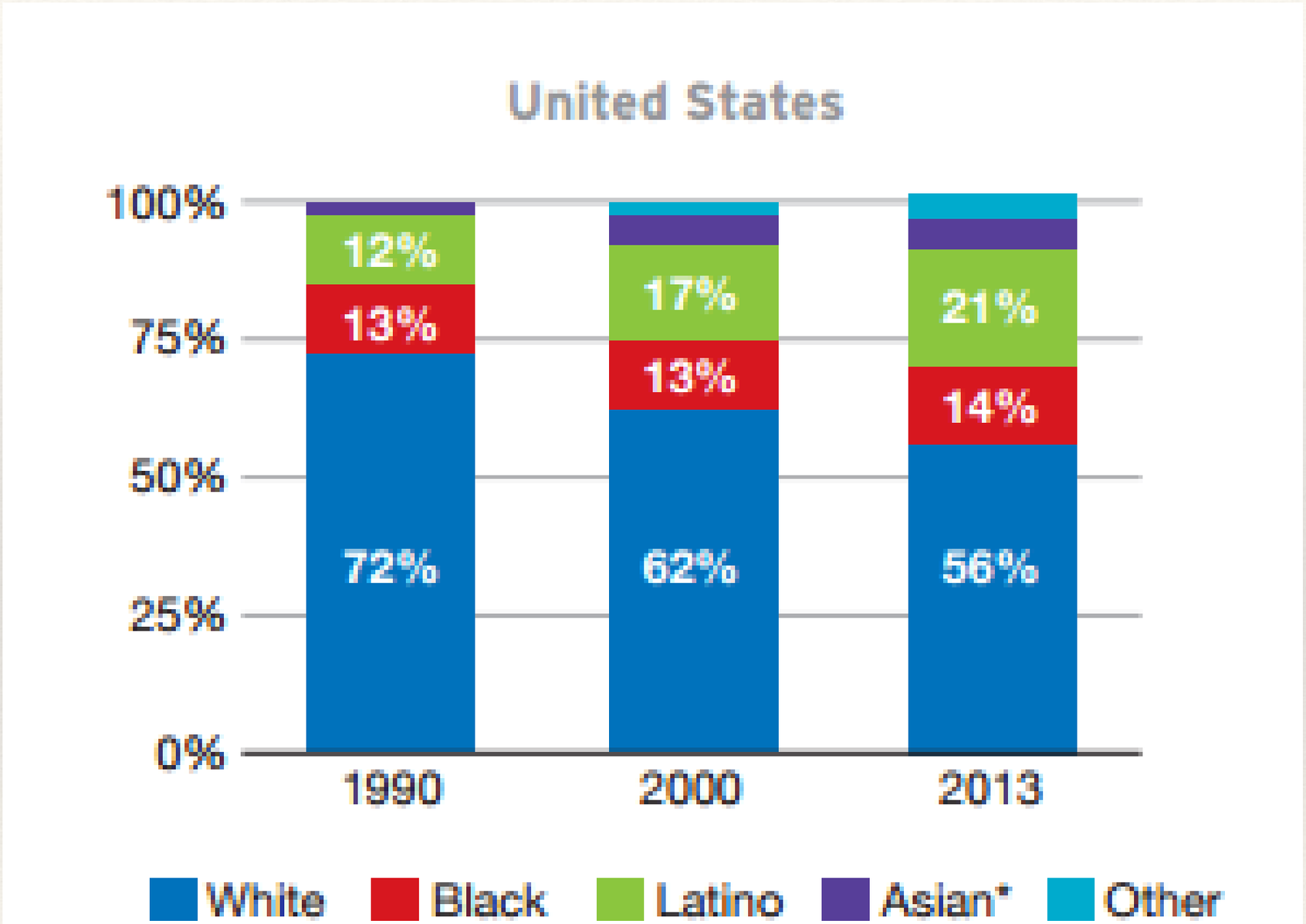
Diversity of Young Adults Age 18-29



http://www.brookings.edu/~/media/research/files/reports/2015/07/20-young-adults-jobs/bmpp_srvy_unemploymentyouth_july20.pdf

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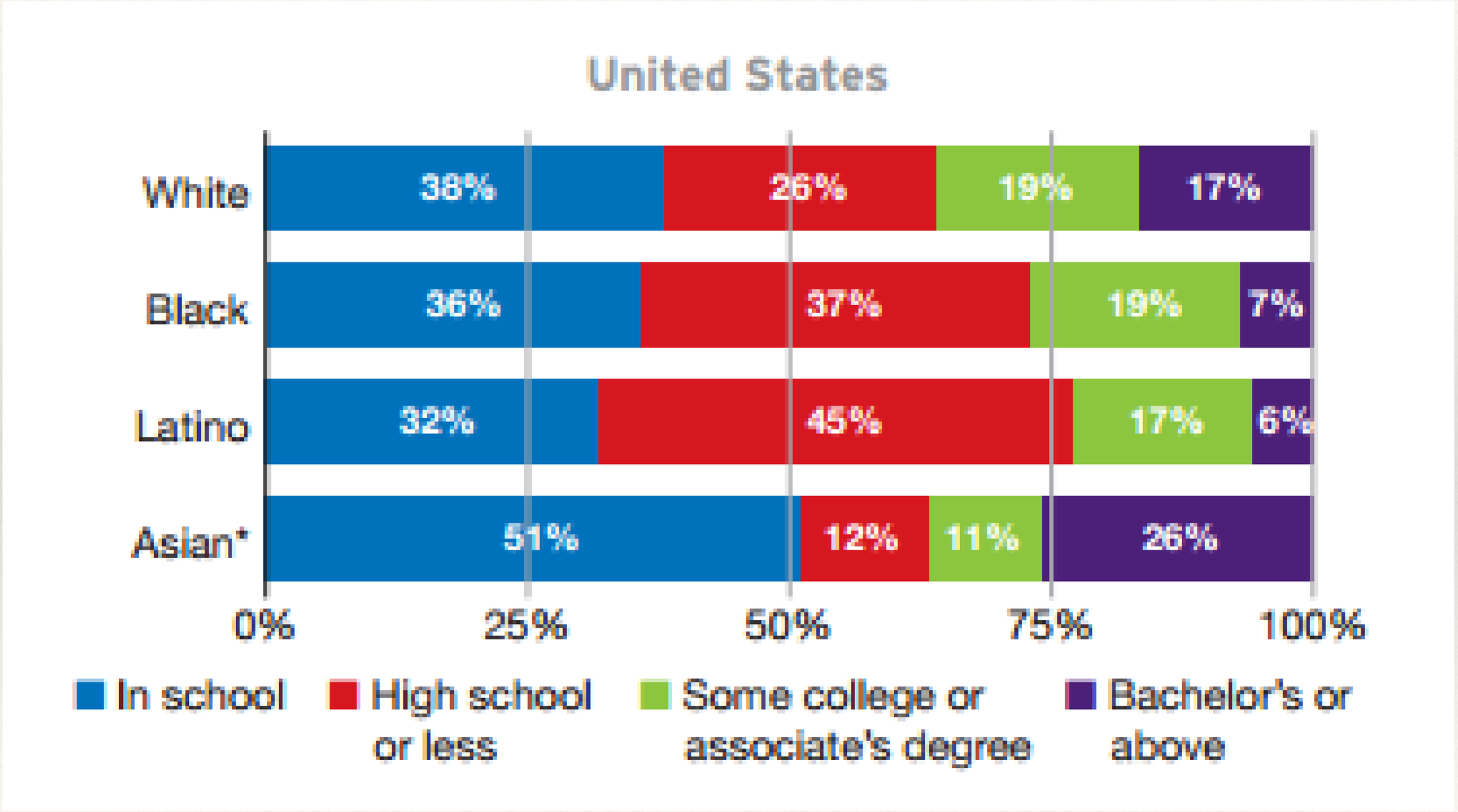
Educational Attainment
Age 18-29, 2013



http://www.brookings.edu/~/media/research/files/reports/2015/07/20-young-adults-jobs/bmpp_srvy_unemploymentyouth_july20.pdf

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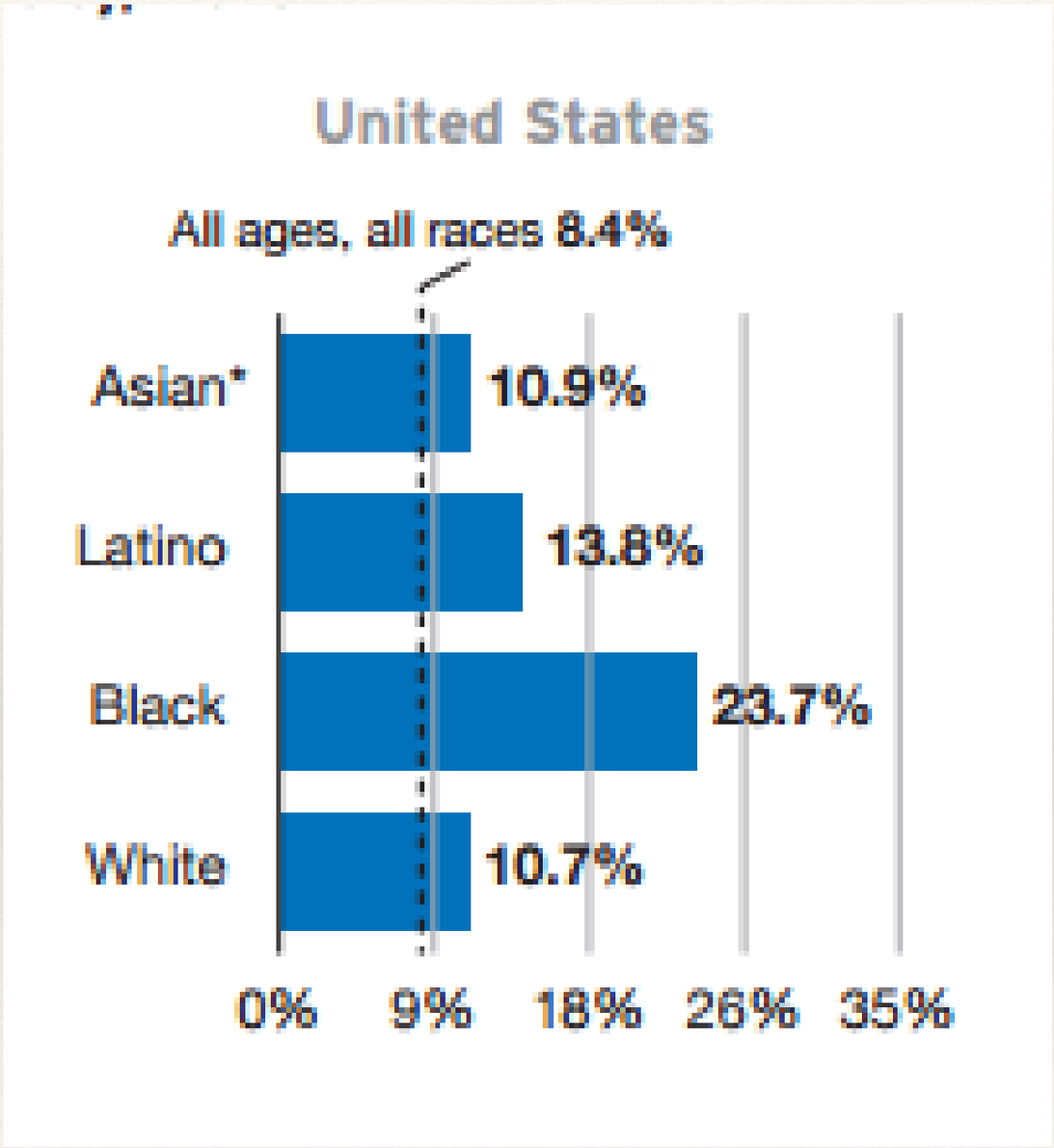

http://www.brookings.edu/~/media/research/files/reports/2015/07/20-young-adults-jobs/bmpp_srvy_unemploymentyouth_july20.pdf

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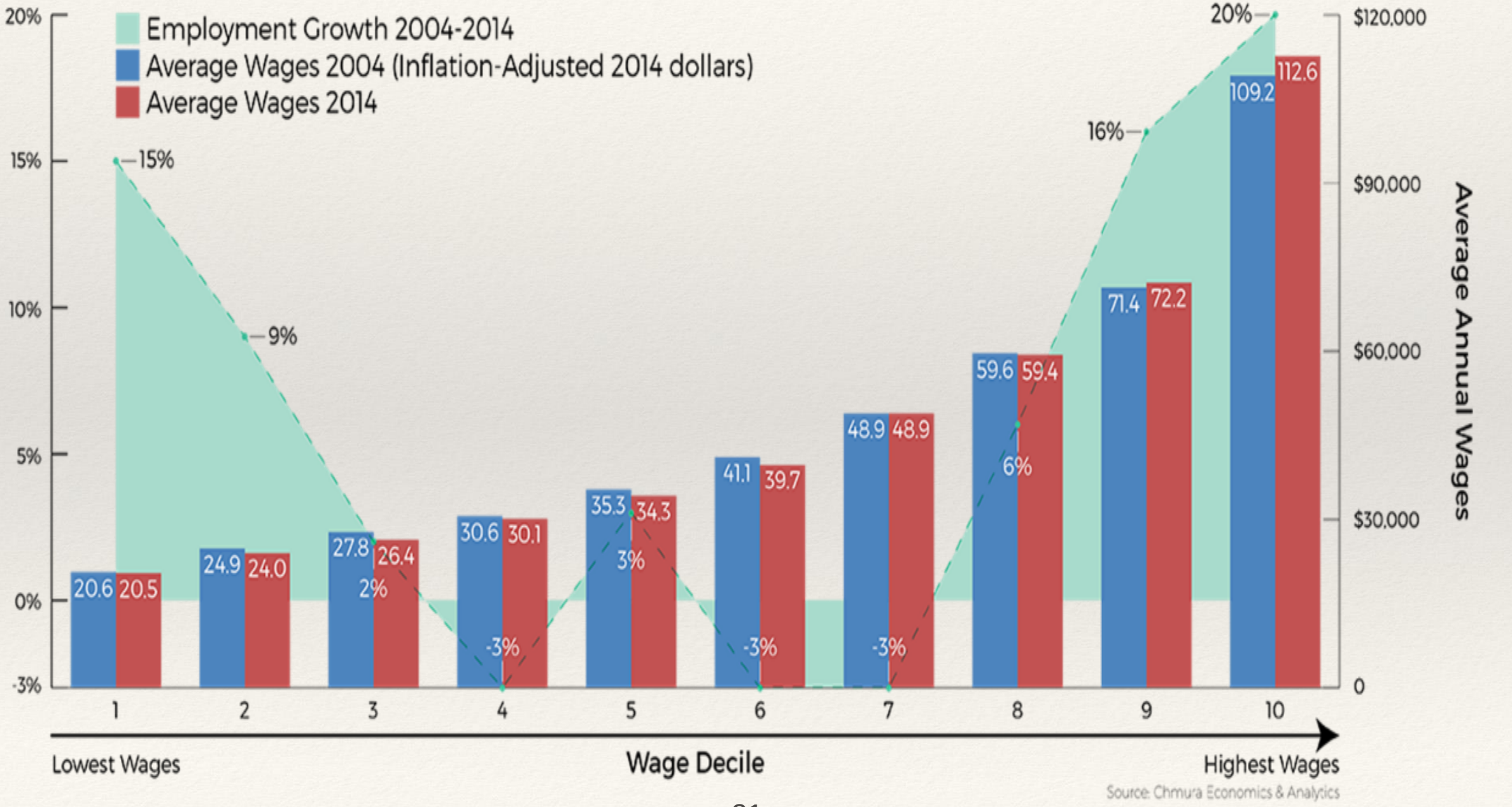
Hollowing Out of the Middle Class



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Question 4

Of your customers in the past year, what has been the most popular occupation you have helped with relocation service?

a. IT/Computer Science Professionals
b. Lawyers
c. Accountants
d. Consultants/Management Professionals
e. Other

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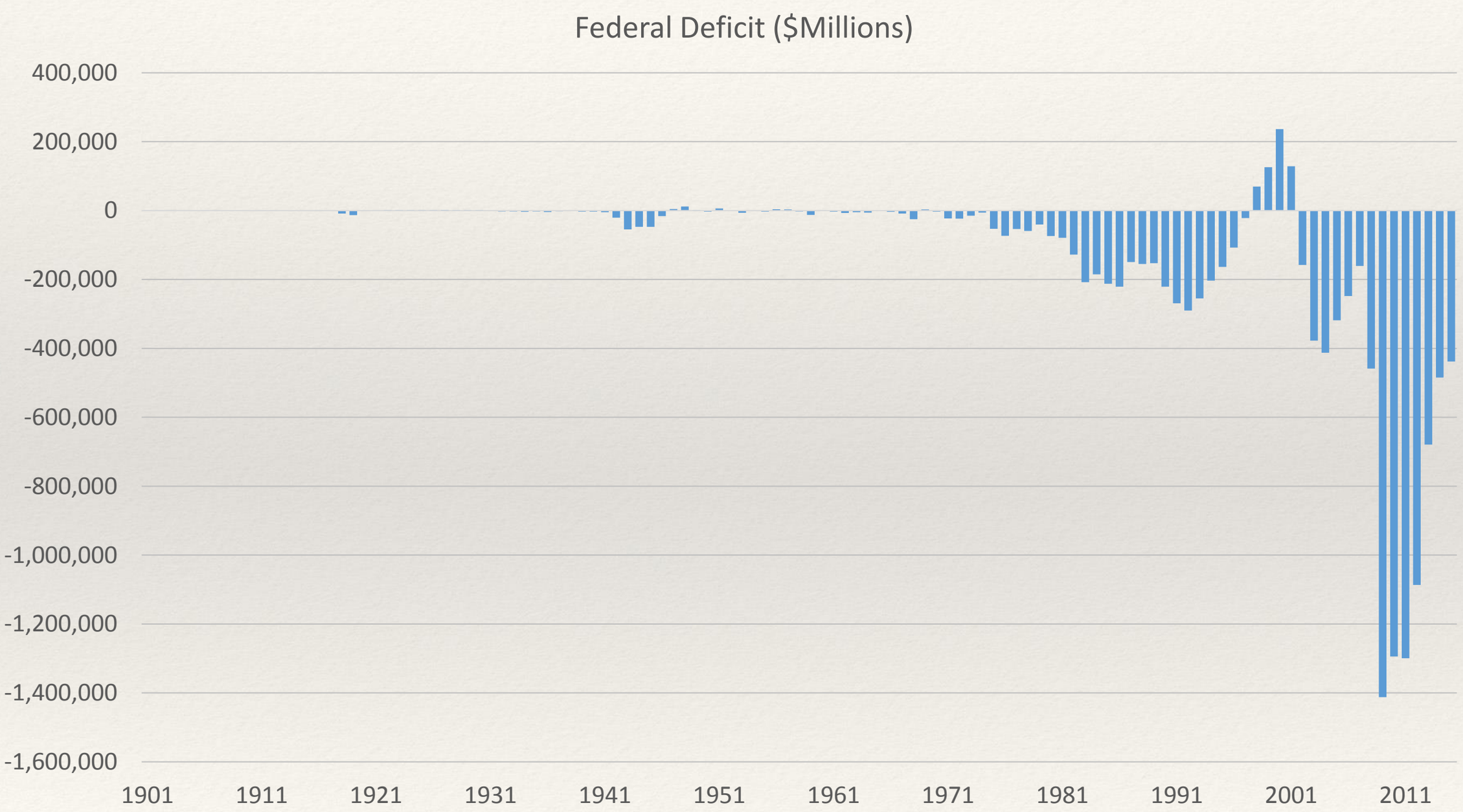
Federal Spending Needs to be Cut



Source: St. Louis Federal Reserve
Last data point is 2015

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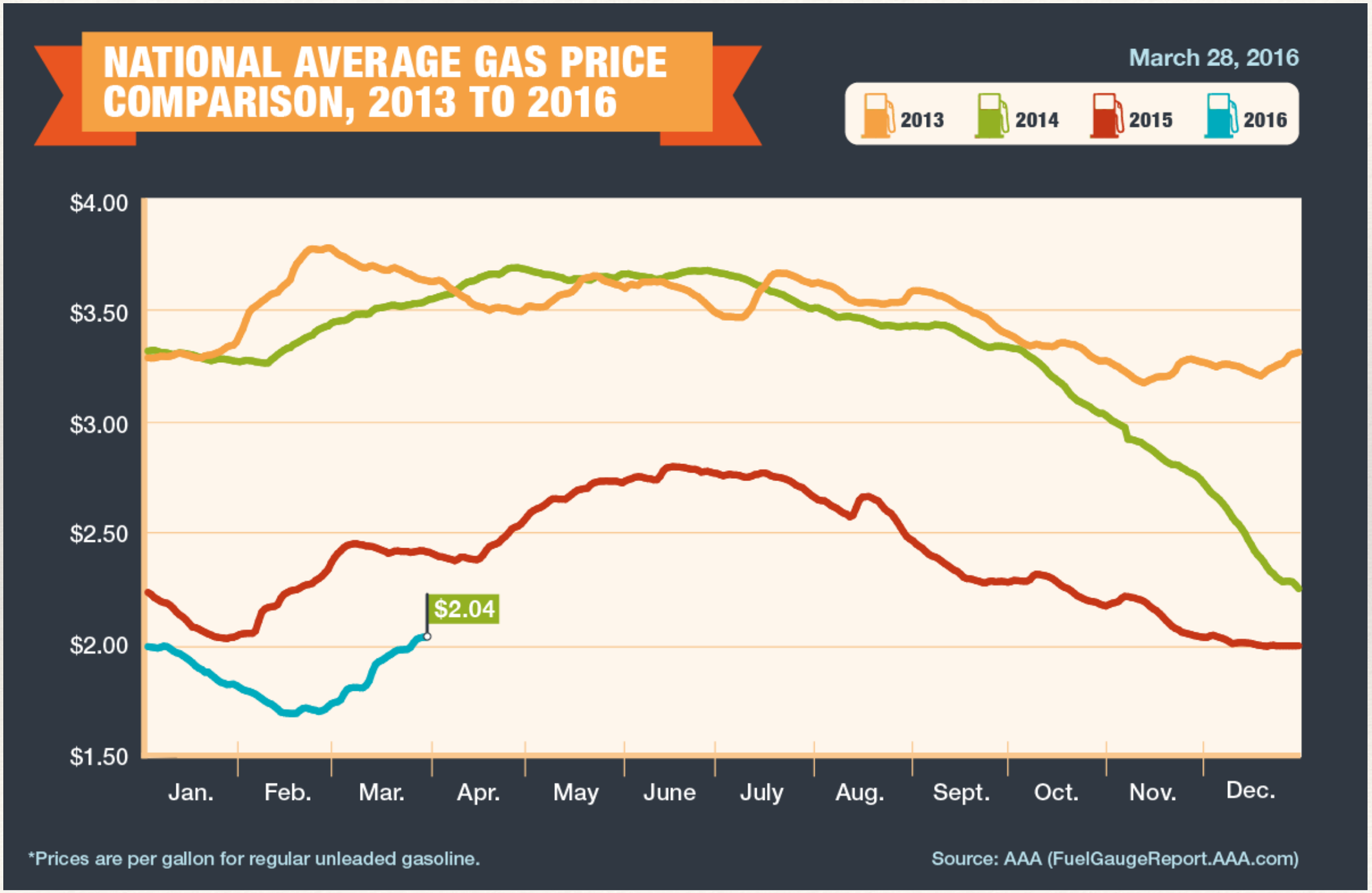
Gasoline Prices…As Good as Tax Cut!



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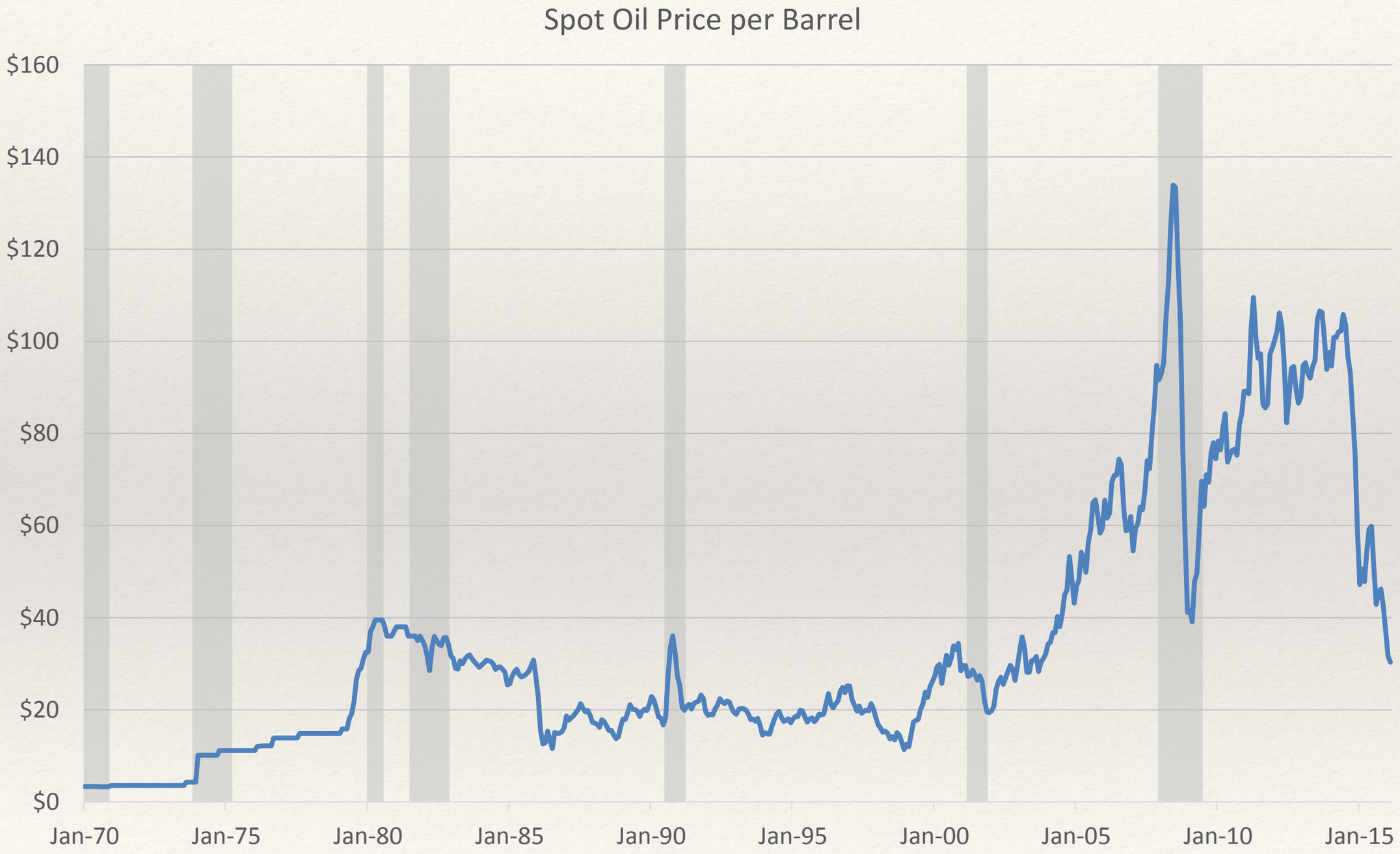
Oil Still Prices Still Plummeting

….Increase Associated with Recession not Decline



Source: West Texas Intermediate
Data through February 2016

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Recent Stock Market Volatility

Paul Samuelson: the stock market has predicted nine out of the past five recessions

Source: Yahoo Finance

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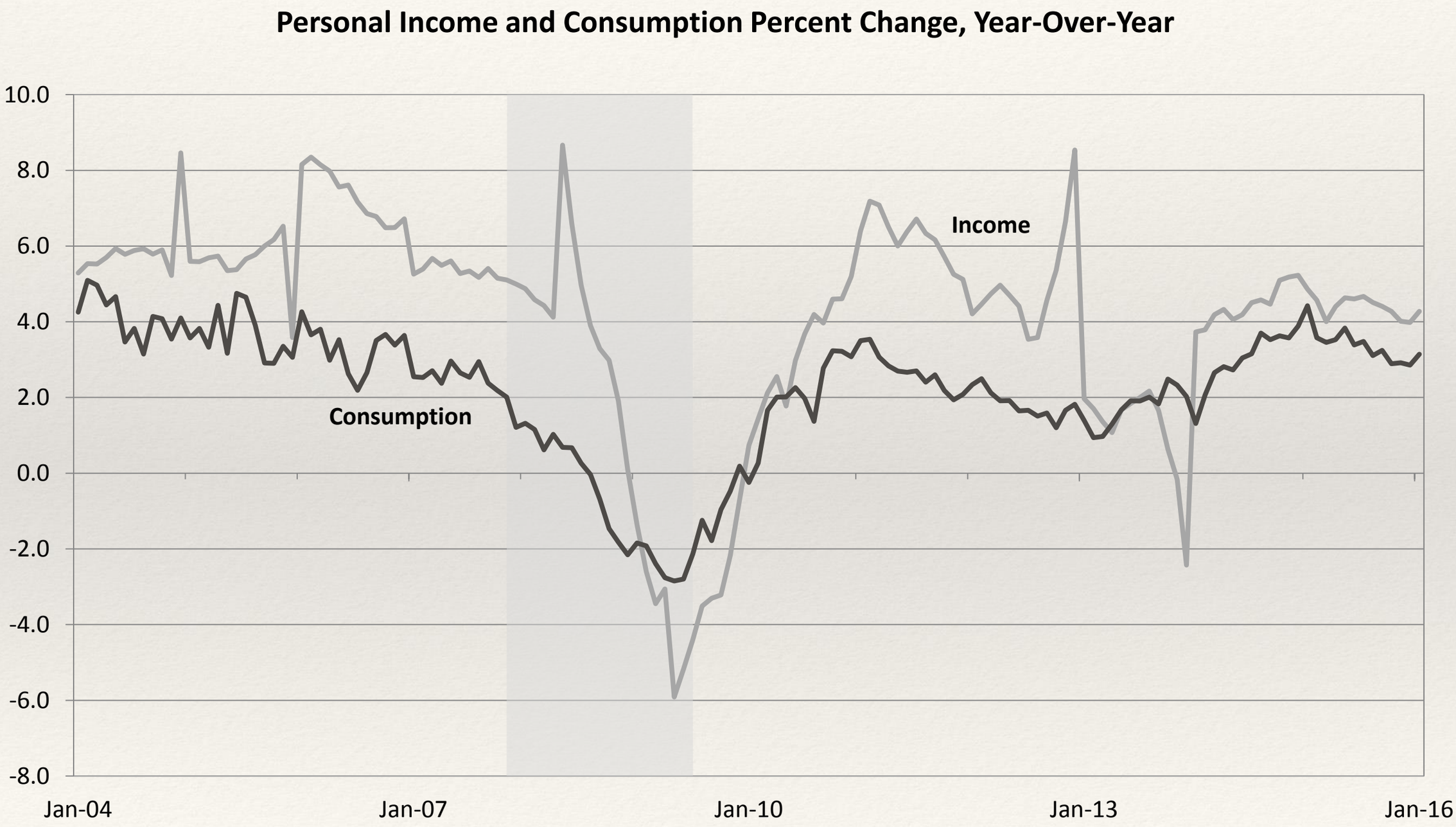
Consumer (60% of GDP) has Room to Spend: Income is Rising Faster than Spending



Source: Bureau of Economic Analysis

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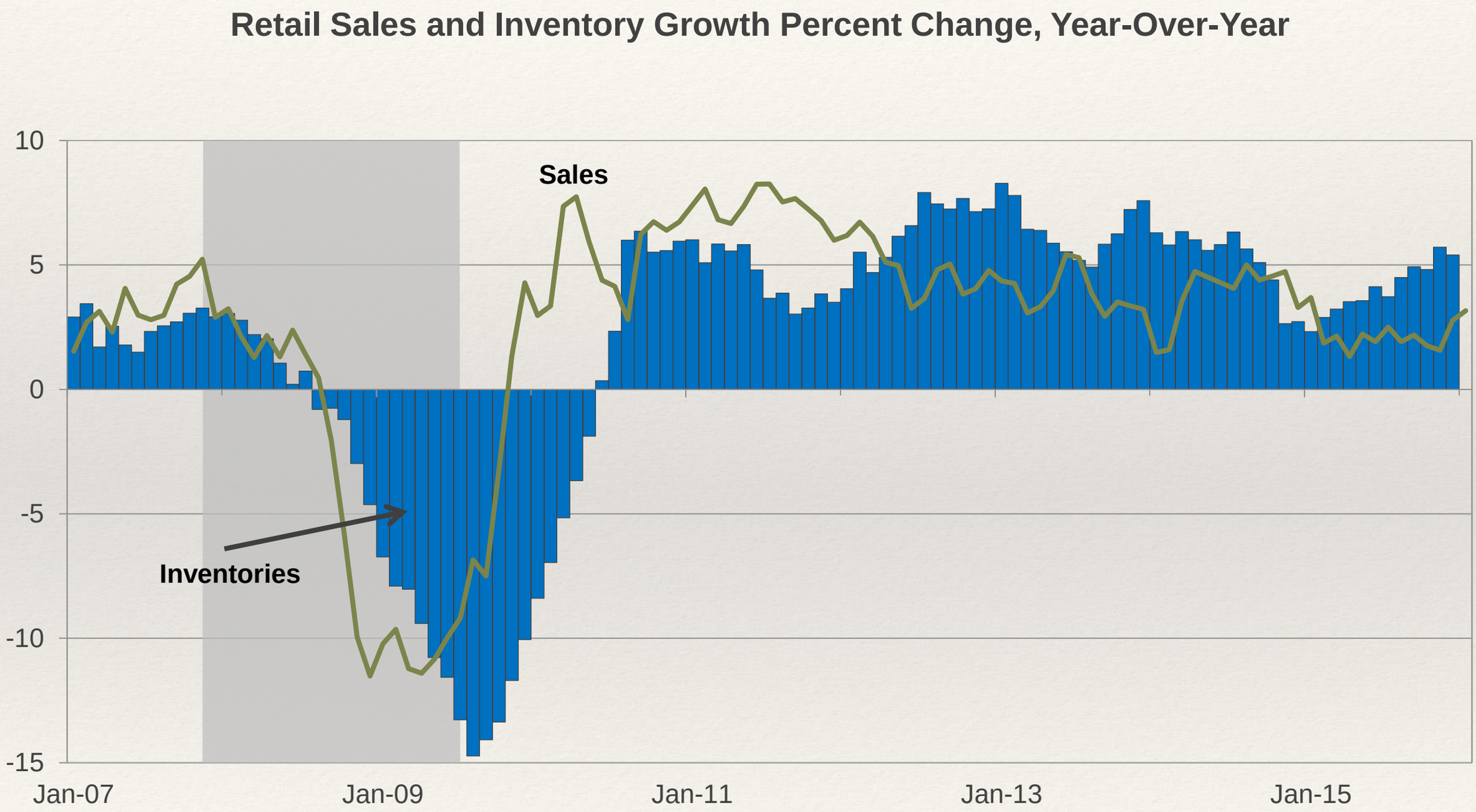
No Imbalances



Source: U.S. Census

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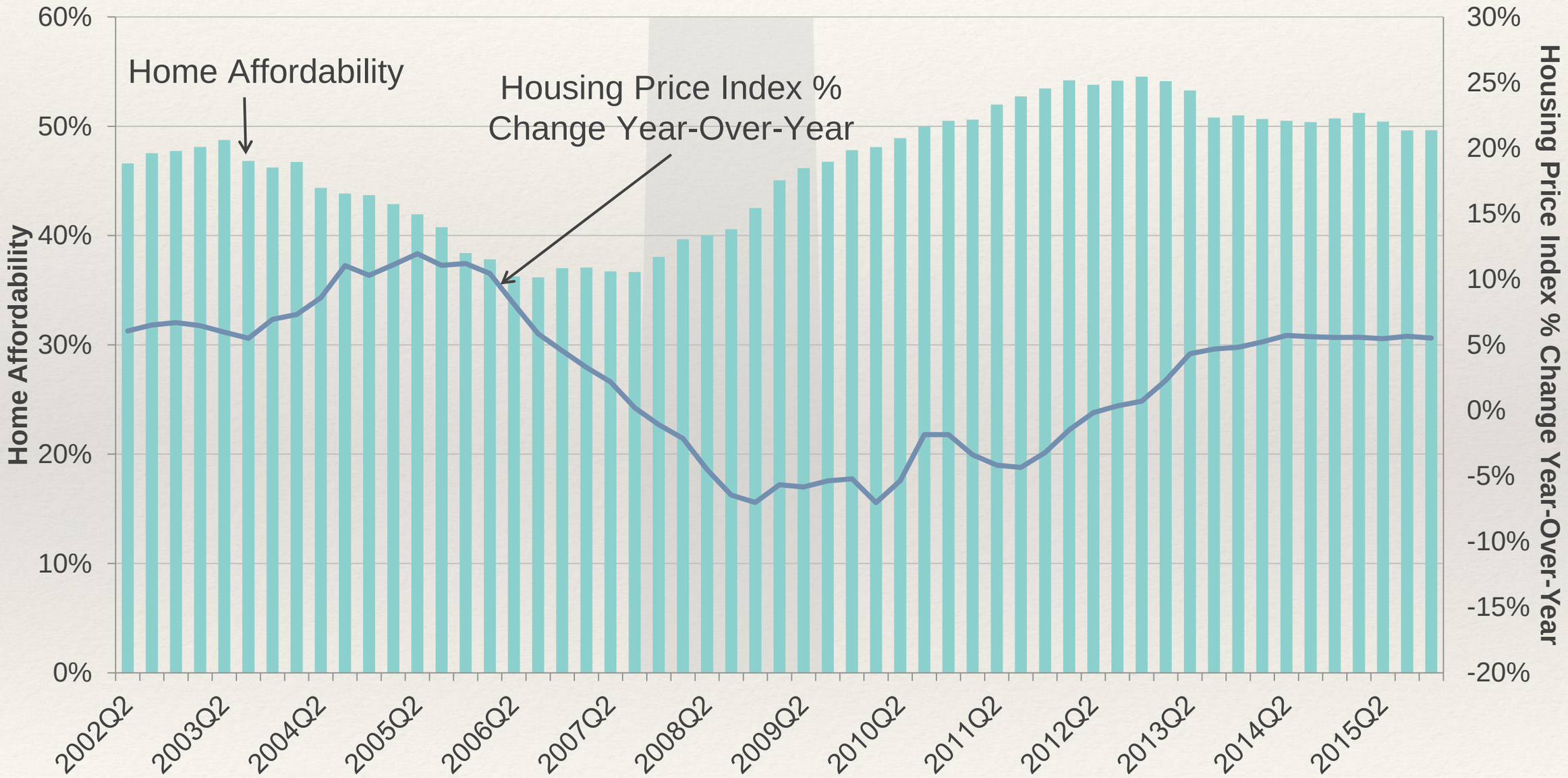
Home Prices Rise & Affordability Drops

Affordability: Percentage of Households that can Afford a Median Priced Home



Source: Federal Housing Finance Agency and Chmura Economics

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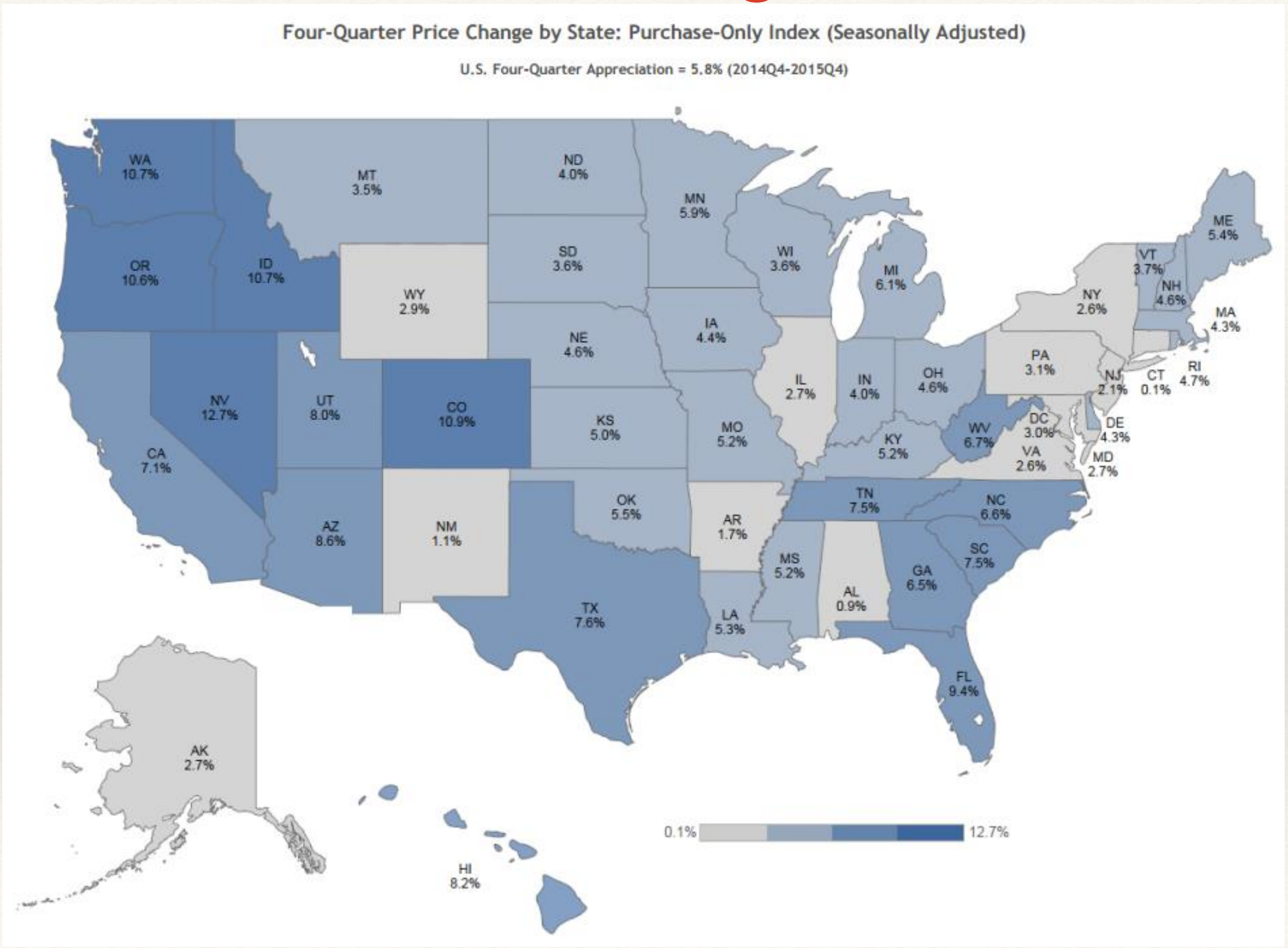
Home Prices Rising In All States



Source: Federal Housing Finance Agency

Existing Home Sales Remain Below Peak

Homeownership has fallen to 64% from 69.1% Peak in 2005

Source: National Association of Realtors

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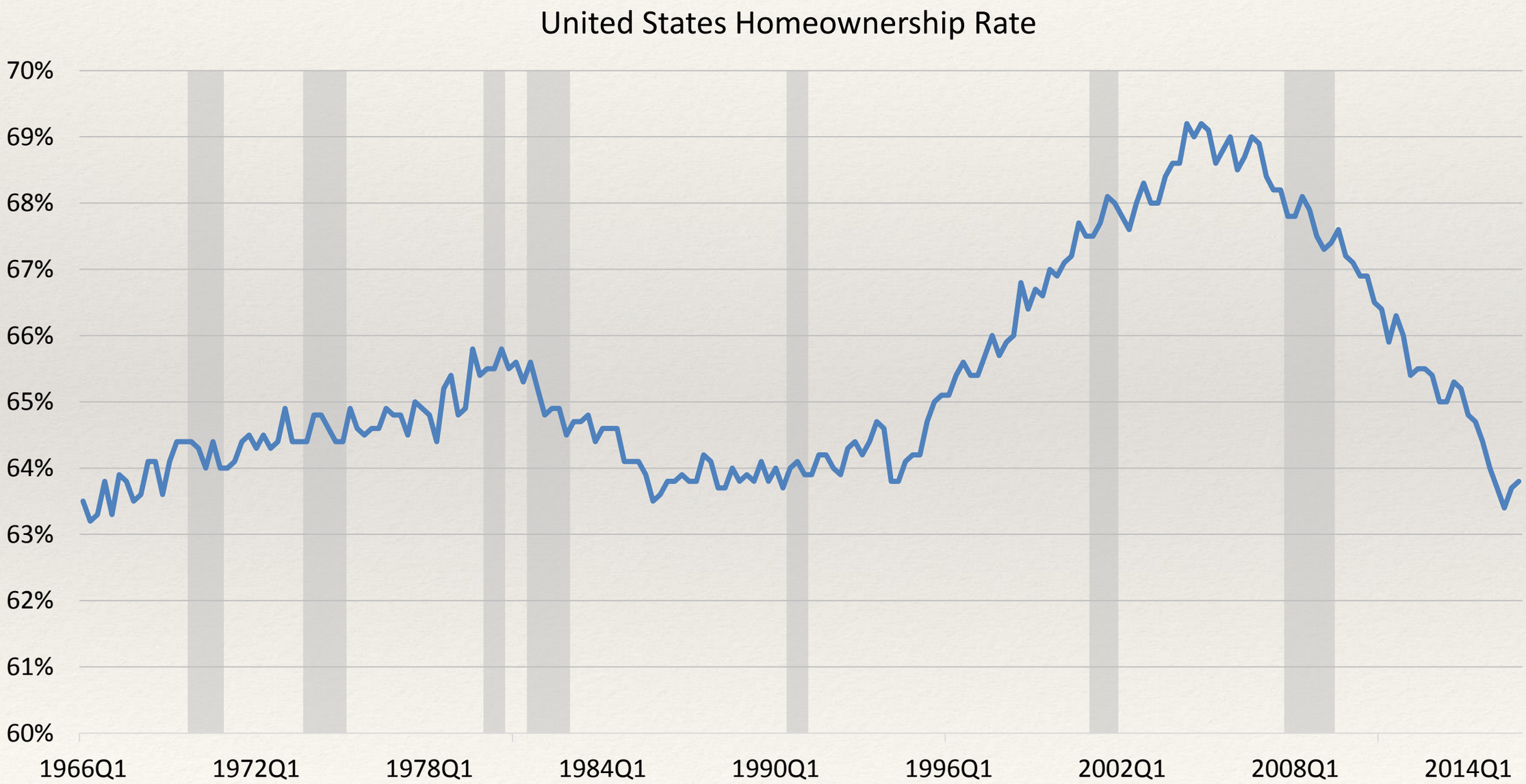
Home Ownership Low by Historical Standards

Issues: Student Loans, Weakness in Labor Market



Source: U.S. Census & Chmura

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Continued Modest Growth Expected

Expansion started 6/09; Now in 83rd Month; Last 3 Expansions Averaged 95 Months

	Actual			Forecast		
	2013	2014	2015	2016	2017	2018
	Percent Change					
Real Gross Domestic Product	1.5	2.4	2.4	2.3	2.8	3.1
Consumption Expenditures	1.7	2.7	3.1	2.6	2.7	2.8
Gross Private Domestic Investment	4.5	5.4	4.9	2.7	4.4	5.3
Residential Investment	9.5	1.7	8.7	6.7	6.9	7.2
Nonresidential Investment	3.0	6.2	2.9	3.6	4.5	5.2
Producer's Durable Equipment	3.2	5.8	3.1	3.5	6.8	5.8
Structures	1.5	8.2	-1.5	-1.0	4.3	5.2
Intellectual Property Products	3.8	5.2	5.8	3.0	4.5	4.1
Government Expenditures	-2.9	-0.6	0.8	1.1	1.6	2.0
	Trade Deficit (Billions of 2000 Dollars)					
Net Exports, Goods & Services	-417.5	-442.7	-547.2	-585.9	-595.9	-619.8
Consumer Price Index	1.5	1.6	0.1	1.4	2.1	2.4
	Yields (%)					
Federal Funds Rate	0.1	0.1	0.1	0.7	2.3	4.2
Prime Rate	3.3	3.3	3.3	3.9	5.3	7.2
10-Year Treasury	2.4	2.5	2.1	2.8	4.2	5.1
30-Year Conventional Mortgage	4.0	4.2	3.9	4.4	5.8	6.8

Inflation expectations drive long-term rates; Risk: demand holds rates down

Source: Chmura Economics & Analytics

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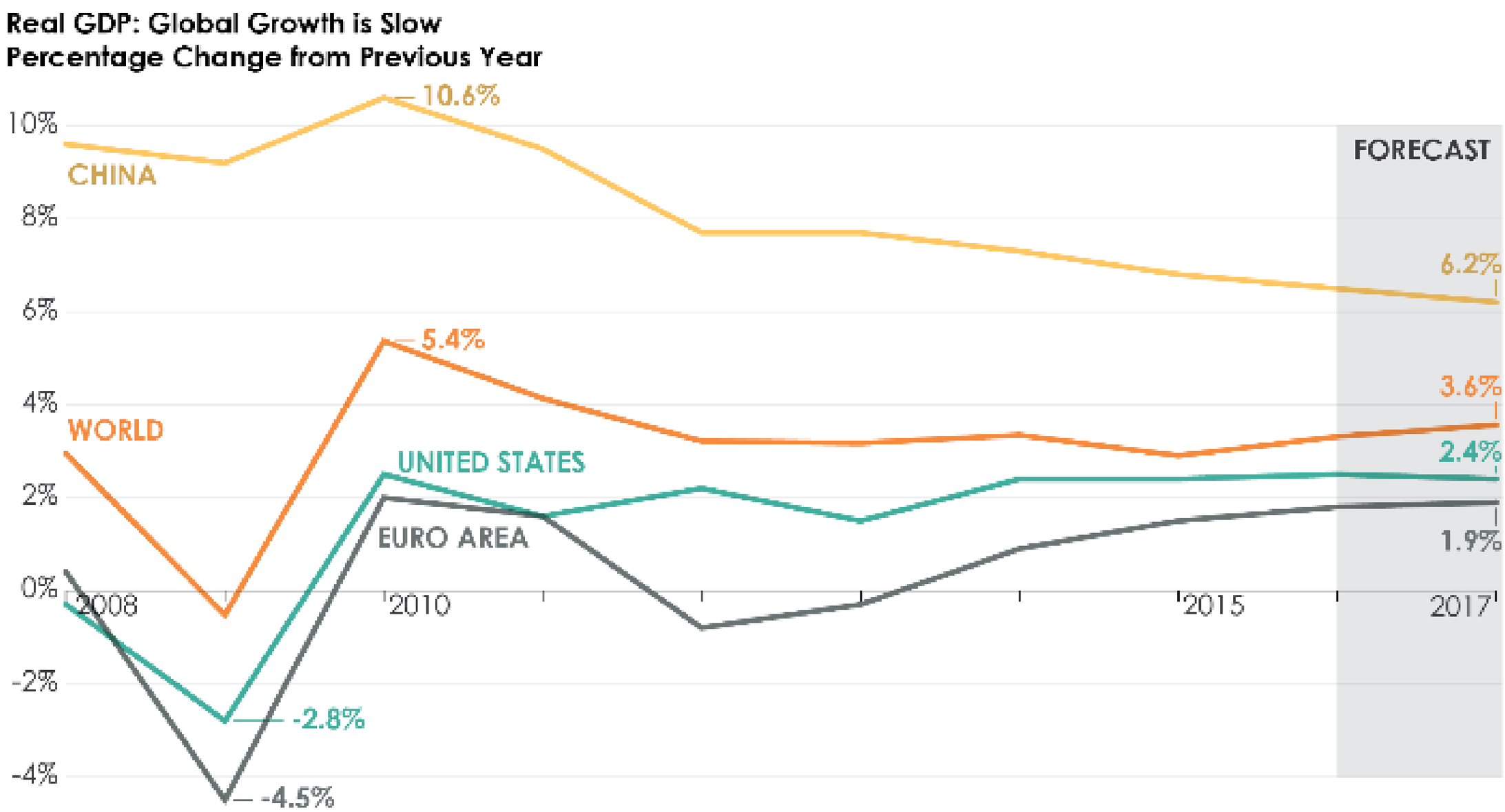
Worldwide Growth is Slow



Source: Chmura Economics & Analytics and Organization of Economic Co-operation and Development

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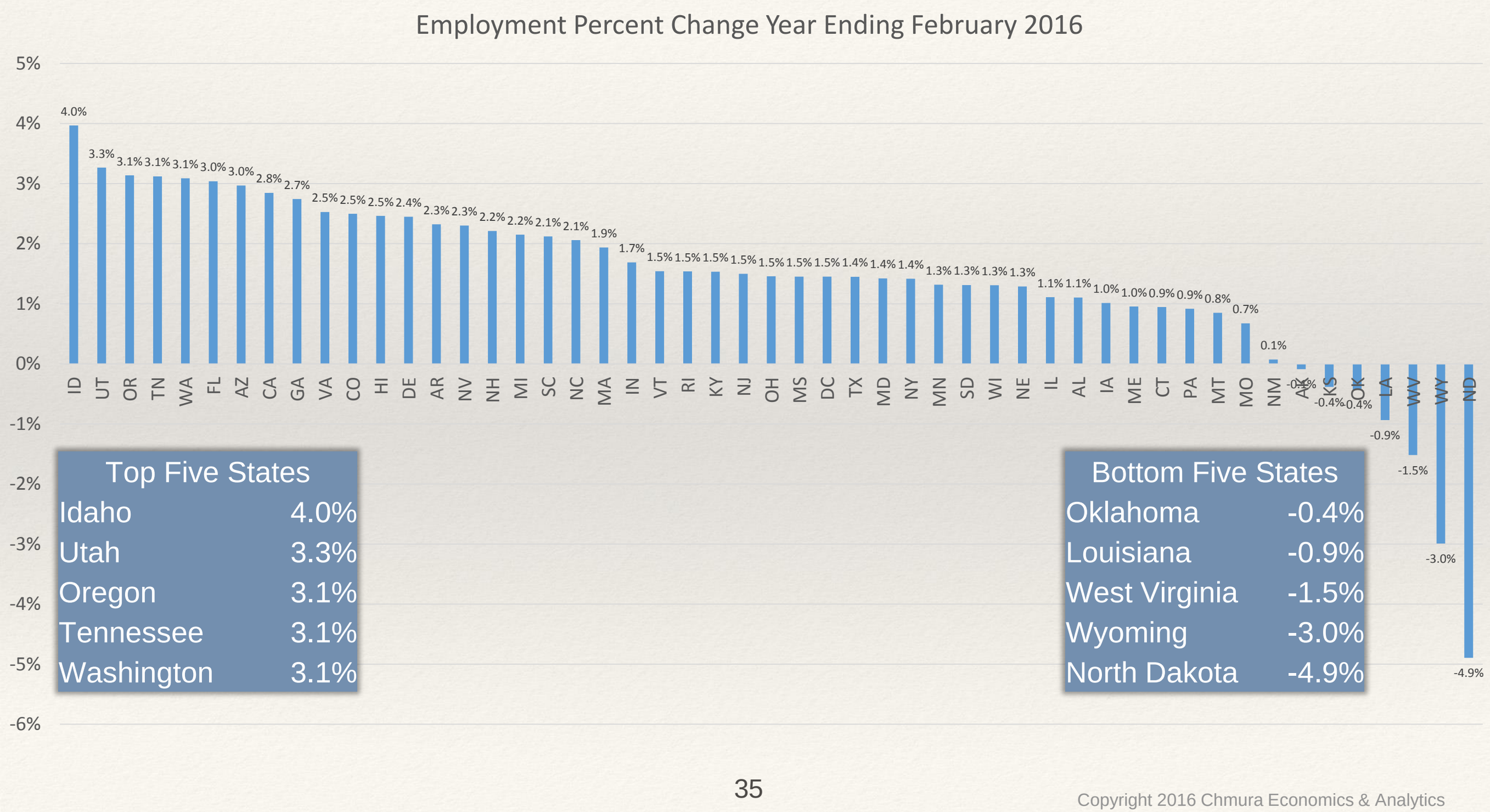
Most States Have Experienced Employment Growth



Top Five States	
Idaho	4.0%
Utah	3.3%
Oregon	3.1%
Tennessee	3.1%
Washington	3.1%

Bottom Five States	
Oklahoma	-0.4%
Louisiana	-0.9%
West Virginia	-1.5%
Wyoming	-3.0%
North Dakota	-4.9%

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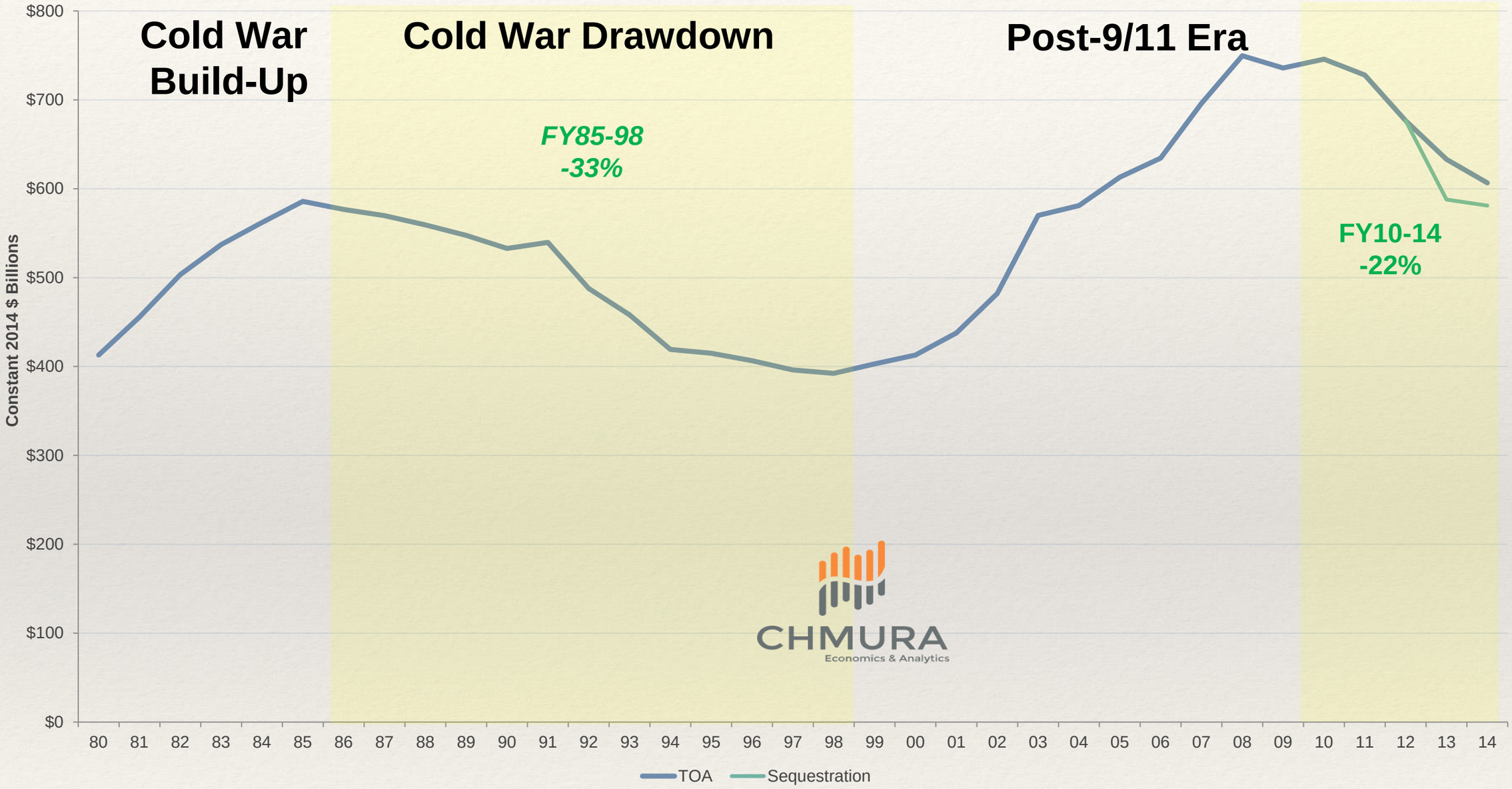
Defense Spending Cycle

The Environment: DoD Cuts In Spending



Note: Total Obligational Authority in constant billions of dollars. These dollars include all enacted war and supplemental funding through FY13.

Sources: Table 6-2, FY 2014 DoD Comptroller's Green Book. CBO, Long-Term Implications of the 2014 Future Years Defense Program. FY15 Budget Overview Brief.

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Sequestration

- Created by Budget Control Act of 2011
- Across-the-board cuts and furloughs started in March 2013
- Likely no cuts to occur in 2016

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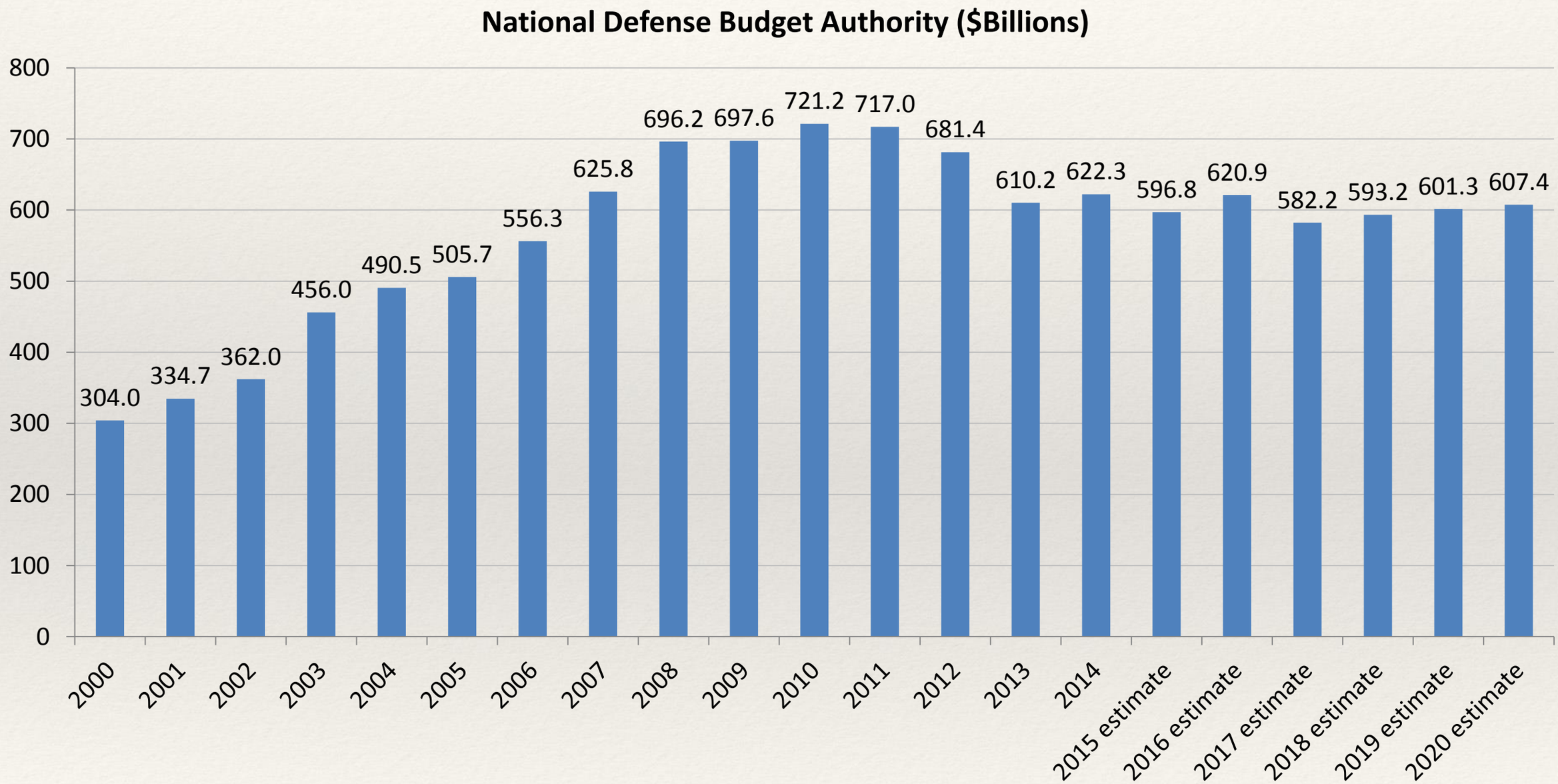
National Defense Budget Authority +$10.6 Billion Between 2015-2020 (+2%)



Source: President's Budget FY 2016 Table 5.1

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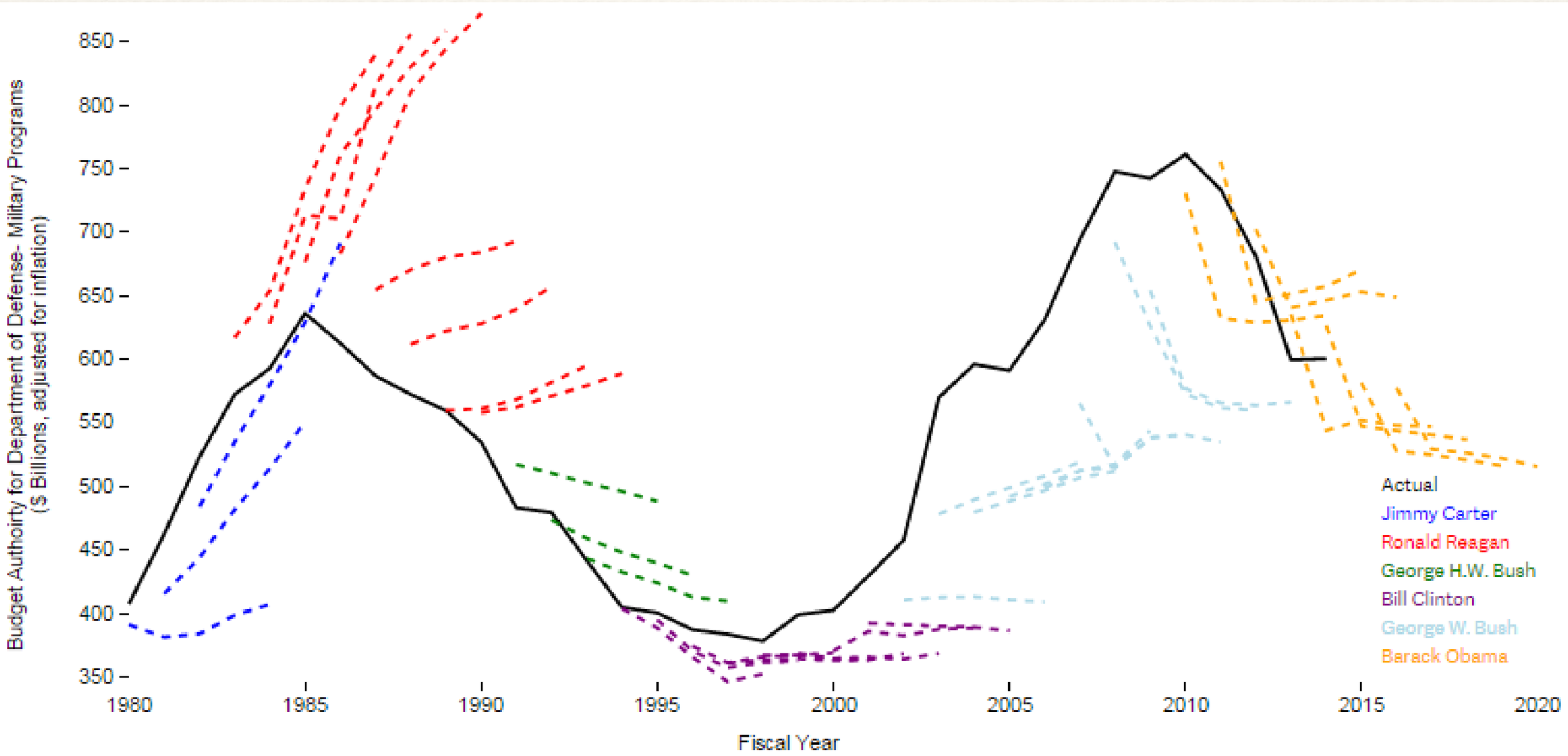
Defense Budgets and Actual Findings: Presidents Don't Typically Get What They Ask For

President's Proposed DoD Budget vs. Actual



Source: http://www.chmuraecon.com/blog/?author=Chris+Chmura

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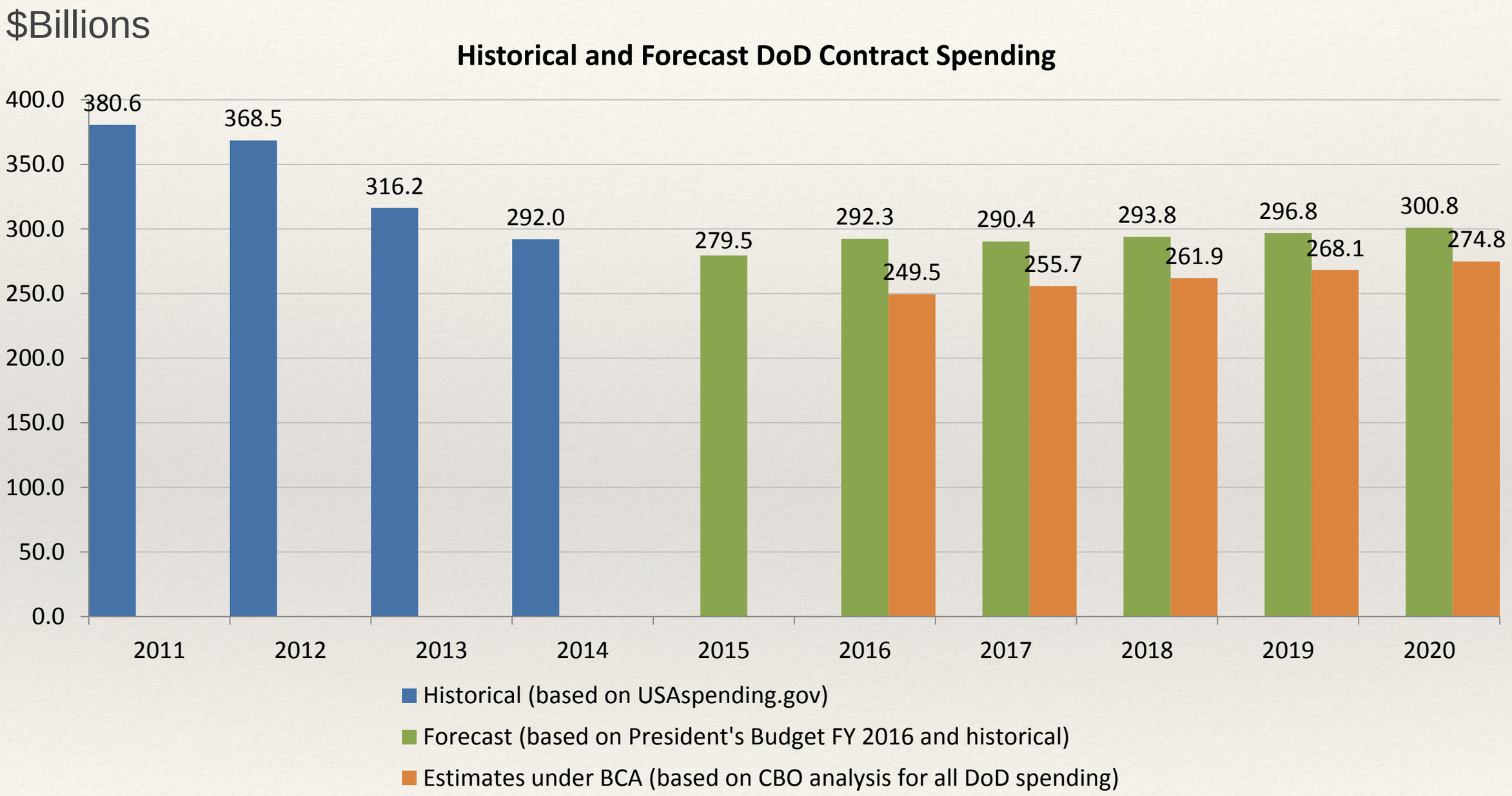
Contract Forecast: +8% over 5 years (Nominal)



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Source: President's Budget FY2016, USAspending.gov, and Chmura

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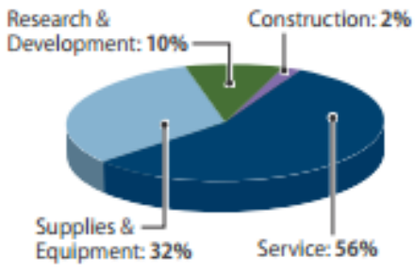
VIRGINIA

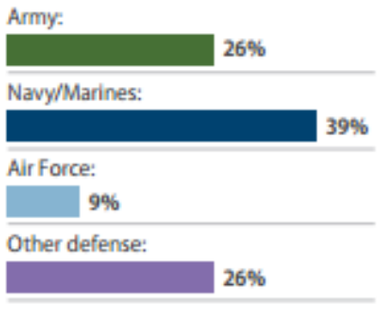
#1 $54.7 BILLION SPENT IN STATE	#1 11.8% OF STATE GDP	13.1% OF TOTAL U.S. DEFENSE SPENDING	$6,567 PER RESIDENT

CONTRACTS

By Type



By Service



Fiscal Year 2014

Top Contractors

(M=millions B=billions)

Huntington Ingalls	$3.5 B
Hewlett-Packard	$1.8 B
Booz Allen Hamilton Holding Corporation	$1.6 B
SAIC	$1.6 B
CACI	$1.1 B
Lockheed Martin	$937.2 M
Exxon Mobil	$925.7 M
Atlantic Diving Supply	$882.9 M
BAE Systems	$743.1 M
Northrup Grumman	$645.3 M

Value of Contract Awards Performed (Billions)

TOP DEFENSE SPENDING LOCATIONS

(M=millions B=billions)

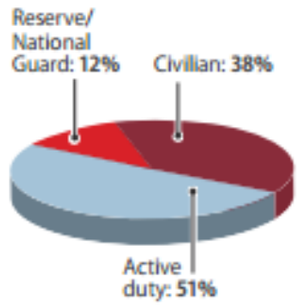
Fairfax County	$19.1 B
Newport News City	$6.2 B
Arlington County	$4.7 B
Norfolk City	$4.2 B
Prince William County	$2.6 B
Virginia Beach City	$2.5 B
Portsmouth City	$2.4 B
Alexandria City	$1.3 B
Loudoun County	$928.7 M
Hampton City	$647.4 M

DEFENSE PERSONNEL

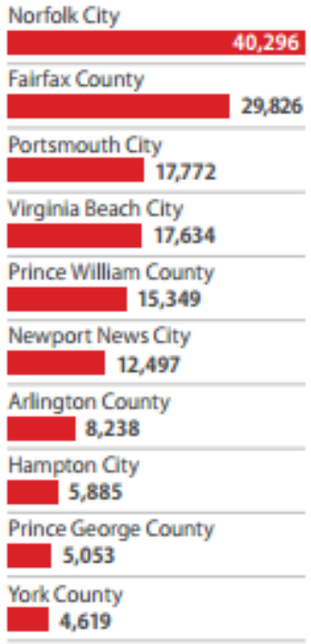
$16.6 Billion
TOTAL PAYROLL

242,936
TOTAL PERSONNEL

Allocation, By Type



Top Personnel Locations



Sources: Defense Manpower Data Center, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and Chmura Economics & Analytics.

Virginia is Highly Dependent on DoD Spending

Defense Spending Impact: Virginia - Fiscal Year 2013

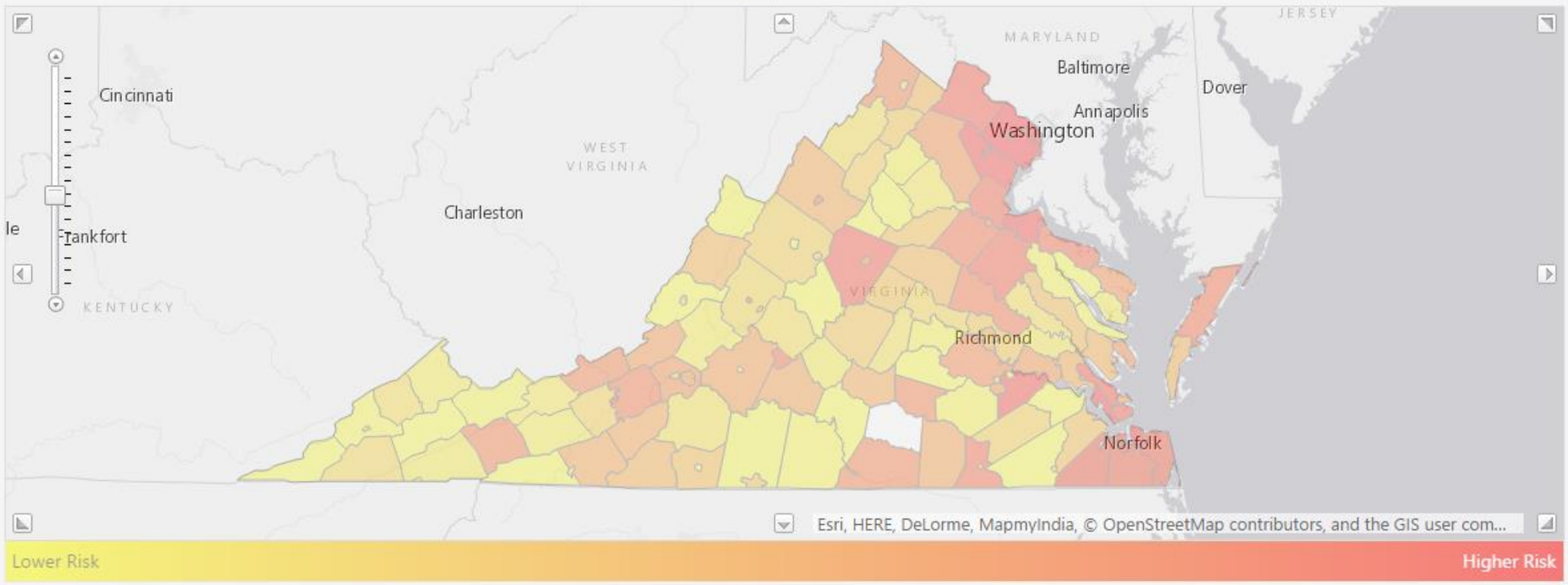
Overview | Forecast | Industry | Occupation | Top Contractors | Contractor Network

Questions about this site?

Display by: County | Metro-Area | Metro-Area (VA Portions Only) | WIA

Export Map

Search



Virginia

$41.5B	$23.6B	8.0%	364,464	210,582 / 36,025 / 117,856
Defense Spending	DoD-Dependent Gross Regional Product	Risk Score	10.0% DoD-Dependent Employment	DoD-Dependent Employment Direct / Indirect / Induced

Source: Chmura Economics & Analytics

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DoD Spending by Industry

Spending by **Industry**

Virginia

Search: Copy CSV Excel

	Industry	DoD Spending (Millions)	DoD-Dependent Empl		Avg Ann Wages
			Direct	Total	
	Total	$41,479.5	210,582	364,464	$52,215
⊕	Professional, Scientific, and Technical Services	$21,117.3	103,934	186,672	$96,361
⊕	Manufacturing	$9,990.0	41,328	75,228	$55,468
⊕	Information	$2,302.5	3,620	9,635	$84,589
⊕	Wholesale Trade	$1,280.6	6,019	10,629	$72,349
⊕	Construction	$1,192.9	8,999	14,078	$49,009
⊕	Transportation and Warehousing	$1,115.5	6,509	9,457	$49,806
⊕	Unclassified	$1,032.3	7,972	13,577	$39,329
⊕	Administrative and Support and Waste Management and Remediation Services	$941.4	8,670	12,428	$37,313
⊕	Other Services (except Public Administration)	$693.4	4,778	7,262	$38,986
⊕	Health Care and Social Assistance	$690.3	7,250	10,392	$45,839
⊕	Retail Trade	$382.0	5,360	6,701	$26,660
⊕	Educational Services	$325.1	3,984	5,216	$41,389
⊕	Utilities	$208.5	845	1,266	$80,935
⊕	Public Administration	$56.4	430	626	$70,704
⊕	Real Estate and Rental and Leasing	$54.7	101	225	$48,433
⊕	Mining, Quarrying, and Oil and Gas Extraction	$41.0	43	120	$68,169
⊕	Accommodation and Food Services	$36.7	630	765	$17,167
⊕	Finance and Insurance	$11.8	37	92	$82,717
⊕	Arts, Entertainment, and Recreation	$5.3	57	76	$24,744
⊕	Agriculture, Forestry, Fishing and Hunting	$1.2	13	16	$29,850
⊕	Management of Companies and Enterprises	$0.4	3	5	$111,159

Source: Chmura Economics & Analytics

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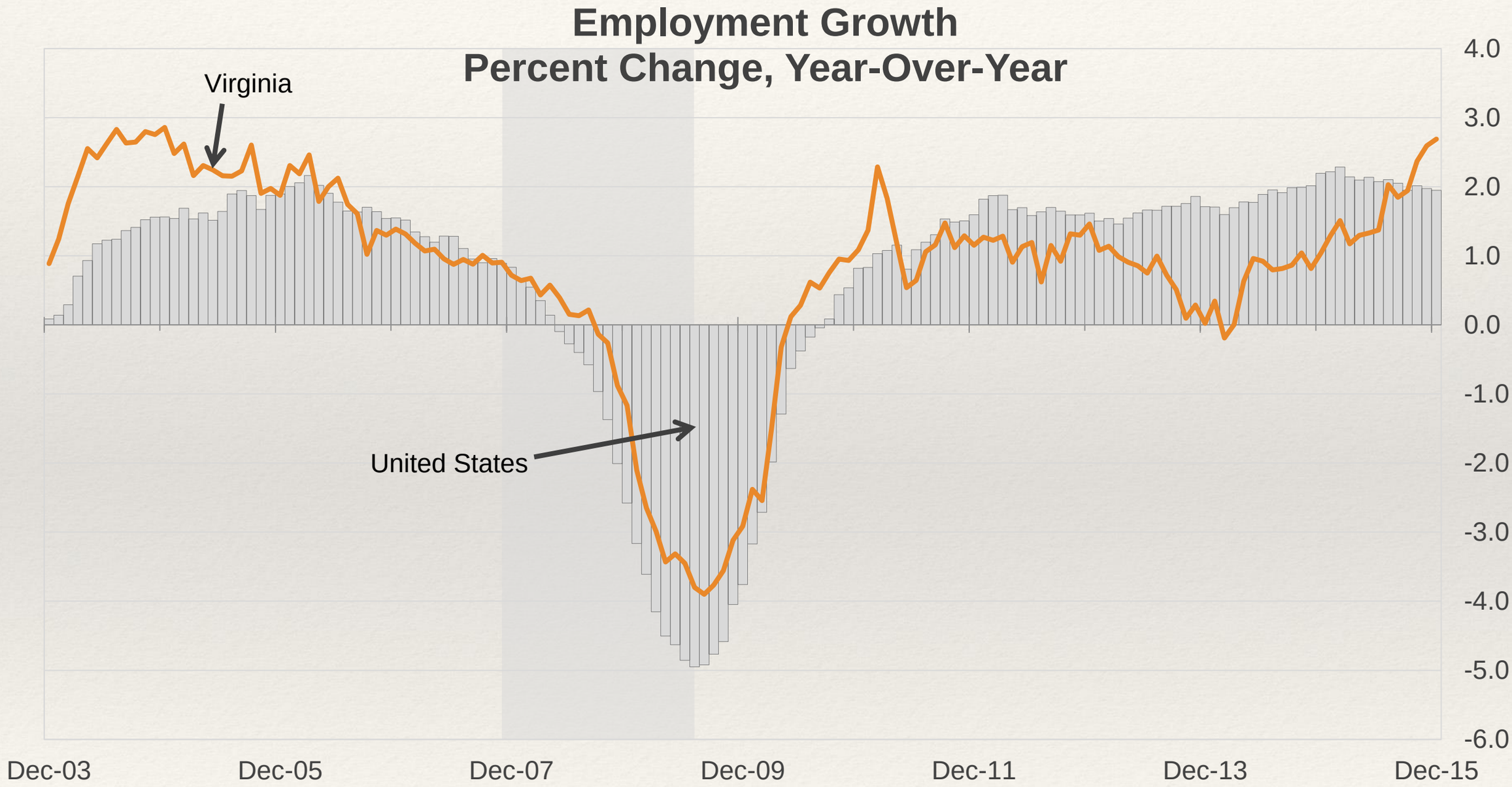
Virginia Has Passed the Nation



Source: Bureau of Labor Statistics

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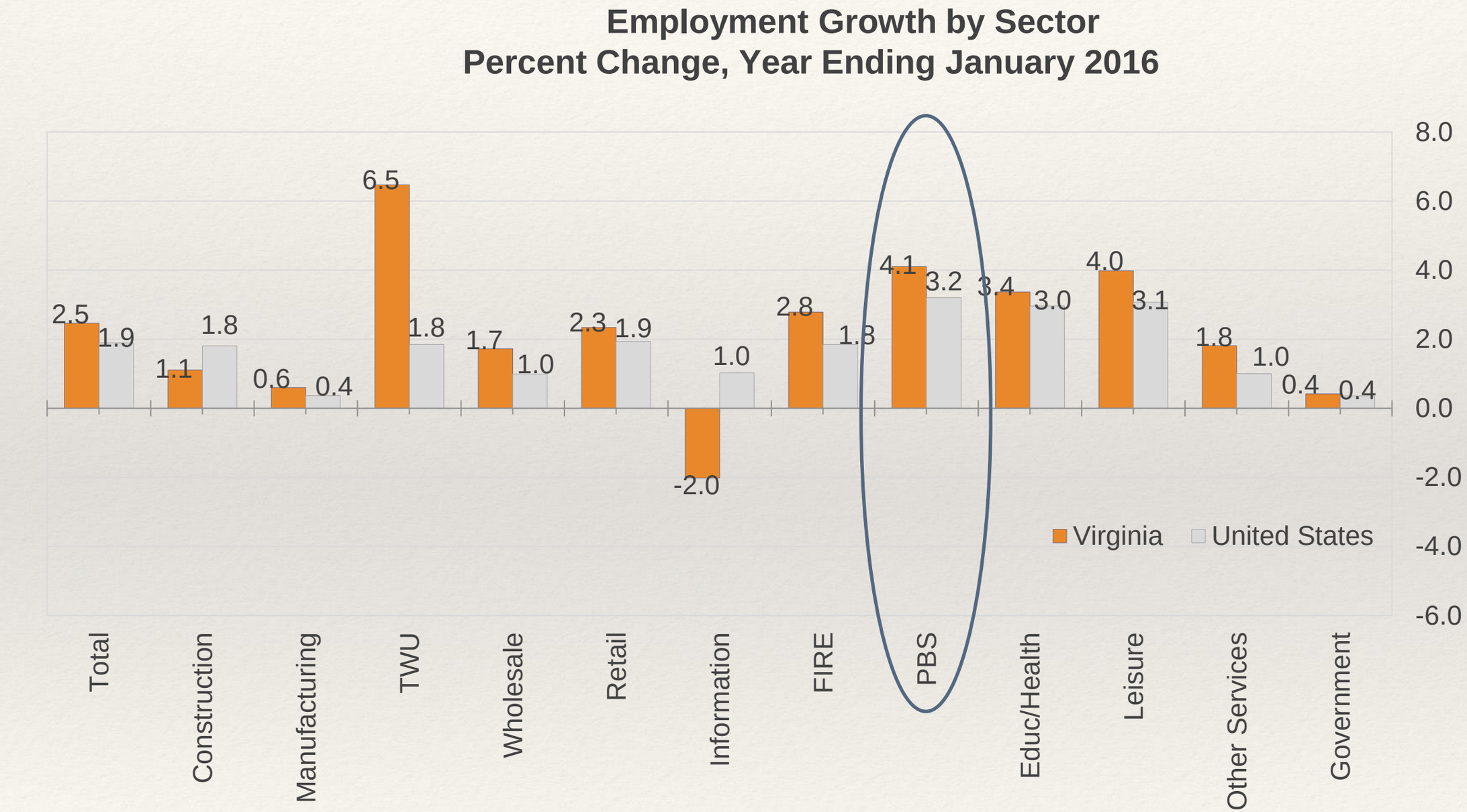
Growth Despite Defense Cuts



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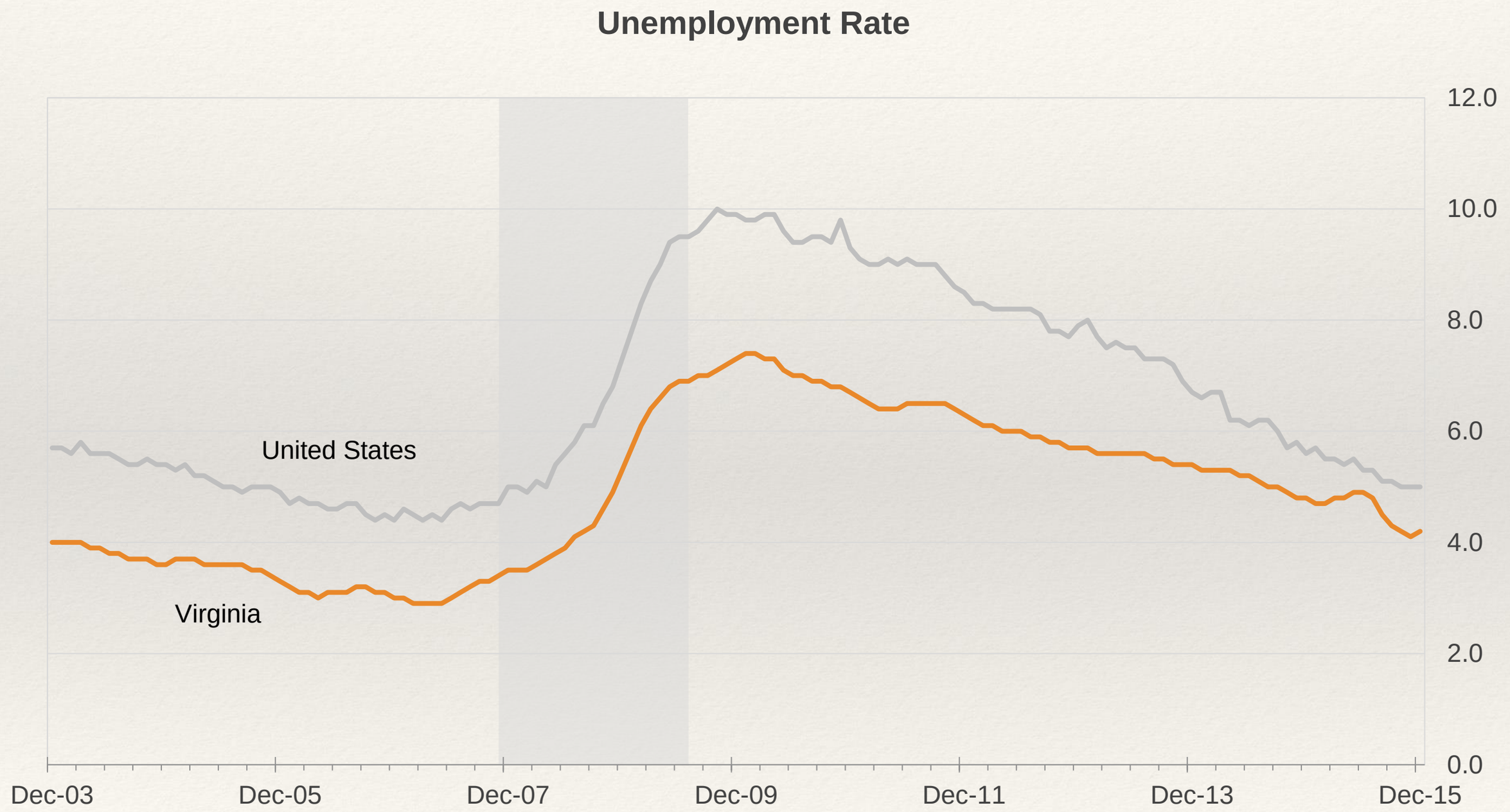
Unemployment Rate Declining But Not as Fast as in the Nation



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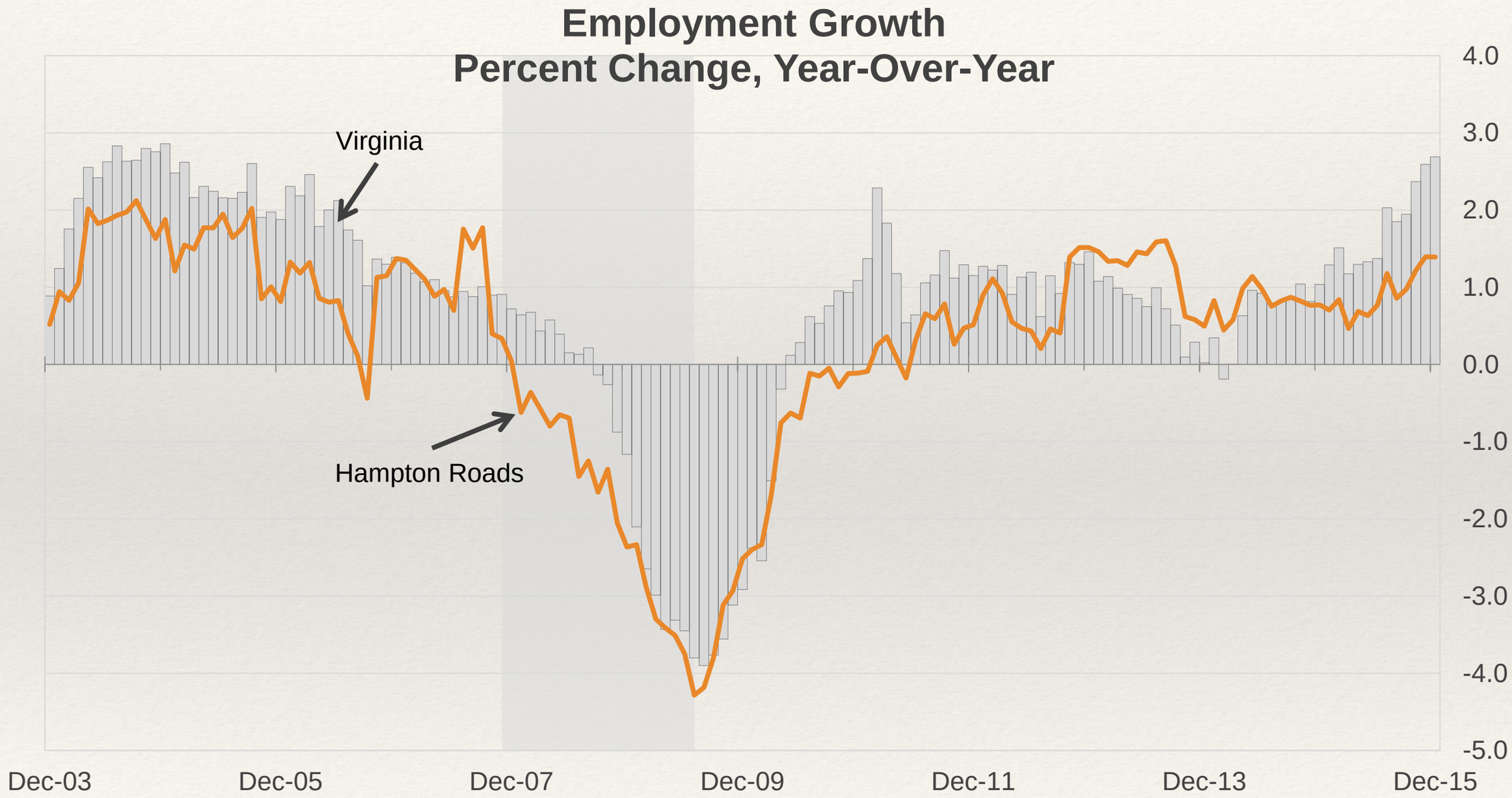
Hampton Roads Employment Growth Below Virginia



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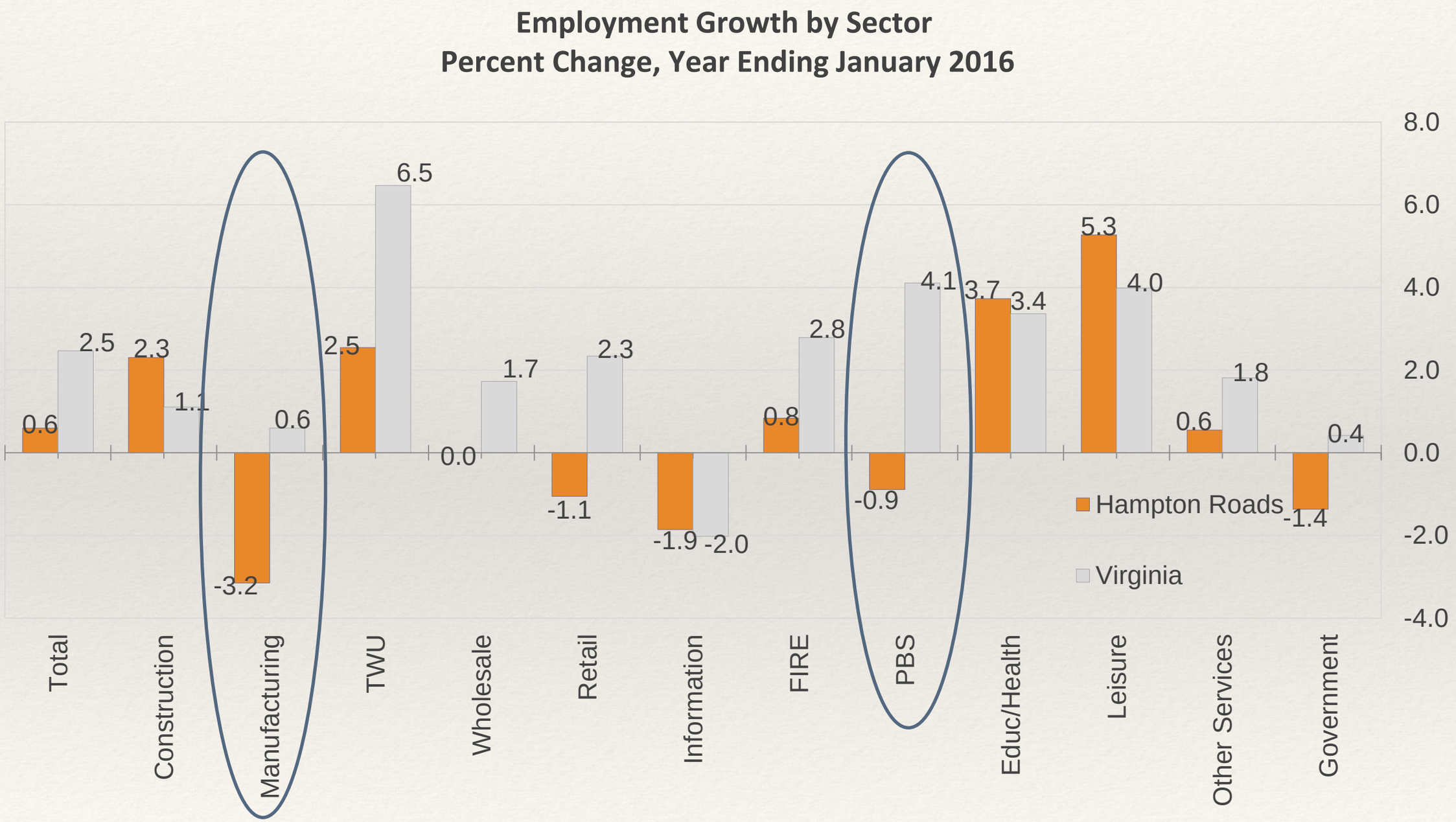
Hampton Roads Hit Hard by Defense Cuts



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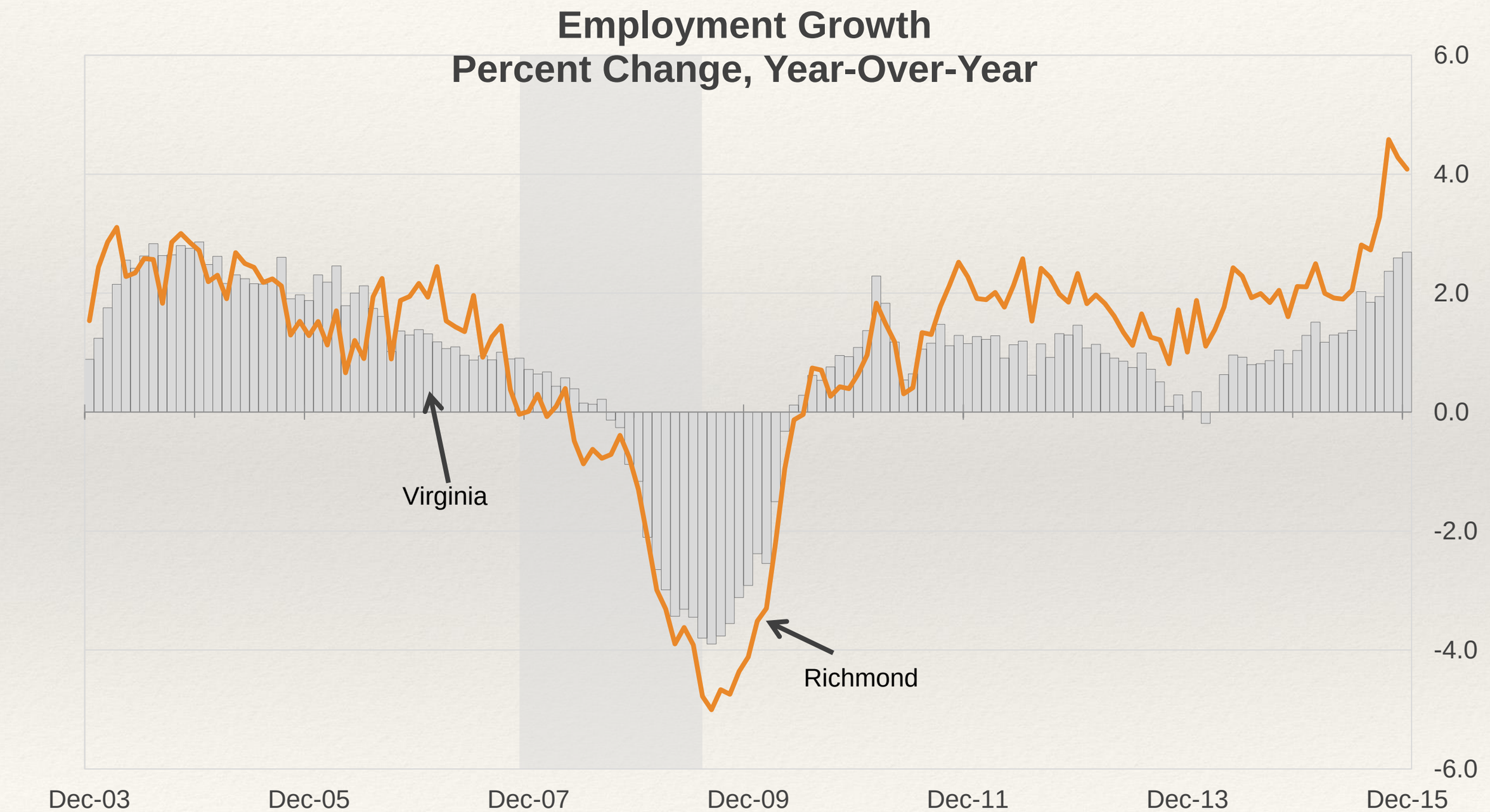
Richmond Employment Growth Faster than Virginia Since Mid-2011



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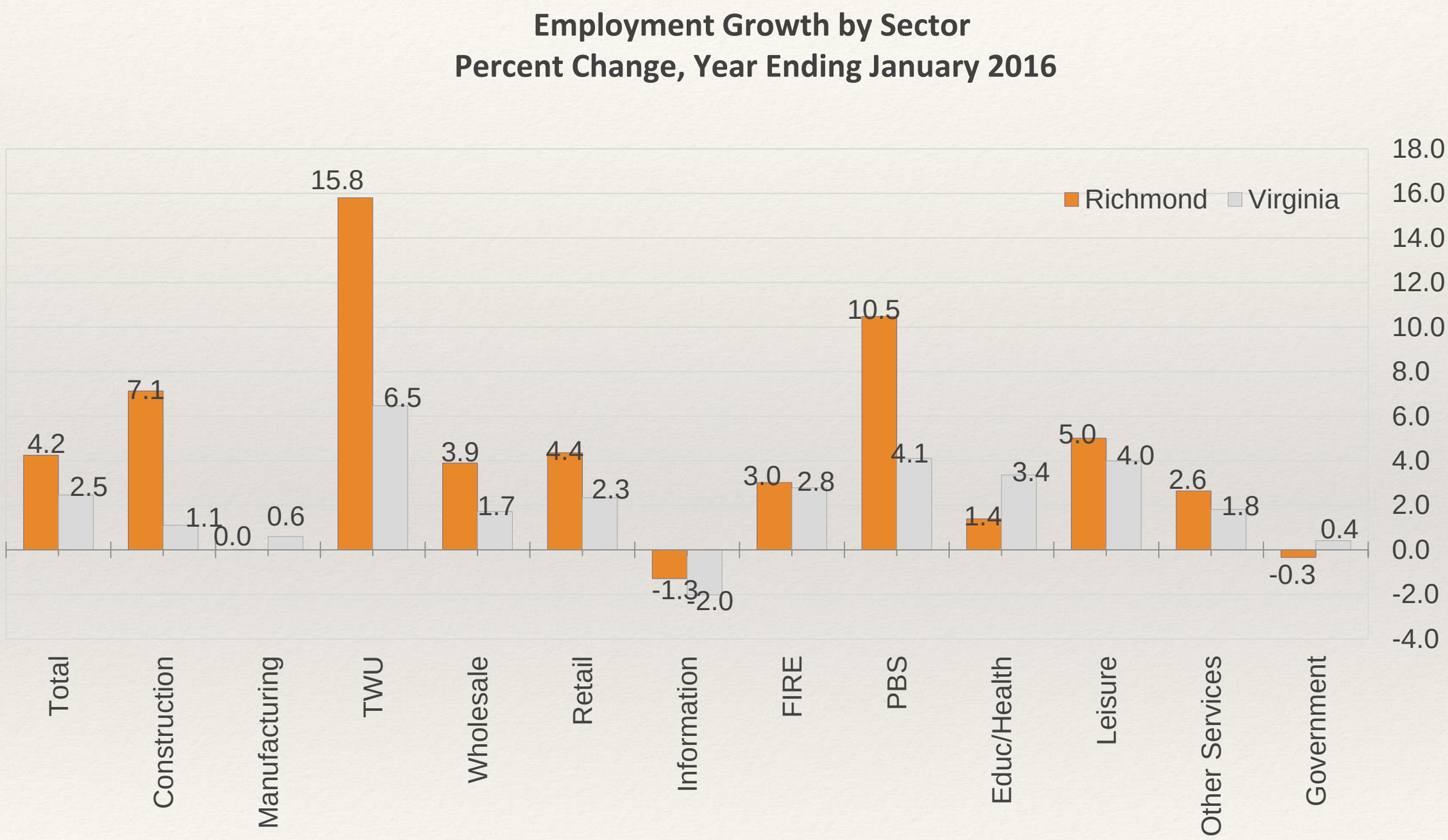
Richmond Generally Positive Growth Across Sectors



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Nonagricultural Employment Forecast

	2013	2014	2015	2016	2017
Blacksburg	1.3%	1.6%	2.5%	**1.8%**	**1.6%**
Bristol	0.6%	-0.8%	1.5%	**1.2%**	**0.9%**
Charlottesville	0.3%	3.2%	2.5%	**2.0%**	**2.2%**
Hampton Roads	1.2%	0.0%	0.9%	**0.7%**	**0.9%**
Harrisonburg	0.5%	1.0%	1.3%	**1.0%**	**1.5%**
Lynchburg	0.3%	0.8%	0.6%	**0.5%**	**1.1%**
Northern Virginia	0.7%	0.1%	1.8%	**2.0%**	**2.2%**
Richmond	1.4%	1.5%	0.7%	**1.1%**	**1.4%**
Roanoke	0.7%	0.9%	0.0%	**0.5%**	**0.6%**
Winchester	2.4%	1.7%	2.7%	**1.9%**	**2.2%**
Virginia	0.7%	0.6%	1.1%	**1.3%**	**1.4%**

Source: Chmura Economics & Analytics

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Richmond MSA

Industry	Current			Historical				Forecast		
	Four Quarters Ending with 2015q4			Change over Last 5 Years	Average Annual % Change in Employment 2010q4-2015q4			Over the Next 10 Years		
	Employment	Avg. Annual Wages	Location Quotient	Employment	Richmond, VA MSA	Virginia	USA	Total Approx Repl Demand	Total Growth Demand	Avg. Annual Growth Percent
Agriculture, Forestry, Fishing and Hunting	2,474	$29,899	0.26	-11	-0.1%	0.7%	1.2%	844	-141	-0.6%
Mining, Quarrying, Oil and Gas Extraction	540	$56,411	0.16	119	5.1%	-4.8%	2.9%	130	-2	0.0%
Utilities	2,851	$80,077	0.80	297	2.2%	0.0%	0.1%	715	-93	-0.3%
Construction	40,839	$48,528	1.17	2,949	1.5%	-0.2%	2.1%	8,511	5,889	1.4%
Manufacturing	31,528	$63,447	0.58	-685	-0.4%	0.5%	1.4%	6,980	-2,880	-1.0%
Wholesale Trade	24,956	$65,461	0.96	1,709	1.4%	0.0%	1.4%	5,616	1,281	0.5%
Retail Trade	70,243	$27,569	0.99	3,048	0.9%	0.8%	1.5%	22,282	4,195	0.6%
Transportation and Warehousing	26,203	$44,345	0.99	5,505	4.8%	1.7%	2.2%	6,789	-119	0.0%
Information	8,492	$58,603	0.65	-1,860	-3.9%	-1.6%	0.3%	2,005	-321	-0.4%
Finance and Insurance	37,997	$76,653	1.47	3,471	1.9%	1.9%	0.8%	9,228	2,754	0.7%
Real Estate and Rental and Leasing	10,082	$50,563	0.92	1147	2.4%	0.0%	1.2%	2,275	351	0.3%
Professional, Scientific, Technical Srvs	41,625	$75,698	0.98	3,281	1.7%	0.6%	2.5%	9,016	4,860	1.1%
Management of Companies & Enterprises	21,445	$117,123	2.26	-639	-0.6%	0.2%	3.5%	4,608	774	0.4%
Administrative, Support, Waste Mgmt	44,936	$33,525	1.07	8,572	4.3%	2.5%	3.1%	10,484	4,392	0.9%
Educational Services	56,854	$41,900	1.05	-570	-0.2%	0.2%	0.2%	12,215	3,869	0.7%
Health Care and Social Assistance	92,086	$47,589	1.01	7,648	1.7%	1.8%	2.2%	19,190	18,325	1.8%
Arts, Entertainment, and Recreation	13,758	$19,987	1.09	1,705	2.7%	1.0%	1.8%	4,320	1,081	0.8%
Accommodation and Food Services	50,322	$16,542	0.88	7,528	3.3%	2.2%	3.0%	17,974	2,693	0.5%
Other Services	33,483	$29,068	1.16	346	0.2%	0.7%	-0.2%	8,503	1,227	0.4%
Public Administration	39,106	$57,358	1.25	-747	-0.4%	0.4%	-0.8%	9,370	-542	-0.1%
Total - All Industries	**649,821**	**$48,521**	**1.00**	**42,805**	**1.4%**	**1.0%**	**1.6%**	**162,870**	**47,593**	**0.7%**

Source: JobsEQ®

Hampton Roads MSA

Industry	Current			Historical				Forecast		
	Four Quarters Ending with 2015q4			Change over Last 5 Years	Average Annual % Change in Employment 2010q4-2015q4			Over the Next 10 Years		
	Employment	Avg. Annual Wages	Location Quotient	Employment	Hampton Roads, VA MSA	Virginia	USA	Total Approx Repl Demand	Total Growth Demand	Avg. Annual Growth Percent
Agriculture, Forestry, Fishing and Hunting	1,709	$34,544	0.15	-85	-1.0%	0.7%	1.2%	571	-168	-1.0%
Mining, Quarrying, Oil and Gas Extraction	113	$66,143	0.03	13	2.4%	-4.8%	2.9%	27	1	0.1%
Utilities	3,096	$71,383	0.72	-327	-2.0%	0.0%	0.1%	785	-29	-0.1%
Construction	44,926	$45,642	1.05	-1,612	-0.7%	-0.2%	2.1%	9,171	4,384	0.9%
Manufacturing	66,780	$63,484	1.01	3672	1.1%	0.5%	1.4%	14,936	-4,800	-0.7%
Wholesale Trade	18,687	$56,665	0.59	-1,056	-1.1%	0.0%	1.4%	4,125	206	0.1%
Retail Trade	95,145	$25,252	1.10	2,634	0.6%	0.8%	1.5%	29,663	2,188	0.2%
Transportation and Warehousing	28,167	$55,654	0.88	1,024	0.7%	1.7%	2.2%	7,212	-807	-0.3%
Information	11,538	$51,773	0.73	-1,672	-2.7%	-1.6%	0.3%	2,656	-1000	-0.9%
Finance and Insurance	22,614	$66,276	0.72	933	0.8%	1.9%	0.8%	5,313	52	0.0%
Real Estate and Rental and Leasing	15,664	$46,435	1.17	-918	-1.1%	0.0%	1.2%	3,442	-304	-0.2%
Professional, Scientific, Technical Srvs	56,070	$69,257	1.09	-179	-0.1%	0.6%	2.5%	12,007	5,123	0.9%
Management of Companies & Enterprises	9,949	$93,743	0.86	597	1.2%	0.2%	3.5%	2,105	35	0.0%
Administrative, Support, Waste Mgmt	49,153	$31,970	0.96	2,374	1.0%	2.5%	3.1%	11,249	2,732	0.5%
Educational Services	74,234	$39,301	1.13	-2898	-0.8%	0.2%	0.2%	15,806	3,610	0.5%
Health Care and Social Assistance	106,525	$46,260	0.96	9,817	2.0%	1.8%	2.2%	21,982	18,713	1.6%
Arts, Entertainment, and Recreation	17,367	$20,512	1.13	-76	-0.1%	1.0%	1.8%	5,391	933	0.5%
Accommodation and Food Services	78,092	$16,562	1.12	3,818	1.0%	2.2%	3.0%	27,354	971	0.1%
Other Services	37,464	$25,496	1.06	596	0.3%	0.7%	-0.2%	9,397	404	0.1%
Public Administration	52,581	$68,263	1.39	2866	1.1%	0.4%	-0.8%	12,146	-4503	-0.9%
Total - All Industries	**789,873**	**$44,264**	**1.00**	**19,519**	**0.5%**	**1.0%**	**1.6%**	**194,492**	**27,740**	**0.3%**

Source: JobsEQ®

Question 5

How much do you expect your employment to change in 2016 compared to the end of 2015?

a. Drop more than 10%
b. -10% to 0%
c. 0% to 10%
d. 10% to 20%
e. Increase more than 20%

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Conclusions

- National growth recently picked up but expected to remain moderate
  - Long-term issues: debt/interest rates rise;
  - Short-term issues: federal cuts/increased regulations
- Virginia growth positive despite cuts in federal spending

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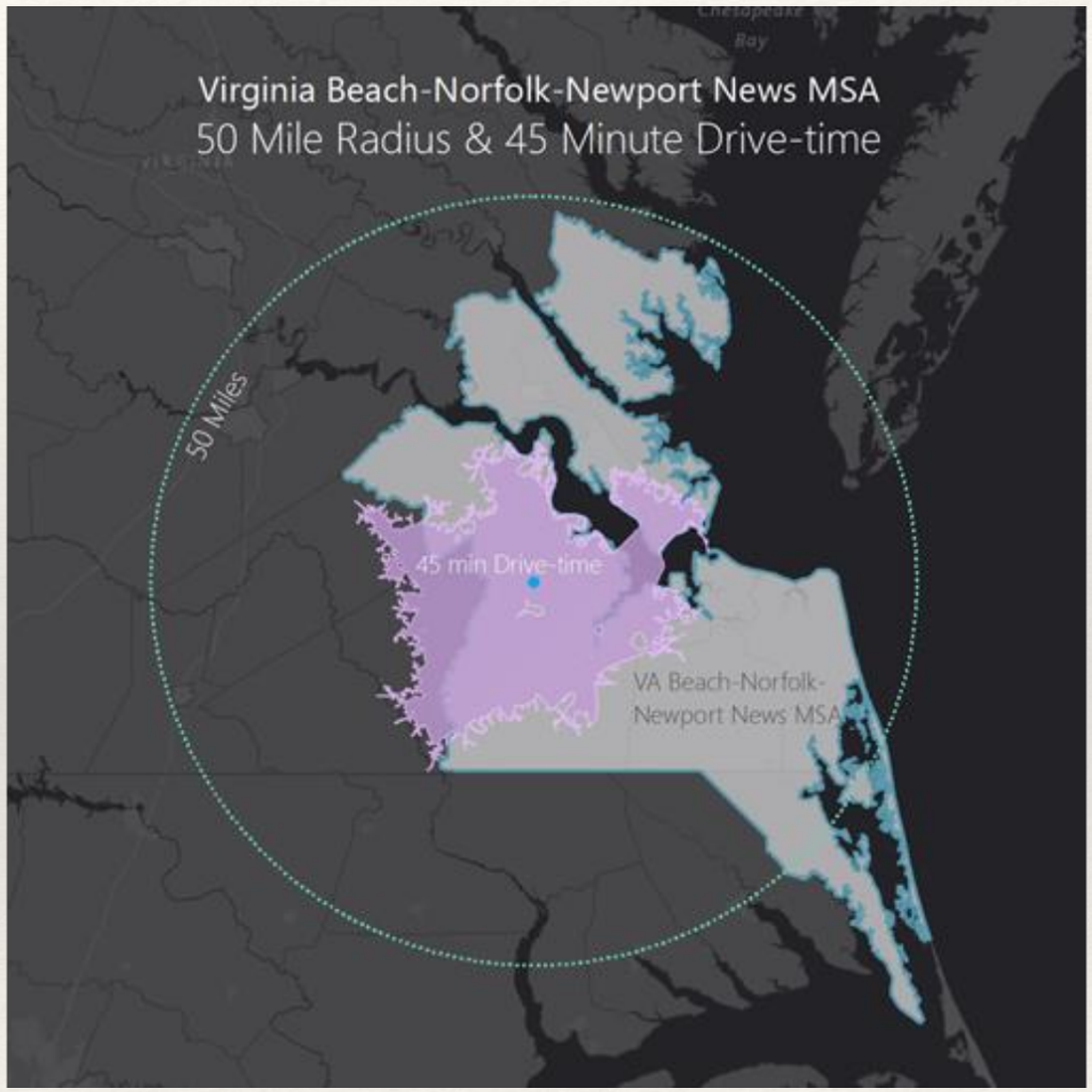
How Economic Developers Prepare for a Prospect

Preparing for a Prospect: Identify the Proper Labor Shed



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Consider Data in Nearby States

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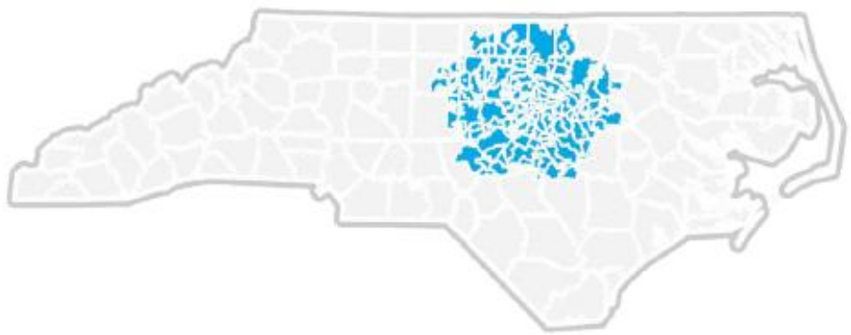
Economic Overview

Cary, NC Drivetime



Demographic Profile; Employment Trends; Wage Trends; Cost of Living Index; Industry Snapshot; Occupational Snapshot; Industry Clusters; Education Levels

JOBSEQ

Occupation Report for Machinists

1919 Connecticut Avenue 60-Min Drive Time

Occupation Definition; Occupation Snapshot; Geographic Distribution; Employment by Industry; Wages; Education Profile; Awards; Training Concentration

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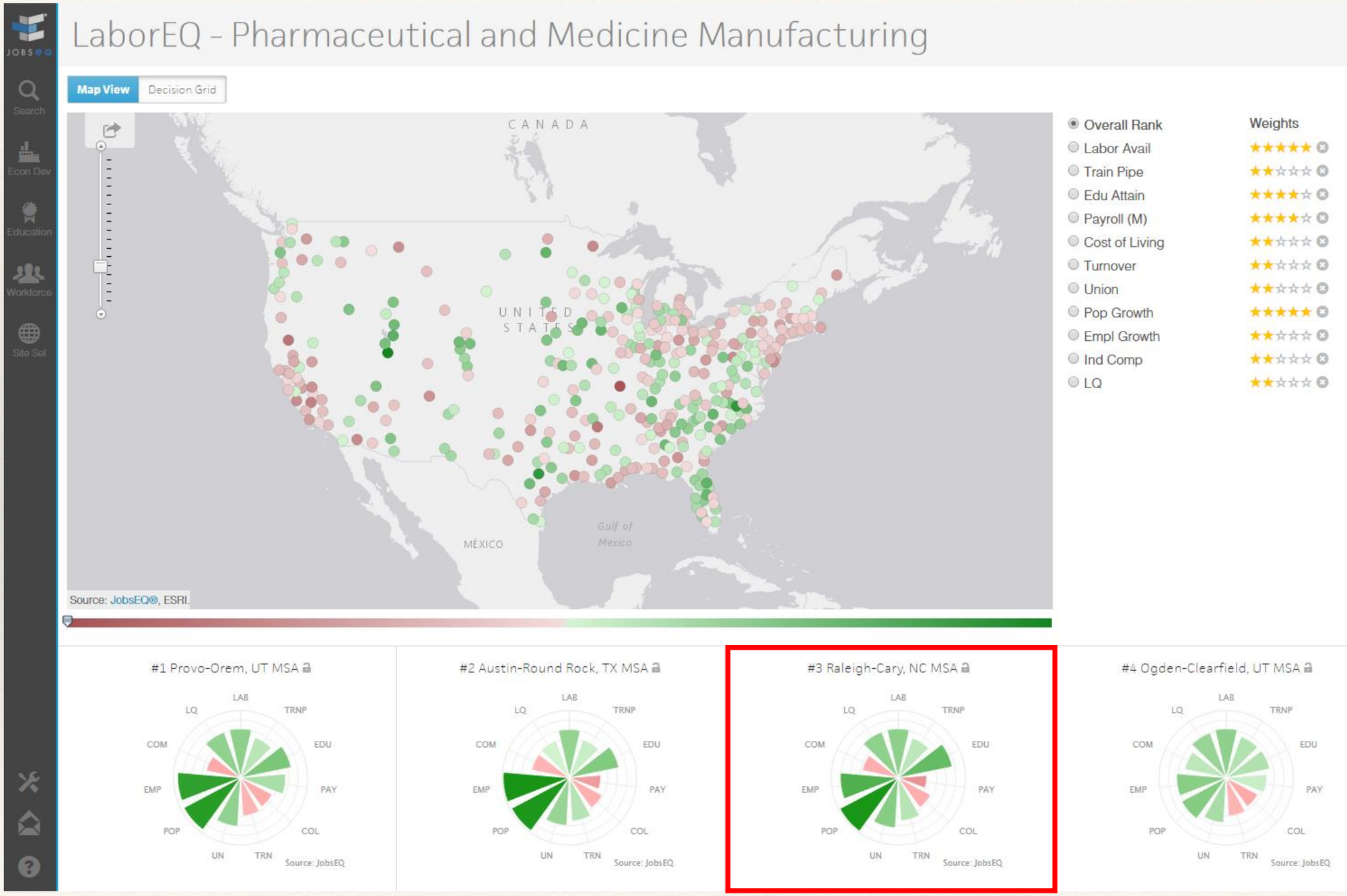
Understand Their Competitive Position



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Identify Inventory of Workers for Expanding Firms

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What-If

Labor Grid | Education Mix

What-If Report for Cary, NC Drivetime, NAICS 3254 - Pharmaceutical and Medicine Manufacturing

700 Workers

Export

Occ Code	Title	New Employer Demand	Current Empl	Current Unempl	Regional Avg Wage	National Avg Wage	Empl Ext	Unempl Ext	Potential Candidate / Opening Ratio
51-9111	Packaging and Filling Machine Operators and Tenders	63	3,822	581	$32,700	$27,900	40,547	4,805	70
19-2031	Chemists	46	1,653	42	$79,900	$74,000	2,081	77	37
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	40	1,573	79	$32,700	$35,400	1,603	100	41
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	32	4,226	356	$38,000	$37,300	16,397	1,835	143
51-1011	First-Line Supervisors of Production and Operating Workers	25	4,477	203	$56,900	$57,400	6,701	201	187
19-1042	Medical Scientists, Except Epidemiologists	23	1,858	27	$89,900	$87,400	3,573	112	82
51-9011	Chemical Equipment Operators and Tenders	21	727	28	$43,300	$47,300	244	16	36
19-4021	Biological Technicians	19	1,244	78	$43,200	$43,000	1,038	47	70
11-9121	Natural Sciences Managers	17	904	18	$146,800	$128,700	14,326	443	54
13-1199	Business Operations Specialists, All Other	16	8,484	432	$72,200	$67,800	6,898	296	557

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Identify Inventory of Workers for Expanding Firms

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Labor Grid | Education Mix

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700 Workers

Export

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51-9111	Packaging and Filling Machine Operators and Tenders	63	3,822	581	$32,700	$27,900	40,547	4,805	70
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51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	40	1,573	79	$32,700	$35,400	1,603	100	41
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	32	4,226	356	$38,000	$37,300	16,397	1,835	143
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13-1199	Business Operations Specialists, All Other	16	8,484	432	$72,200	$67,800	6,898	296	557

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Pitch the Pipeline: Transferable Skills

Related Occ for Mixing and Blending Machine Setters, Operators, and Tenders (51-9023)

Export

Occ Code	Occ Description	Empl	Unempl	Regional Avg Wage
51-3092	Food Batchmakers	554	33	$27,400
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	433	28	$32,400
53-7011	Conveyor Operators and Tenders	214	10	$32,300
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	209	13	$33,900
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	83	5	$31,500
51-2091	Fiberglass Laminators and Fabricators	69	6	$32,700
51-9193	Cooling and Freezing Equipment Operators and Tenders	41	4	$24,900
	-Total-	1,603	100	

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Pitch the Pipeline: Graduates

Chemists (19-2031)

Conduct qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge. Excludes "Geoscientists, Except Hydrologists and Geographers" (19-2042) and "Biochemists and Biophysicists" (19-1021).

Training | Wages | Attributes | Apprenticeships | NCRC Profile

	Annual Awards - Cary, NC Drivetime		
Title/School	**Certificates and 2yr Degrees**	**4yr Degrees**	**Postgraduate Degrees**
40.0501 Chemistry, General			
Barton College	0	3	0
Campbell University	0	13	0
Duke University	0	31	18
Elon University	0	6	0
Meredith College	0	13	0
Mount Olive College	0	2	0
North Carolina Central University	0	6	2
North Carolina State University at Raleigh	0	41	23

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