

The Economic Outlook

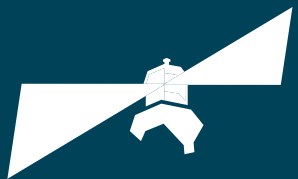
May 2018

Focus on California and the Global Economy

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Director, UC Riverside Center for Economic Forecasting and Development



The Good, Bad, and Ugly



- **Meet the new economy, same as the old economy**

- 2017 solid year for growth: looked a lot like 2013-2014
- 2018 likely to be better: good momentum with fiscal stimulus even after a slow start
- Still a low chance of recession in next 24 months

- **Brakes and Imbalances**

- Labor and housing shortages
- Recent market froth / volatility / rising long term rates
- Aggressive Fed: rising rates, flattening yield curves
- Sharp growth in government deficits coming
- Consumer savings rate declining
- Global trade / security worries

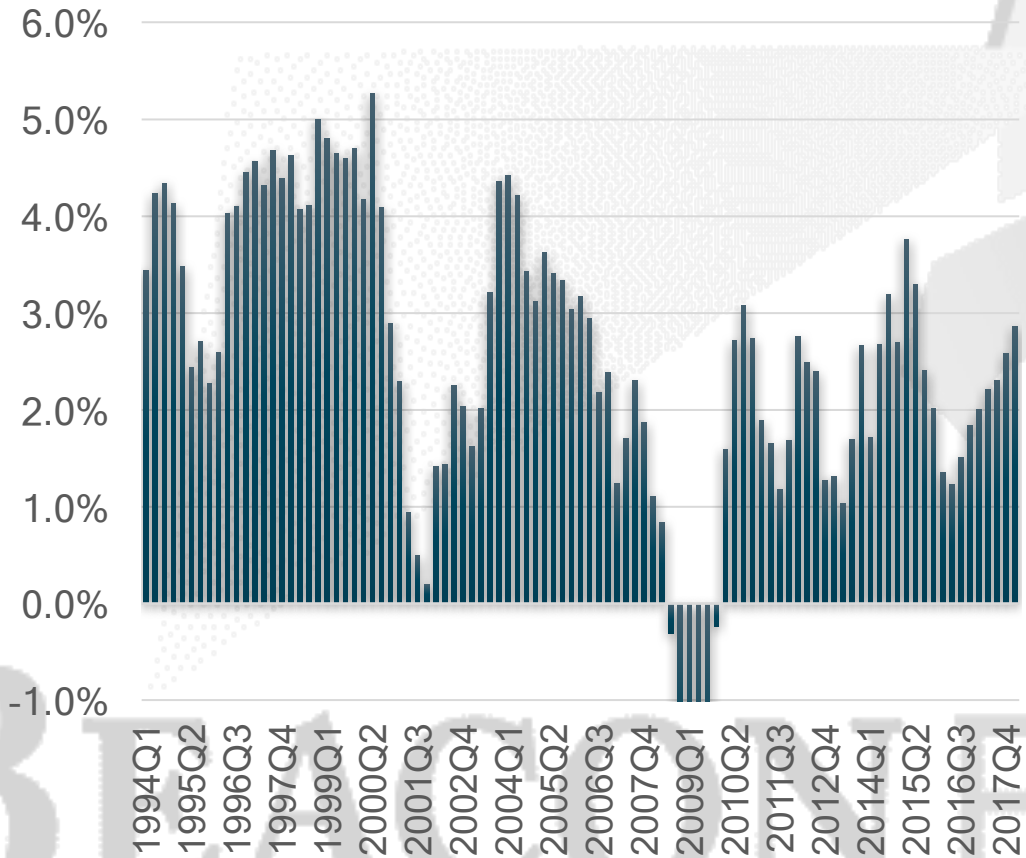
- **Politics going in the wrong direction**

- Little effort to deal with underinvestment in infrastructure, rising wealth and income inequality, healthcare cost inflation, pension and entitlement issues, etc etc etc
- The great disconnect between economic realities and political discourse

GDP Growth: Almost back to 3%

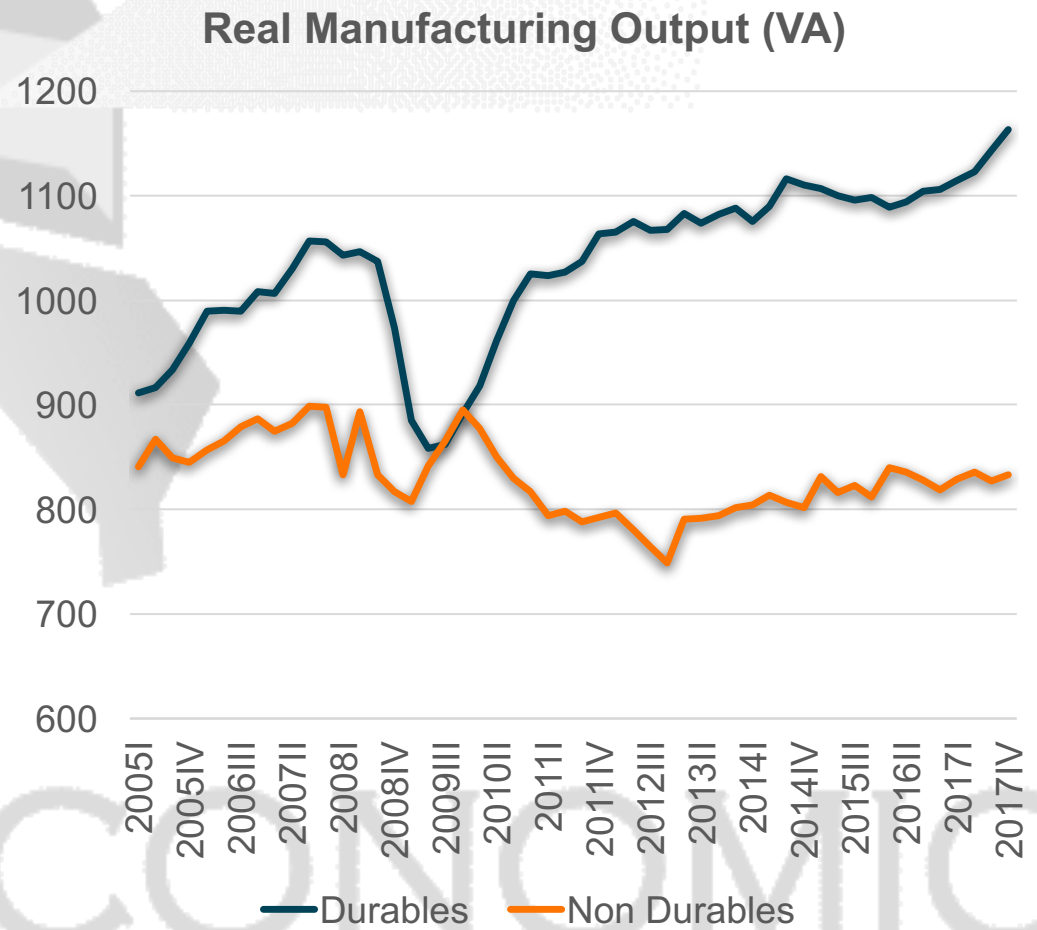


Y-o-Y Growth Real Output

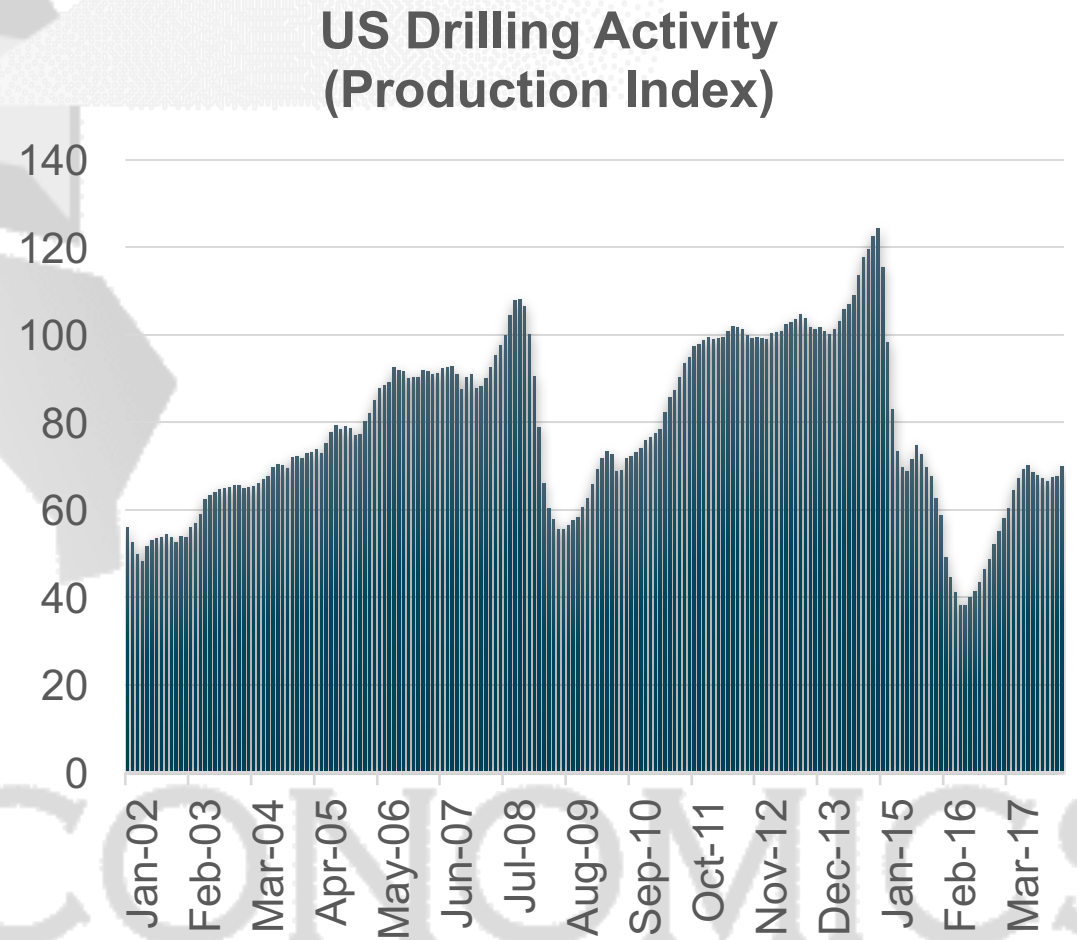
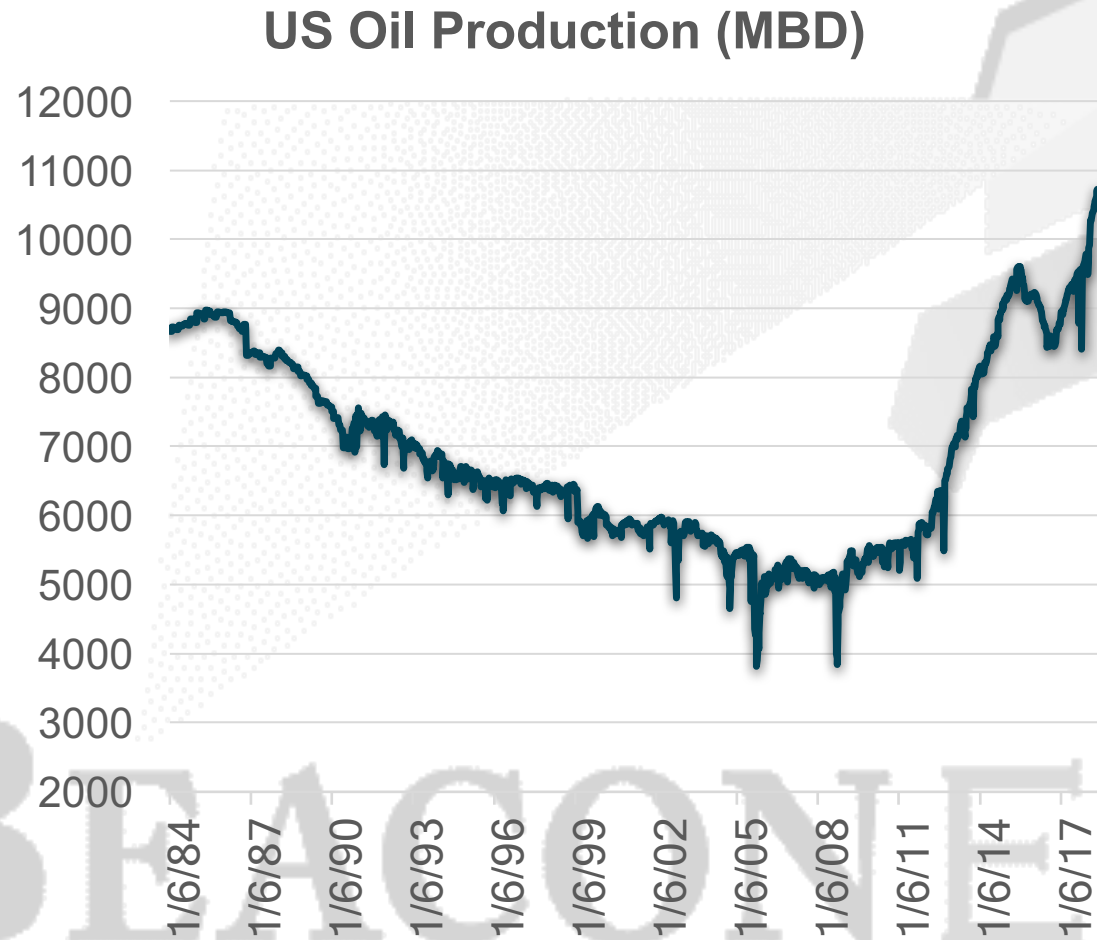


	2014	2015	2016	2017	2018 q1
GDP	2.73	2.00	1.85	2.73	2.30
FD	3.45	2.70	2.19	2.79	1.67
PCE	2.40	2.04	1.93	1.95	0.73
Fixed Inv	0.95	0.40	0.18	0.86	0.76
Struct	0.26	-0.28	0.10	0.07	0.34
Equip	0.24	0.21	-0.22	0.52	0.27
IPP	0.26	0.13	0.21	0.20	0.14
Res	0.20	0.35	0.09	0.08	-0.00
Invent	-0.15	-0.02	-0.02	-0.11	0.43
Net exports	-0.57	-0.68	-0.31	0.05	0.20
Government	0.09	0.28	0.07	0.12	0.20

Industrial activity



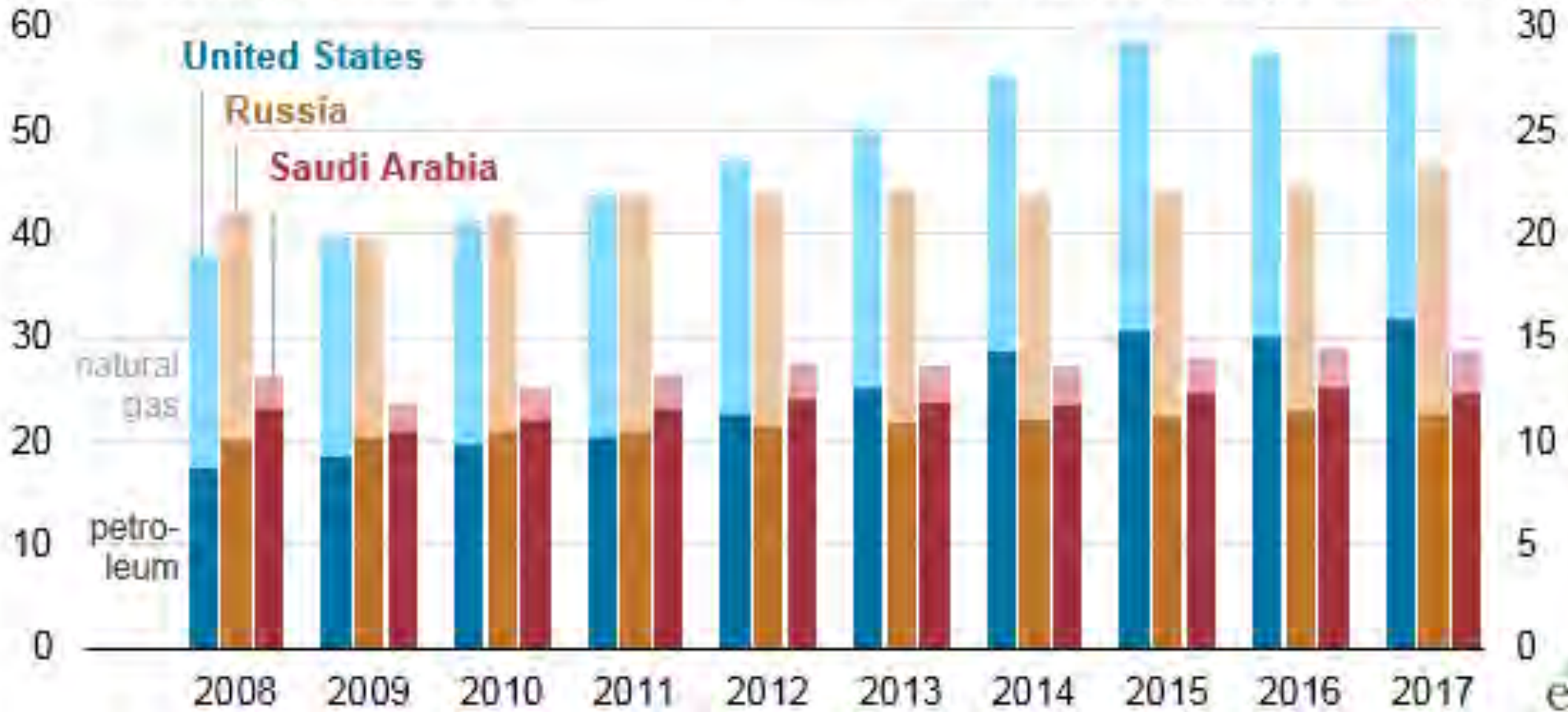
The New Energy Boom



The New Swing Producer



Estimated petroleum and natural gas hydrocarbon production in selected countries
quadrillion British thermal units million barrels per day of oil equivalent



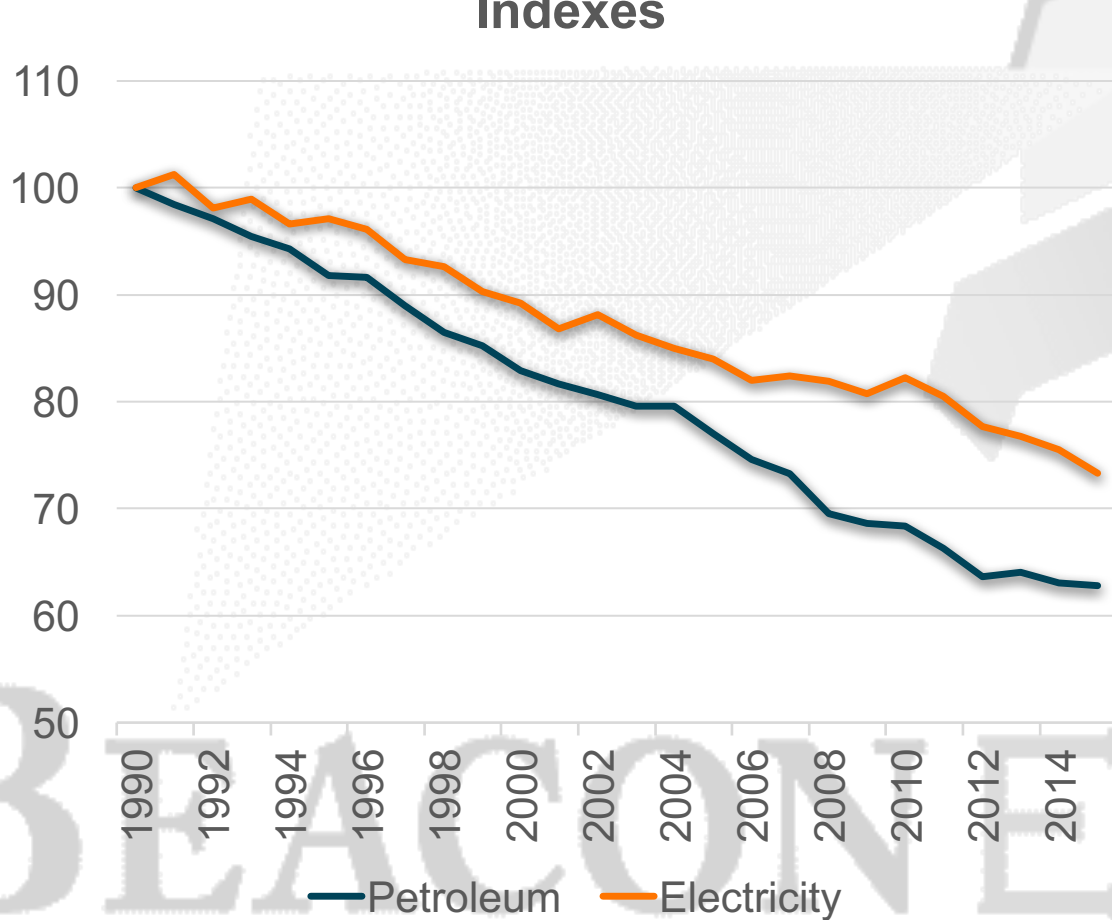
B



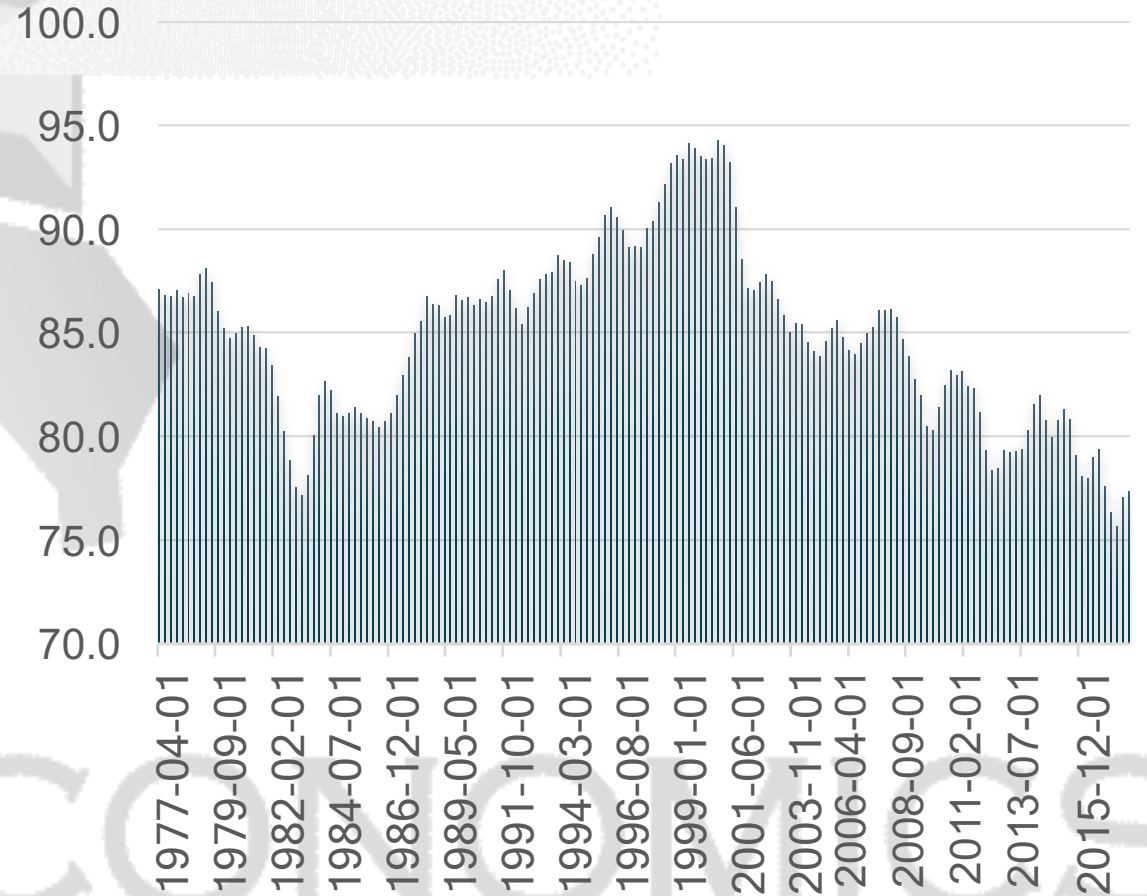
Domestic Energy Glut



Energy Consumption / Real GDP Indexes



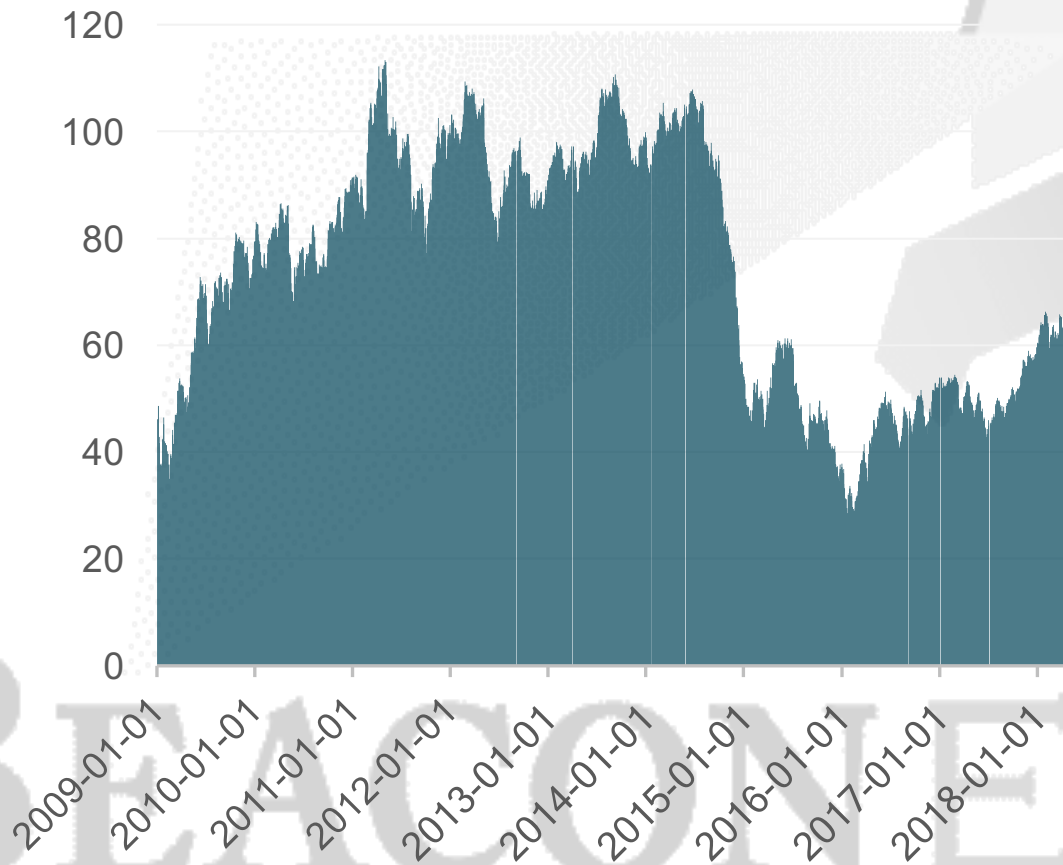
US Utilities Capacity Utilization



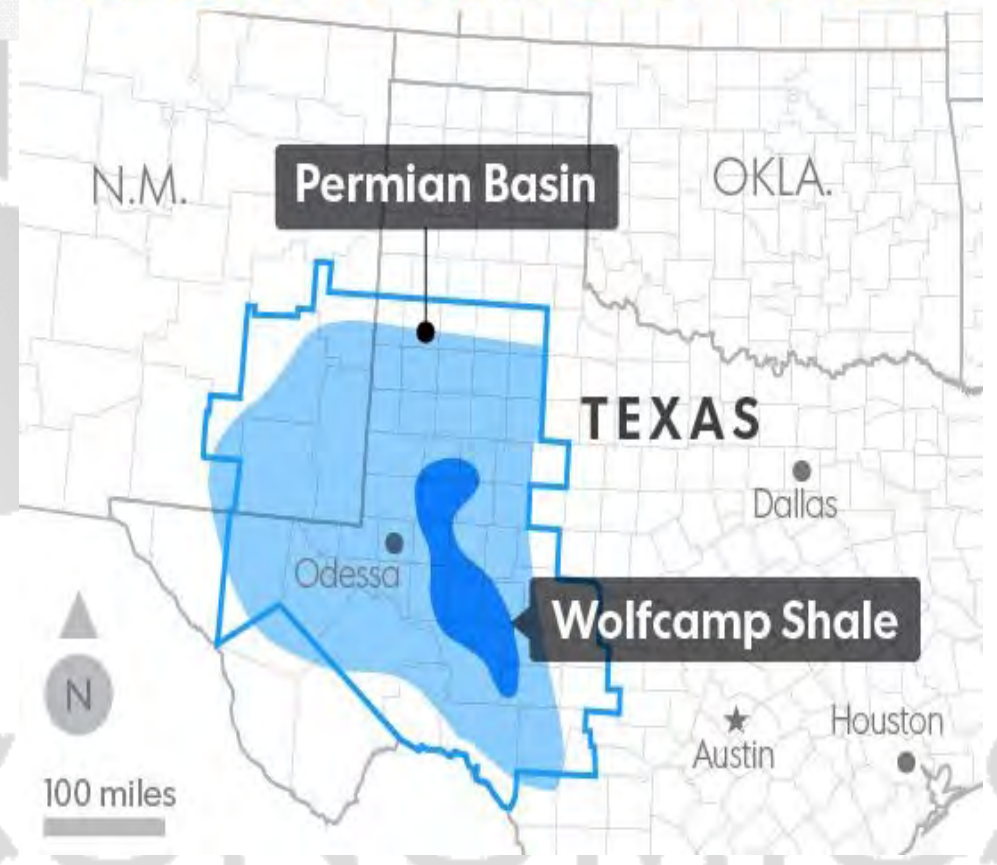
Rising Prices?



Oil Prices (WTI)



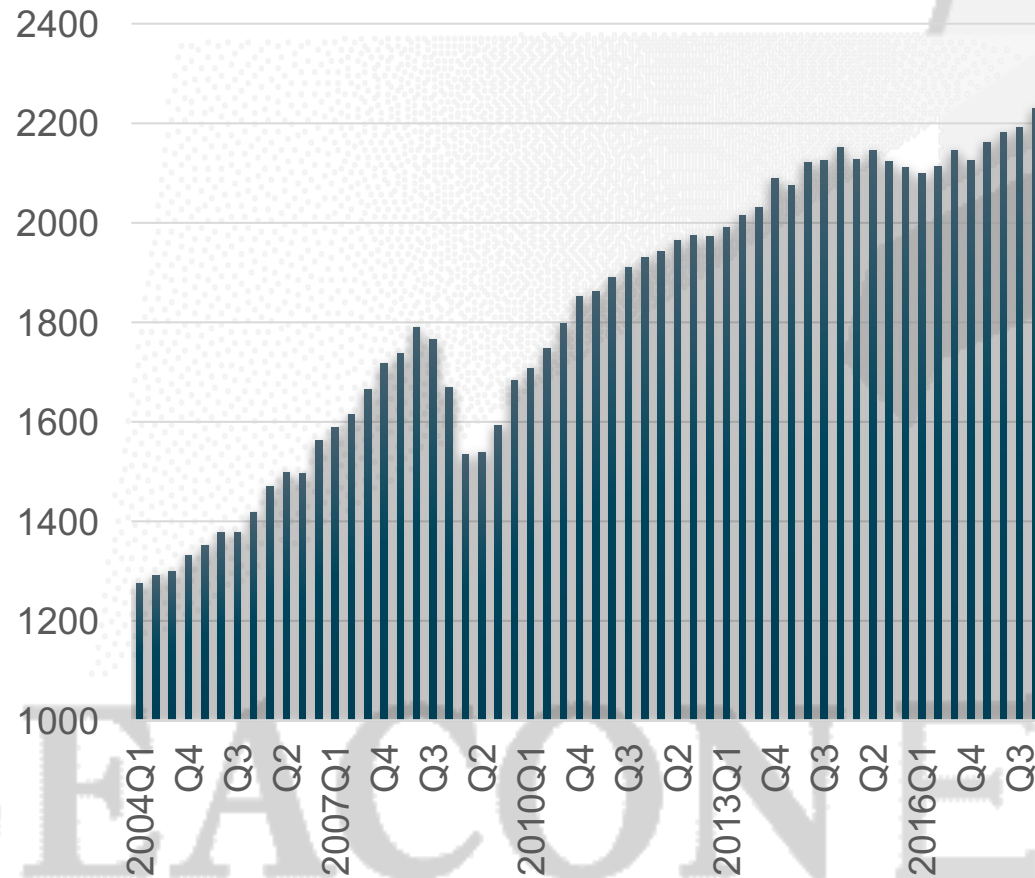
LARGEST OIL DEPOSIT FOUND



Exports



US Real Exports

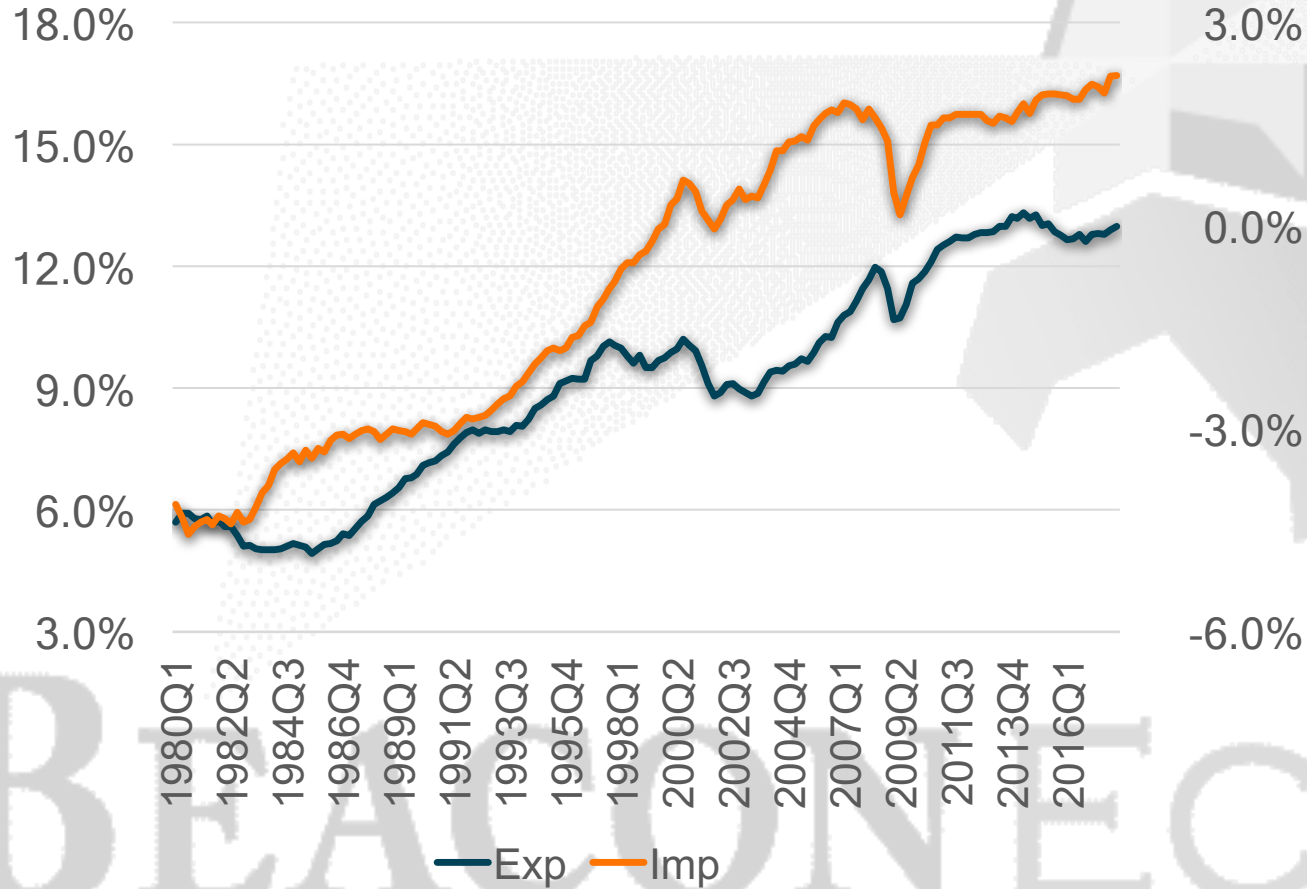


Nominal Trade Flows	2018	Y-o-Y Gr
	Q1 \$Bil	
Exports	2471.8	7.7%
Industrial supplies	507.6	14.8%
Travel	224.4	6.6%
Consumer goods	208.8	4.4%
Automotive	171.3	6.1%
Petroleum	159.9	25.8%
Foods, feeds	136.3	2.4%
Charges for IP	123.9	1.0%
Civilian aircraft	121.2	5.7%
Transport	90.2	5.5%
Computers	48	9.3%

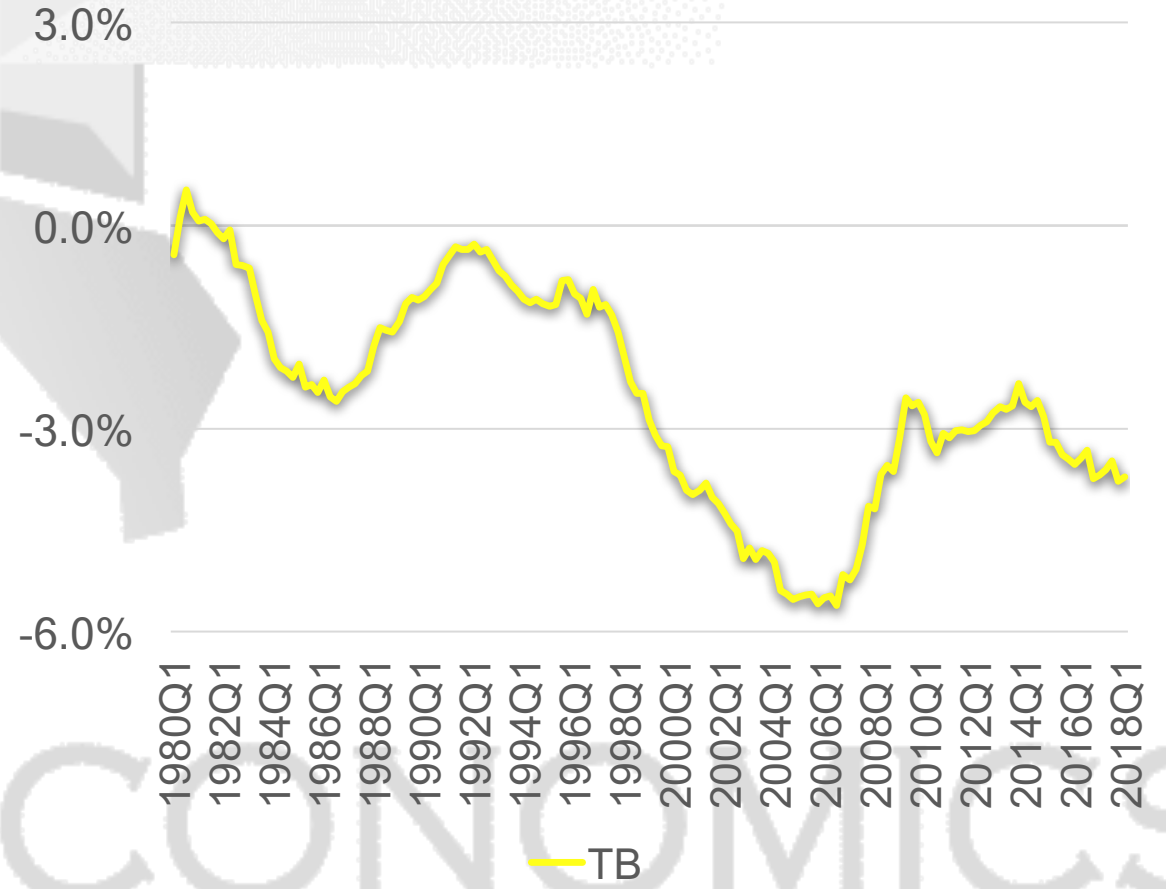
Trade Trends



US Real Trade Flows % GDP



US Real Trade Flows % GDP



Global Growth

IMF Global Forecast: 3.9%



	China	United States	EU	East Asia	Latin America	World
2009	9.2	-2.8	-4.3	4.4	-1.8	-0.1
2010	10.6	2.5	2.1	8.8	6.1	5.4
2011	9.5	1.6	1.8	6.7	4.7	4.3
2012	7.9	2.2	-0.4	5.8	3	3.5
2013	7.8	1.7	0.3	6	2.9	3.5
2014	7.3	2.6	1.8	5.5	1.2	3.6
2015	6.9	2.9	2.3	5.3	0.1	3.4
2016	6.7	1.5	2	5.2	-0.9	3.2
2017	6.8	2.2	2.3	5.4	1.2	3.6

\$US: Broad Index, Real



Tariffs: 25% steel, 10% aluminum



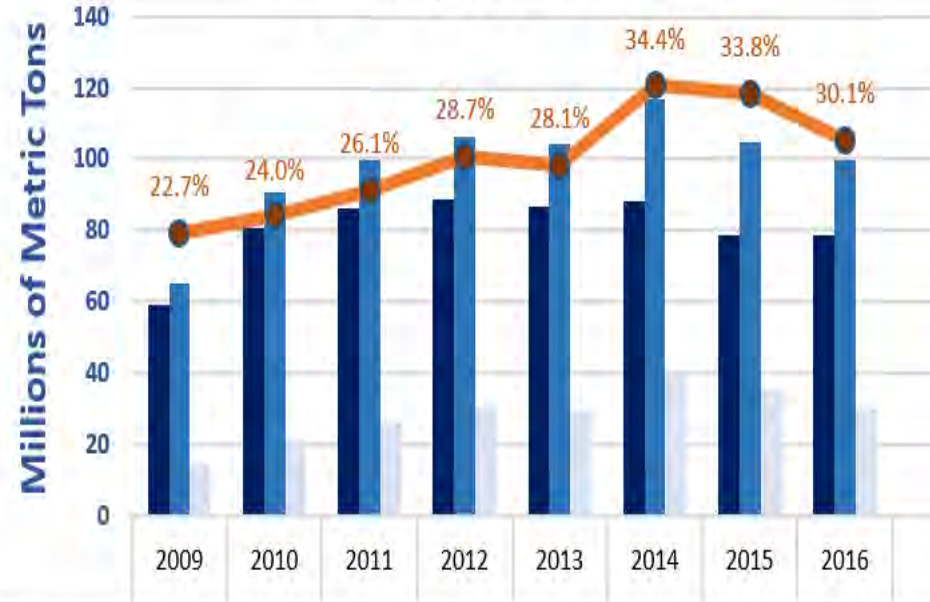
	Exports	Imports
Goods	\$1,547	\$2,381
Services	\$797	\$534

Trade (Billions)	2013	2016
Iron & steel mill products	\$18.1	\$16.0
Bauxite & aluminum	\$10.3	\$12.3

PPI: Steel and Steel Products



U.S. Import Penetration



US Metal Industry: <100,000 Production Workers

EU leader responds to Trump's tariff plan: 'We can also do stupid'

By Victor Reklaitis

Published: Mar 8, 2018 2:47 a.m. ET



European Union leaders on Wednesday discuss possible responses to potential U.S. tariffs on steel and aluminum imports



Donald J. Trump @realDonaldTrump

When a country (USA) is losing many billions of dollars on trade with virtually every country it does business with, trade wars are good, and easy to win. Example, when we are down \$100 billion with a certain country and they get cute, don't trade anymore-we win big. It's easy!

Trade Trends



	Total Trade	Share	Gr	Bal 2017	Bal 2016
Total	3889.7	100.0%	6.8%	-796.1	-734.3
China	636.0	16.4%	9.9%	-375.2	-347.0
Canada	582.4	15.0%	6.9%	-17.6	-11.3
Mexico	557.0	14.3%	6.1%	-71.0	-63.2
Japan	204.2	5.3%	4.5%	-68.8	-68.9
Germany	171.2	4.4%	4.6%	-64.2	-64.8
Korea	119.4	3.1%	6.4%	-22.9	-27.6
UK	109.4	2.8%	-0.3%	3.2	1.1
France	82.5	2.1%	6.2%	-15.3	-15.9
India	74.3	1.9%	9.7%	-22.9	-24.3
Italy	68.3	1.8%	10.2%	-31.7	-28.4

The China Syndrome

Value US Exports to China as % of GDP:
0.75%

Value China Exports to US as % of GDP:
4.0%



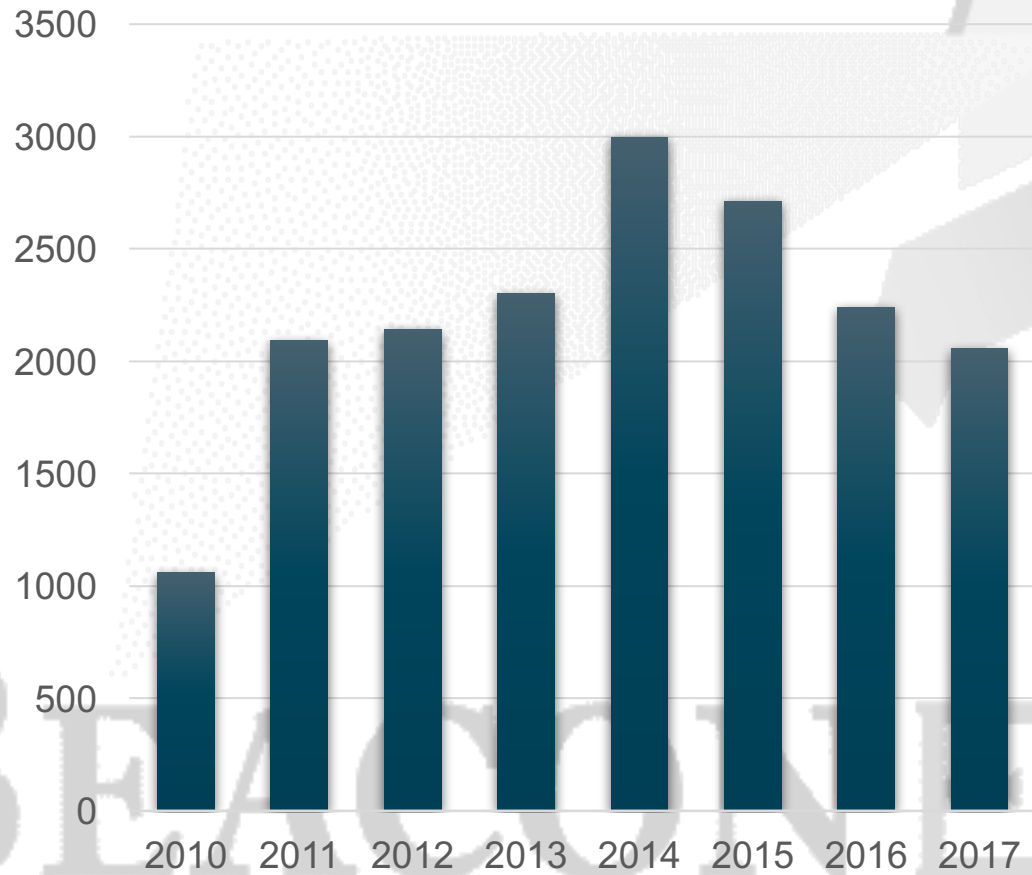
Demands

- reduce its trade surplus with the U.S. by \$200 billion over two years
- would not challenge U.S. actions taken in intellectual property disputes
- stop subsidizing high-tech sectors identified in its “Made in China 2025” plan
- cut tariffs on “all products in non-critical sectors” to levels at or below U.S. duties
- demanded that China not target U.S. farmers and agricultural products
- demanded that China not retaliate against U.S. restrictions on Chinese investments
- ease a process for approving U.S. investments

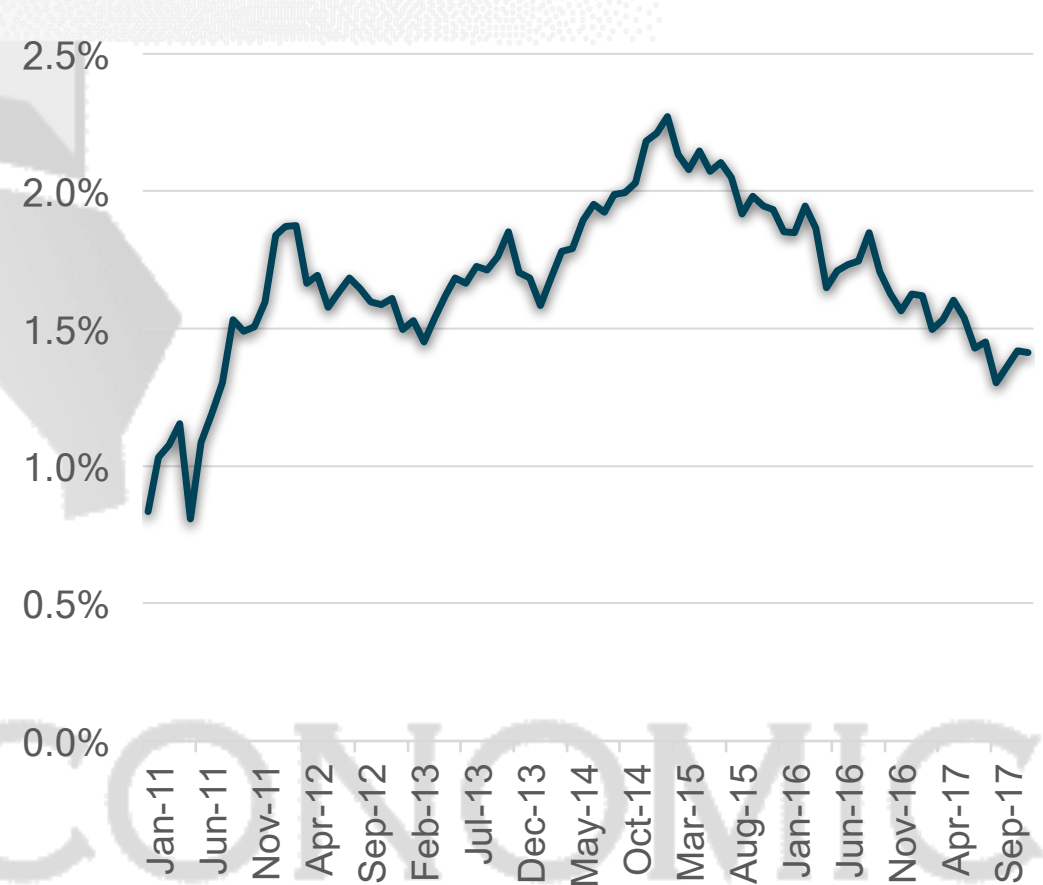
Labor Markets



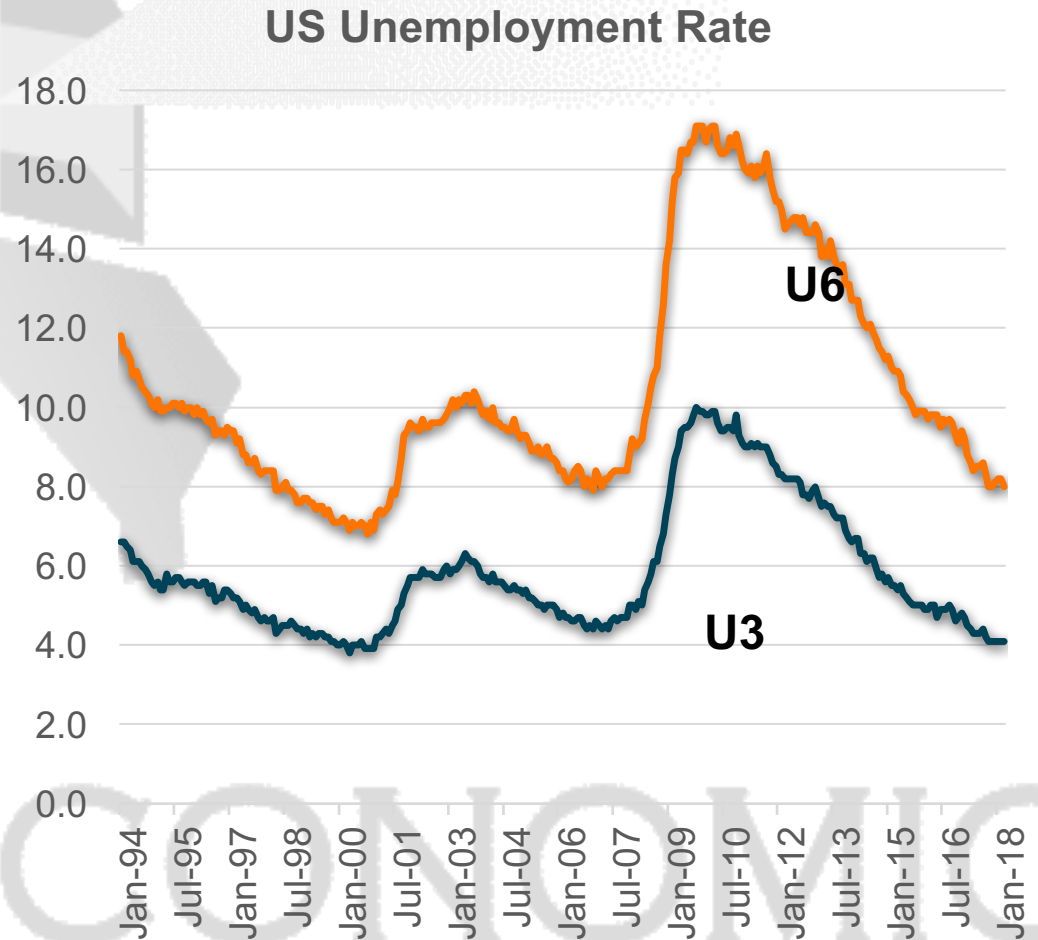
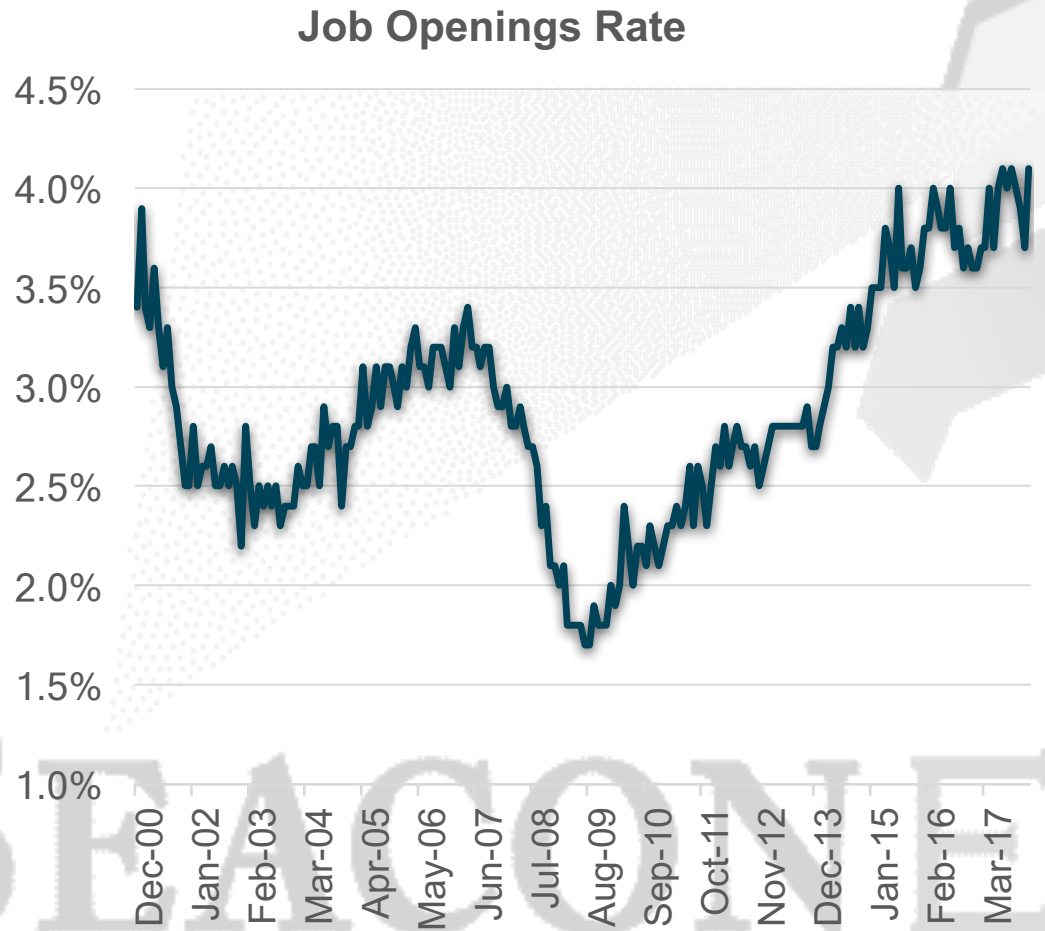
Net Change Payroll Jobs



Growth Payroll Employment (Y-o-Y)



Why Slowing Job Growth?

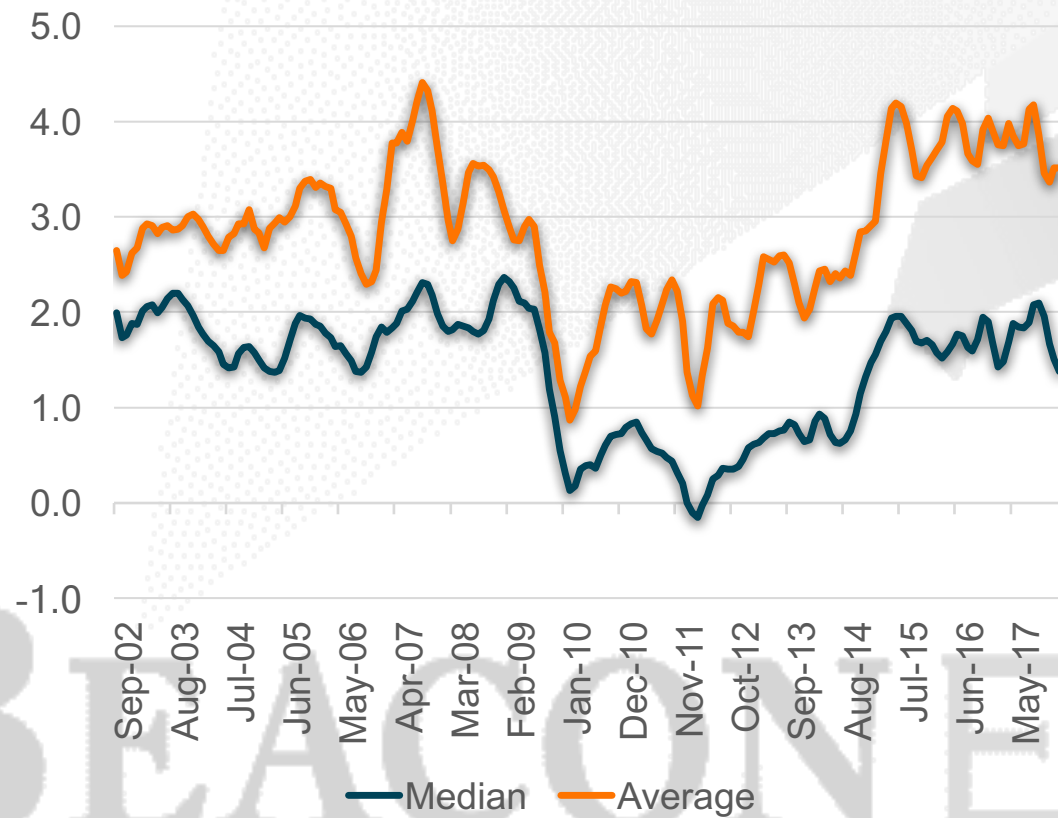


BEACON ECONOMICS

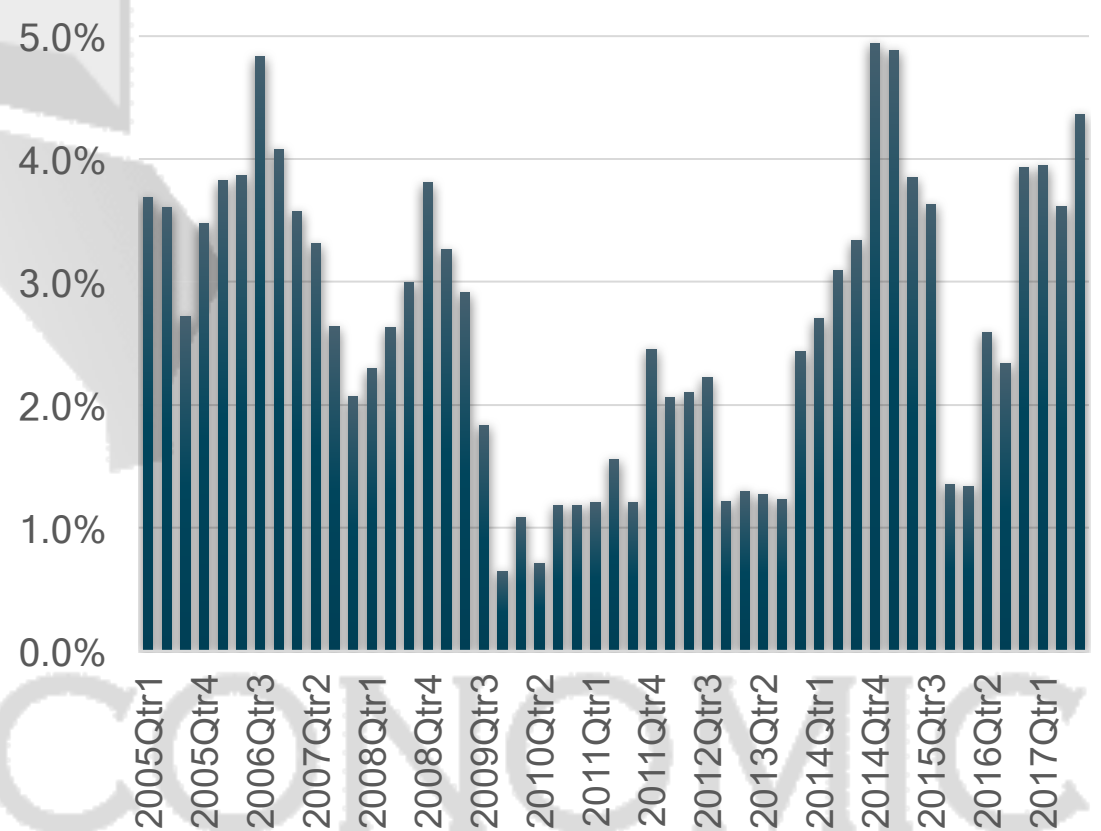
Consequences



Real Wage Gains for Continuously Employer Workers



Growth in Average Cost per Employee Hour



Word of the Day



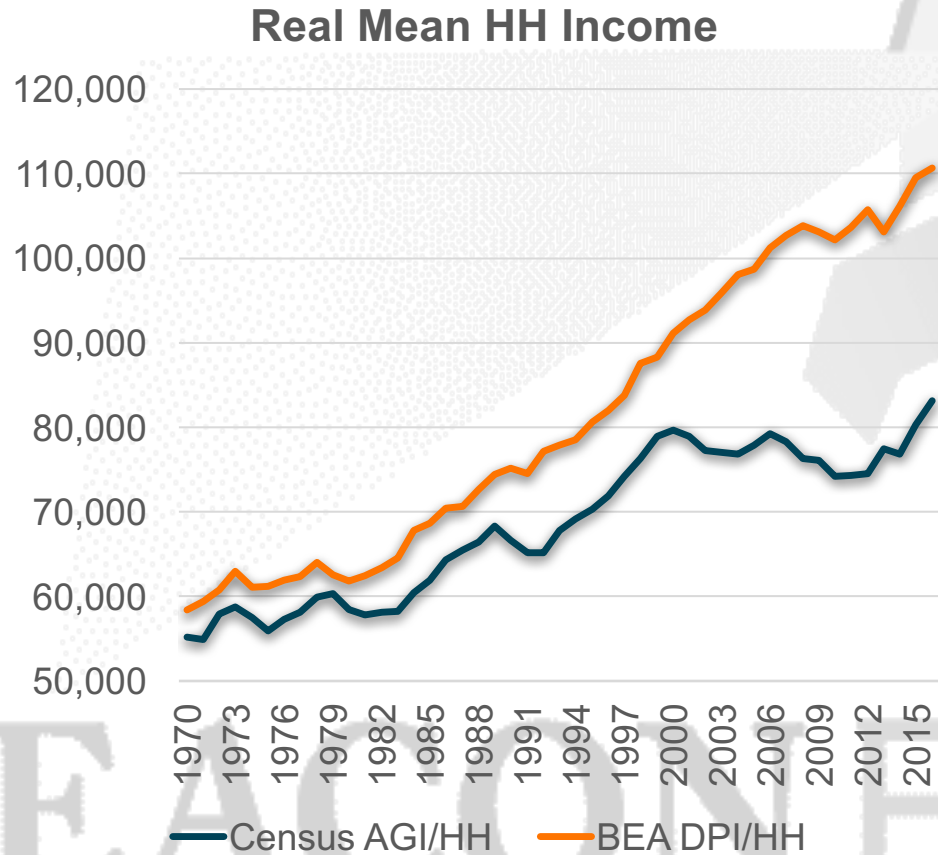
Miserabilism

The philosophy of pessimism – or –
Trying really hard to convince everyone
that things are really bad when, in reality,
they aren't.



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Income Stagnation?



■ What is better today?

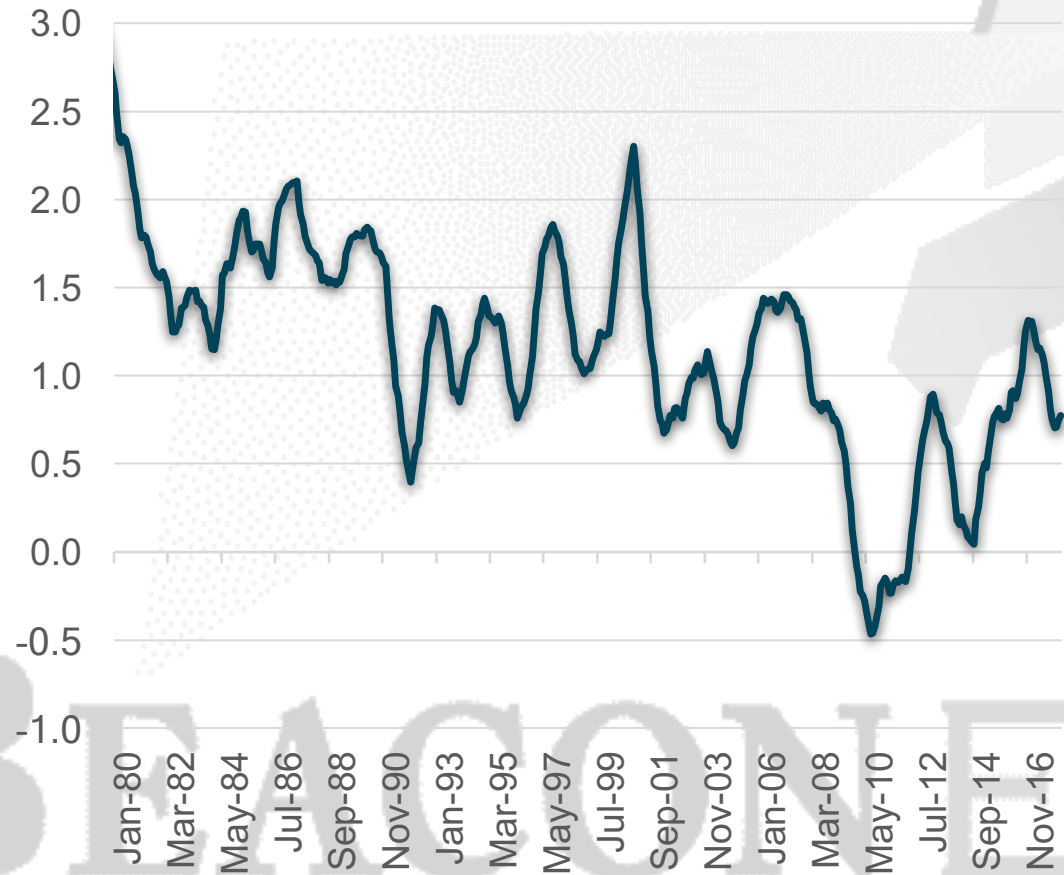
- Communications
- Medical care, Pharmaceuticals
- Entertainment options
- Transportation
- Shopping, Product quality
- Food quality / variety
- Access to information
- Environmental conditions
- Legal Marijuana

■ What isn't?

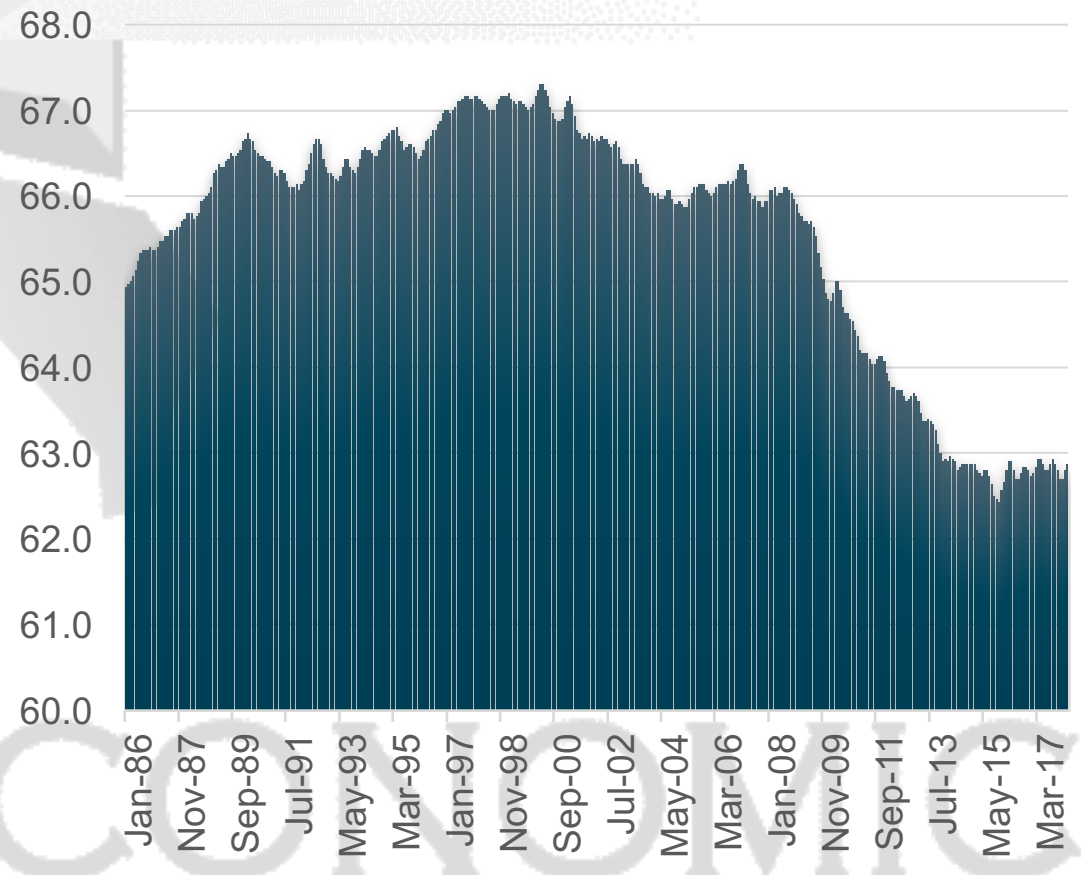
Workforce Growth



US Labor Force Growth (Smoothed)



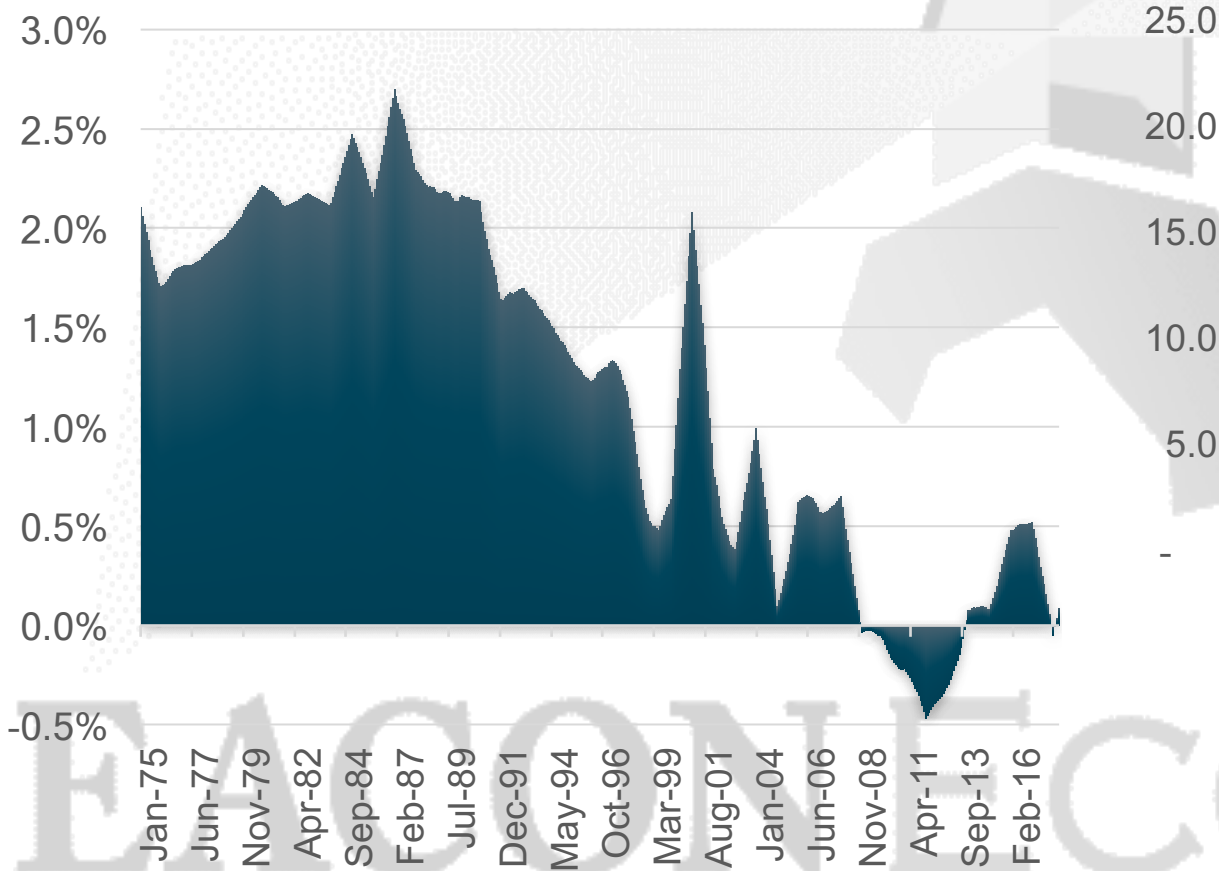
US Participation Rate



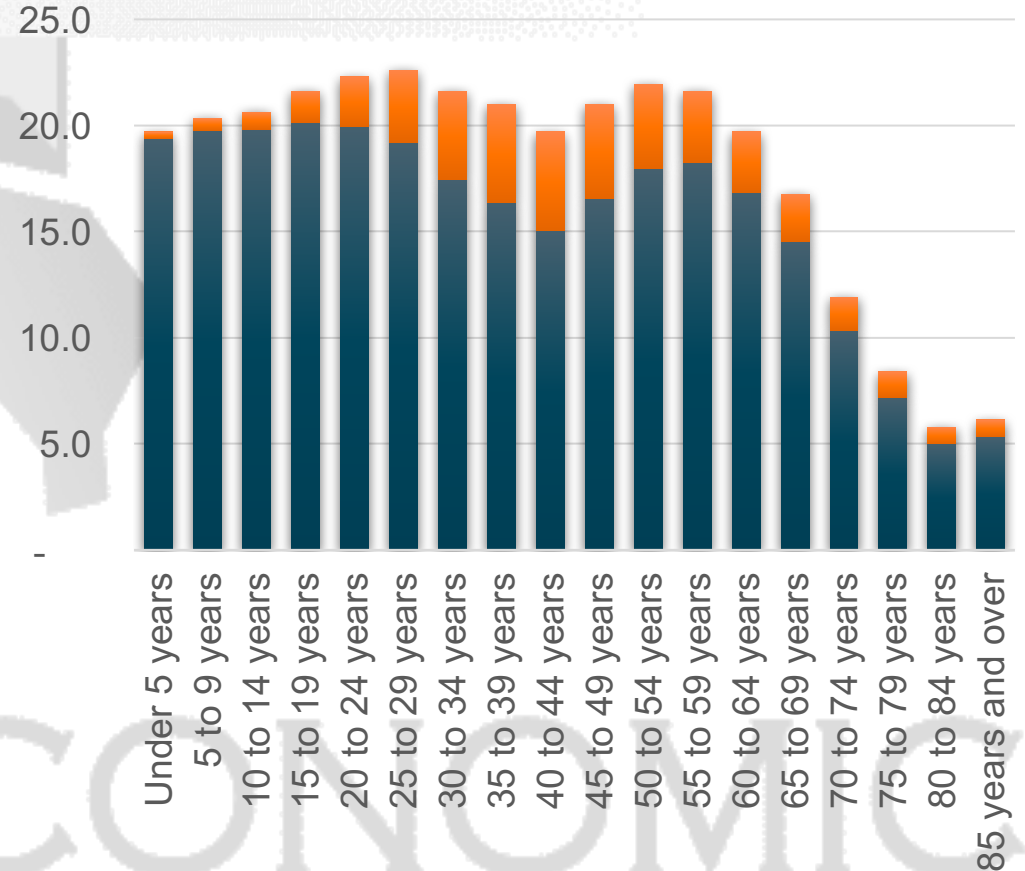
The Boomer Bust



US Population 25-54 Y-o-Y Gr



2016 Population by Age (Millions)



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The Cure for Secular Stagnation



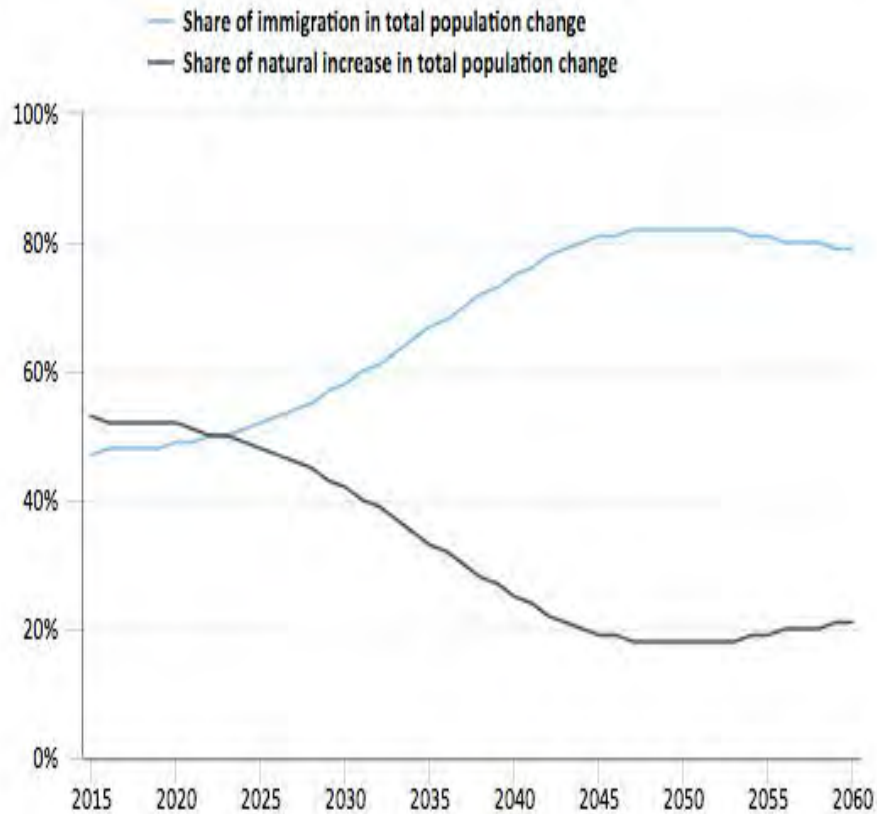
Figure 8: Increase in Average Annual Growth Rate With Estimated Policy Shifts

Policy Change	Boost in Annual Growth Rate	Estimated By
Enact immigration reform to increase number of workers	0.3%	CBO
Reform the income tax code	0.05% - 0.3%	JCT, Treasury
Increase the Social Security retirement ages by two years	0.15%	CBO
Reduce deficits by \$4 trillion over ten years	0.1%	CBO
Expand energy production at level of shale boom*	0.09%	CBO
Repeal the Affordable Care Act ("Obamacare")	0.08%	CBO
Ratify the Trans-Pacific Partnership	0.01%	U.S. ITC
Increase public investment in infrastructure, education, and research by \$400 billion	0 - 0.01%	CBO

Immigration



Projected share of natural increase of population and immigration in total population change



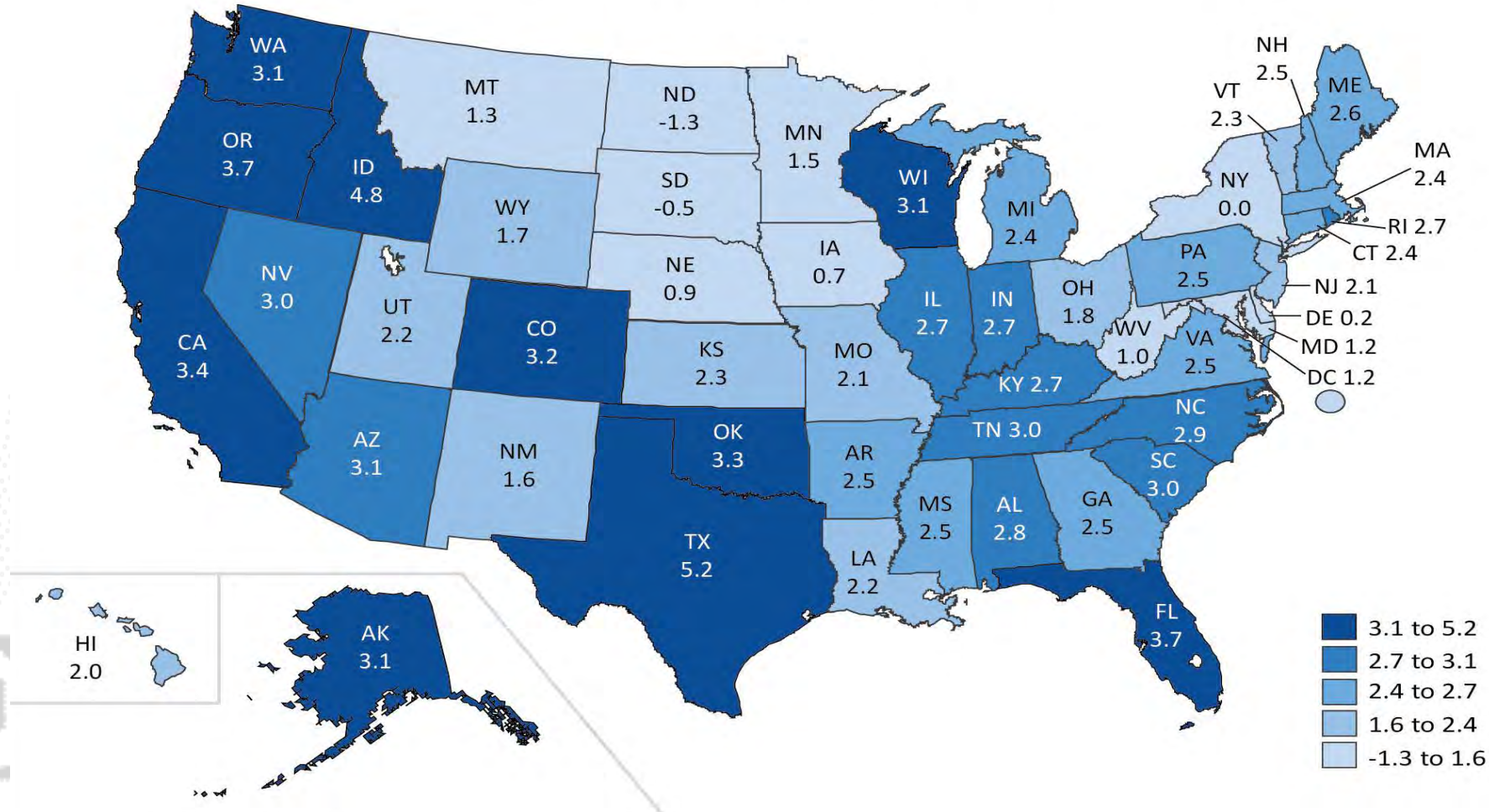
Share Foreign Born by State

California	39.1	27.3%	Minnesota	5.5	8.3%
New York	19.8	22.9%	North Carolina	10.0	7.9%
New Jersey	9.0	22.1%	Michigan	9.9	6.6%
Florida	20.3	20.2%	Pennsylvania	12.8	6.5%
Texas	27.5	17.0%	Oklahoma	3.9	6.0%
Massachusetts	6.8	16.1%	Tennessee	6.6	5.0%
Maryland	6.0	15.2%	Indiana	6.6	4.9%
Connecticut	3.6	14.5%	Wisconsin	5.8	4.8%
Illinois	12.9	14.2%	Iowa	3.1	4.8%
Washington	7.2	13.7%	South Carolina	4.9	4.8%
Arizona	6.8	13.4%	Ohio	11.6	4.3%
Virginia	8.4	12.2%	Missouri	6.1	4.0%
Georgia	10.2	10.0%	Louisiana	4.7	4.0%
Oregon	4.0	9.9%	Kentucky	4.4	3.6%
Colorado	5.5	9.8%	Alabama	4.9	3.5%

Regional Growth



Percent Change in Real GDP by State, 2017:Q3–2017:Q4



BE

ICS

Local Economic Performance



State Unemployment Rate Nov 2016

Alaska	6.9	Wyoming	5.3	Iowa	4.2
New Mexico	6.7	Missouri	5.2	Maryland	4.2
Louisiana	6.4	Oklahoma	5.2	Maine	4.1
DC	6.1	Georgia	5.1	Wisconsin	4.1
Mississippi	6	Kentucky	5	Arkansas	4
Nevada	5.8	New York	5	Minnesota	4
W Virginia	5.8	South Carolina	4.9	Virginia	4
Penn	5.7	Ohio	4.8	Idaho	3.8
RI	5.6	Texas	4.8	Colorado	3.6
Washington	5.6	Florida	4.7	Massachusetts	3.6
Arizona	5.5	North Carolina	4.7	Utah	3.4
California	5.5	Michigan	4.6	Hawaii	3.3
Illinois	5.5	Tennessee	4.6	Vermont	3.3

State Participation 2015

Minnesota	70.2	Pennsylvania	62.8
Wisconsin	68.0	Ohio	62.5
Maryland	66.8	California	62.2
Colorado	66.7	Georgia	61.3
Missouri	65.6	N Carolina	61.2
Virginia	65.2	New York	61.1
Mass.	64.9	Louisiana	60.5
Illinois	64.7	Michigan	60.3
New Jersey	64.1	Arizona	59.8
Indiana	63.7	Tennessee	59.3
Texas	63.7	Florida	59.3
Washington	63.0	S Carolina	59.0

Regional Trends



Unemployment Rates by Census Division

Division	Q2-17 (%)	Chg since Q2-11 (p.p.)
West North Central	3.5	-3.1
New England	4.0	-3.8
Mountain	4.0	-4.9
East North Central	4.2	-5.2
South Atlantic	4.4	-4.9
Middle Atlantic	4.5	-3.8
Pacific	4.6	-6.5
East South Central	4.7	-4.9
West South Central	4.8	-2.9

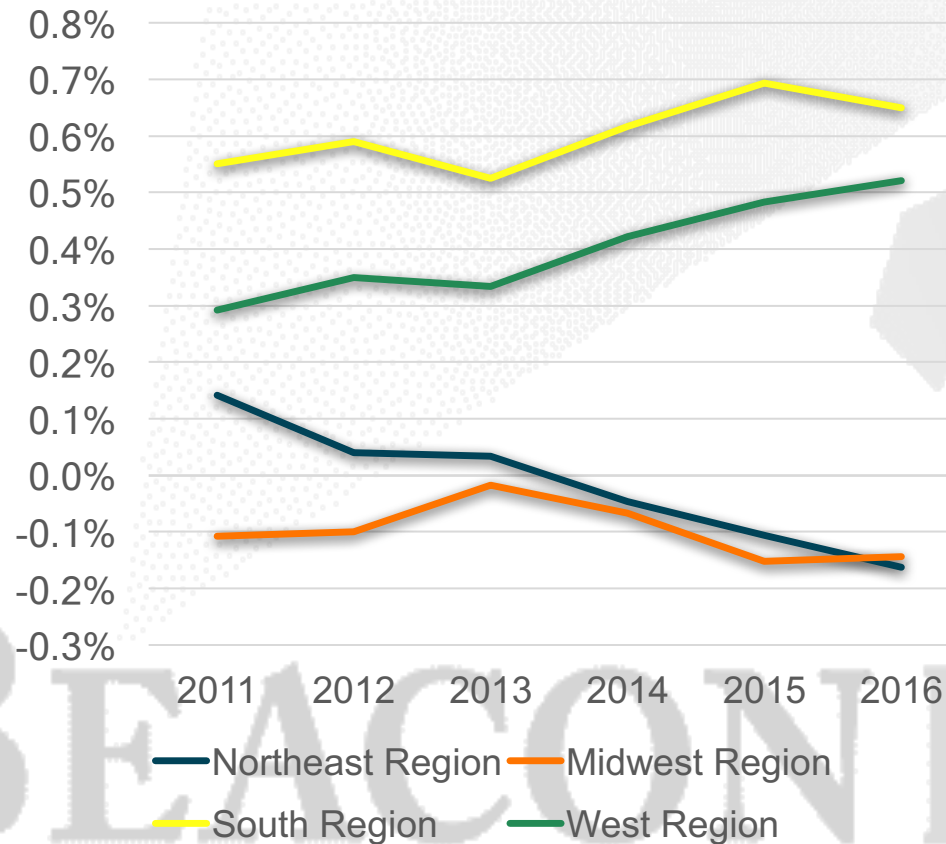
Total Payroll Employment (SA)

Census Division	2011	2016	% chg
Mountain	9,136	10,312	12.9
Pacific	5,415	6,058	11.9
South Atlantic	25,051	27,776	10.9
West South Central	15,254	16,881	10.7
East South Central	7,409	8,003	8.0
East North Central	20,333	21,838	7.4
New England	6,867	7,331	6.8
West North Central	9,934	10,606	6.8
Middle Atlantic	18,202	19,364	6.4

Population Shifts



Net Migration (% of Pop) by region



Net Migration by State 14-16

Florida	1.51%	Ohio	-0.05%
Nevada	1.27%	Penn	-0.06%
Colorado	1.10%	Wisconsin	-0.08%
Oregon	1.08%	Michigan	-0.08%
South Carolina	1.04%	New Jersey	-0.14%
Washington	0.99%	Vermont	-0.19%
Arizona	0.96%	W Virginia	-0.26%
Texas	0.90%	New York	-0.27%
North Dakota	0.79%	Mississippi	-0.28%
Idaho	0.77%	Kansas	-0.30%
Delaware	0.66%	Connecticut	-0.32%
North Carolina	0.66%	Wyoming	-0.35%
Montana	0.60%	New Mexico	-0.47%
Georgia	0.54%	Illinois	-0.58%
Tennessee	0.53%	Alaska	-0.73%

California fact versus fiction



Chief
Executive
NETWORK

CONTINUOUS IMPROVEMENT FOR YOU - THE CEO

2016 Best & Worst States For Business

- 50 [California](#)
- 49 [New York](#)
- 48 [Illinois](#)
- 47 [New Jersey](#)
- 46 [Massachusetts](#)
- 45 [Connecticut](#)
- 44 [Hawaii](#)
- 43 [Michigan](#)
- 42 [Oregon](#)
- 41 [Vermont](#)
- 40 [Maryland](#)
- 39 [Mississippi](#)
- 38 [West Virginia](#)
- 37 [Rhode Island](#)



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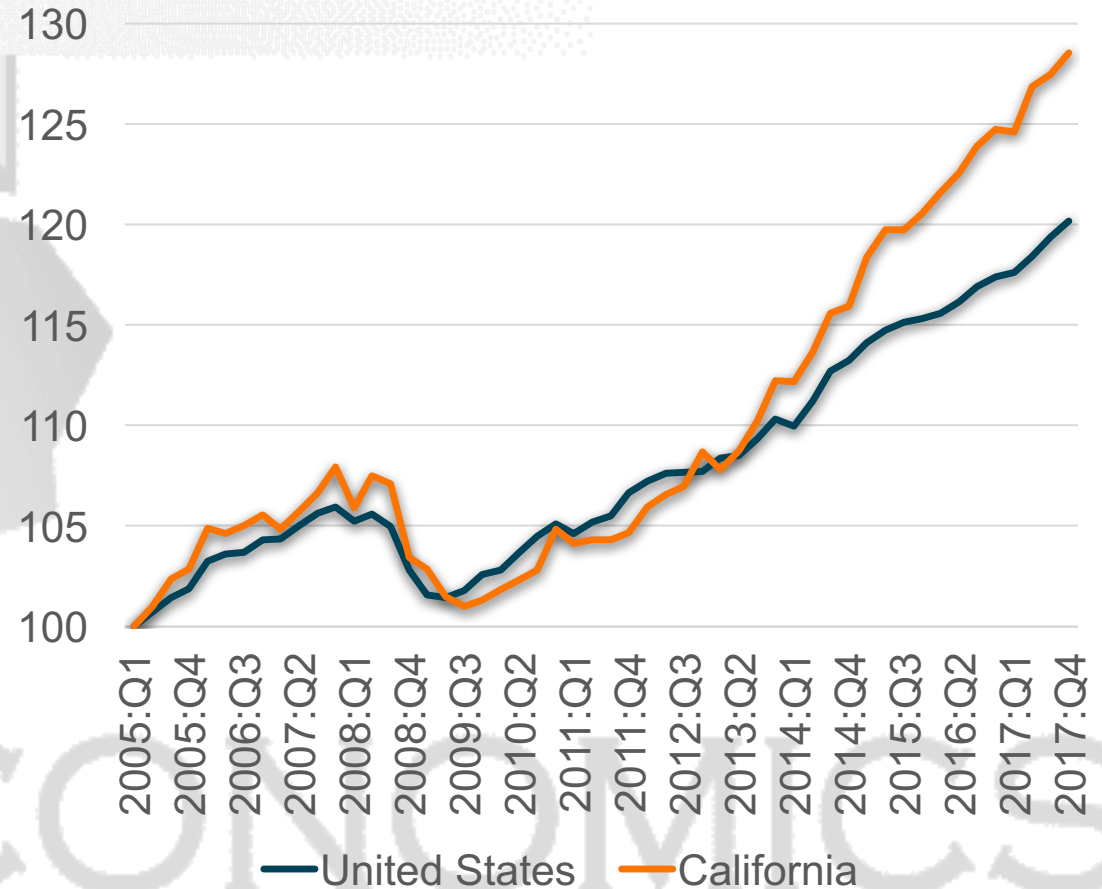
MICS

State Economic Performance



Rk	State	#	Ann Gr	Share US
1	Nevada	211.2	3.4%	1.7%
2	Utah	218.3	3.2%	1.7%
3	Florida	1238.2	3.1%	9.8%
4	Oregon	252.1	2.9%	2.0%
5	Idaho	92.1	2.8%	0.7%
6	Colorado	328.7	2.7%	2.6%
7	Washington	413.1	2.7%	3.3%
8	California	2051	2.6%	16.3%
9	Georgia	537.9	2.6%	4.3%
10	South Carolina	237.6	2.4%	1.9%
11	Texas	1371.6	2.4%	10.9%
12	Arizona	283.3	2.2%	2.2%
13	North Carolina	441.2	2.1%	3.5%
14	Tennessee	291.6	2.0%	2.3%
15	Massachusetts	321.1	1.9%	2.5%

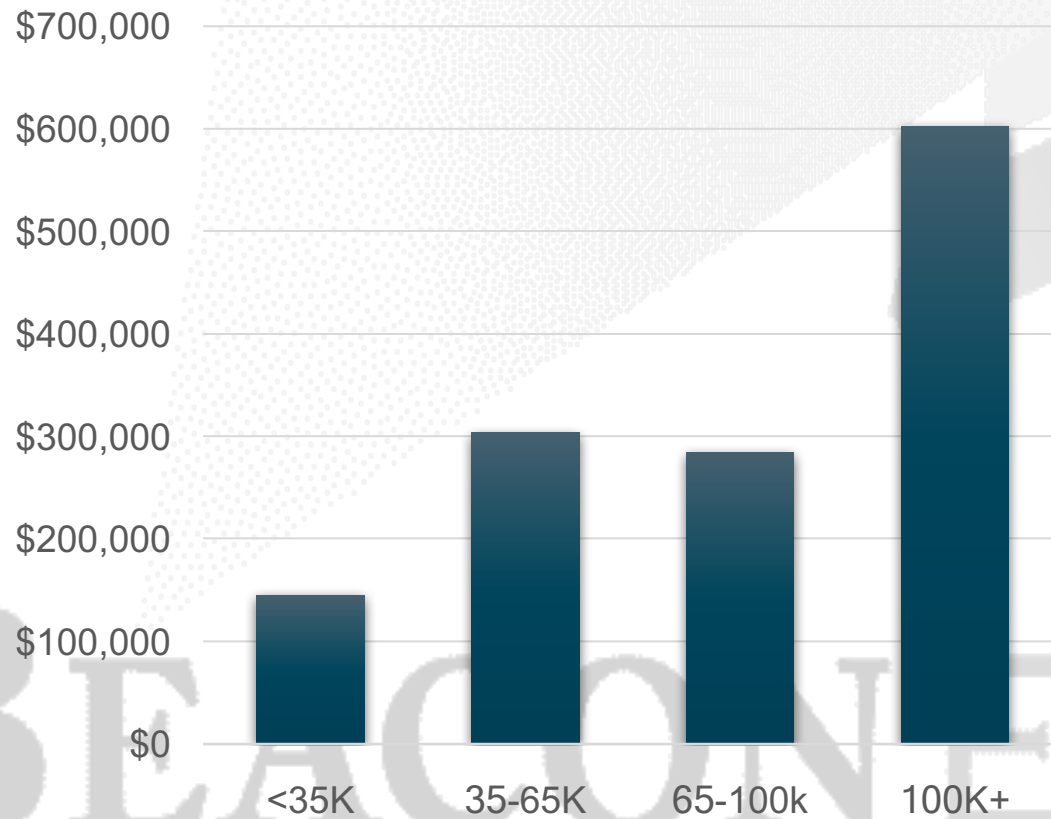
Real State Output Index



State Incomes



California: Change in Employment by Income (F.T.) 2012-2016



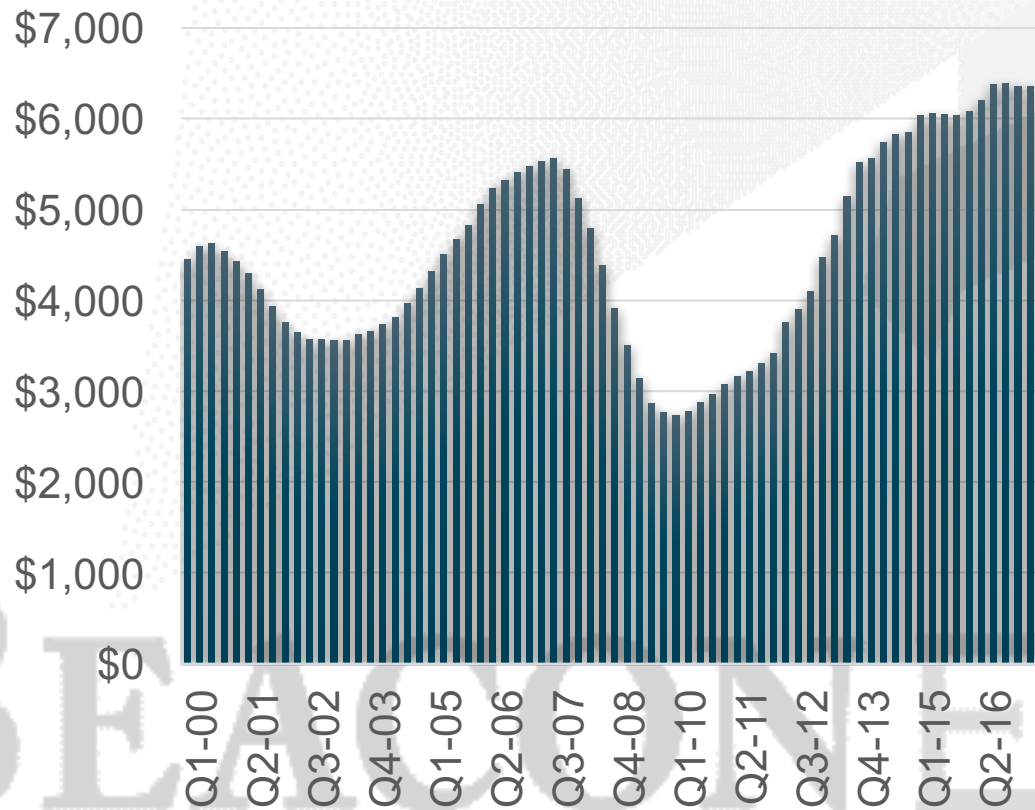
Distribution Household Incomes

	California		Balance US	
	Share	Ch 12-16	Share	Ch 12-16
< 25K	18.5%	-3.3%	21.6%	-3.1%
25-50K	19.4%	-2.4%	22.9%	-1.6%
50-100K	28.5%	-0.5%	30.2%	0.2%
100-150K	15.7%	1.3%	13.8%	1.7%
150K-200K	7.9%	1.6%	5.6%	1.2%
200K+	10.1%	3.3%	6.0%	1.6%

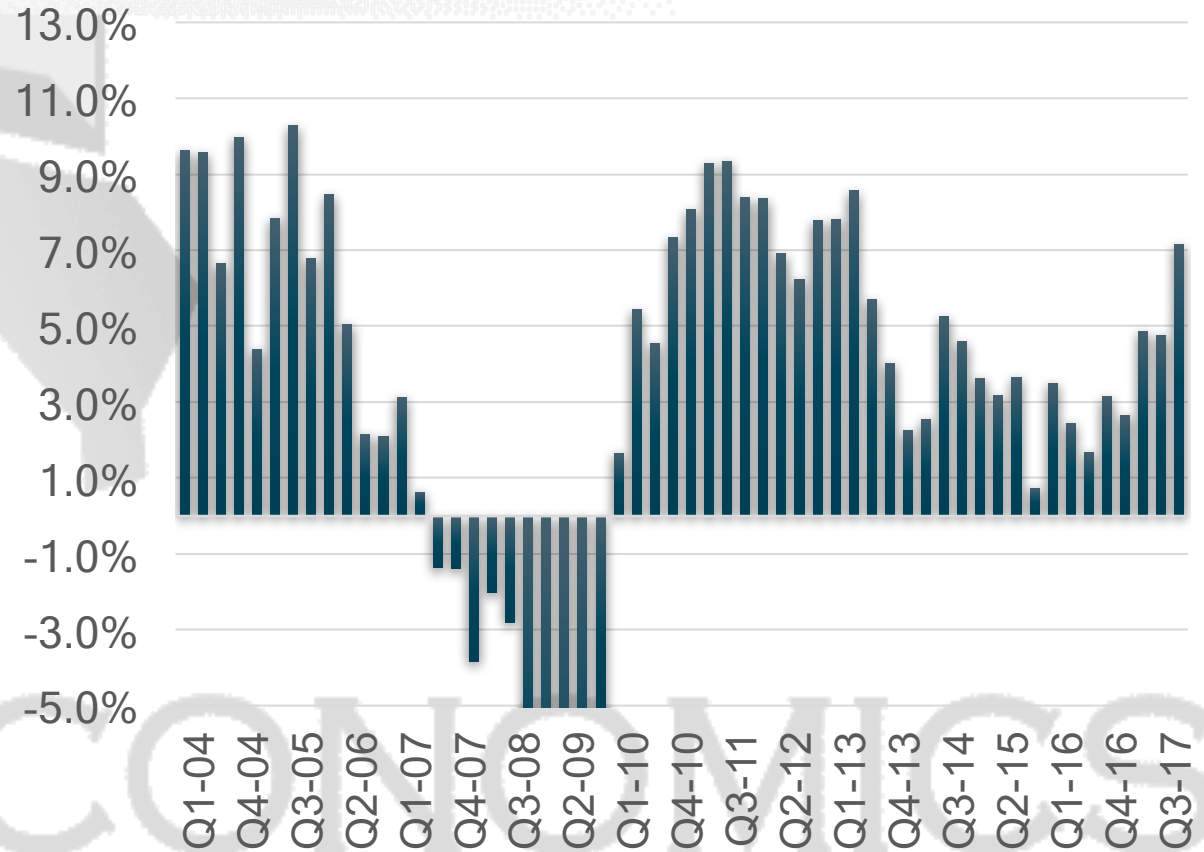
Still Strong Indicators



California Non Residential Permit Values



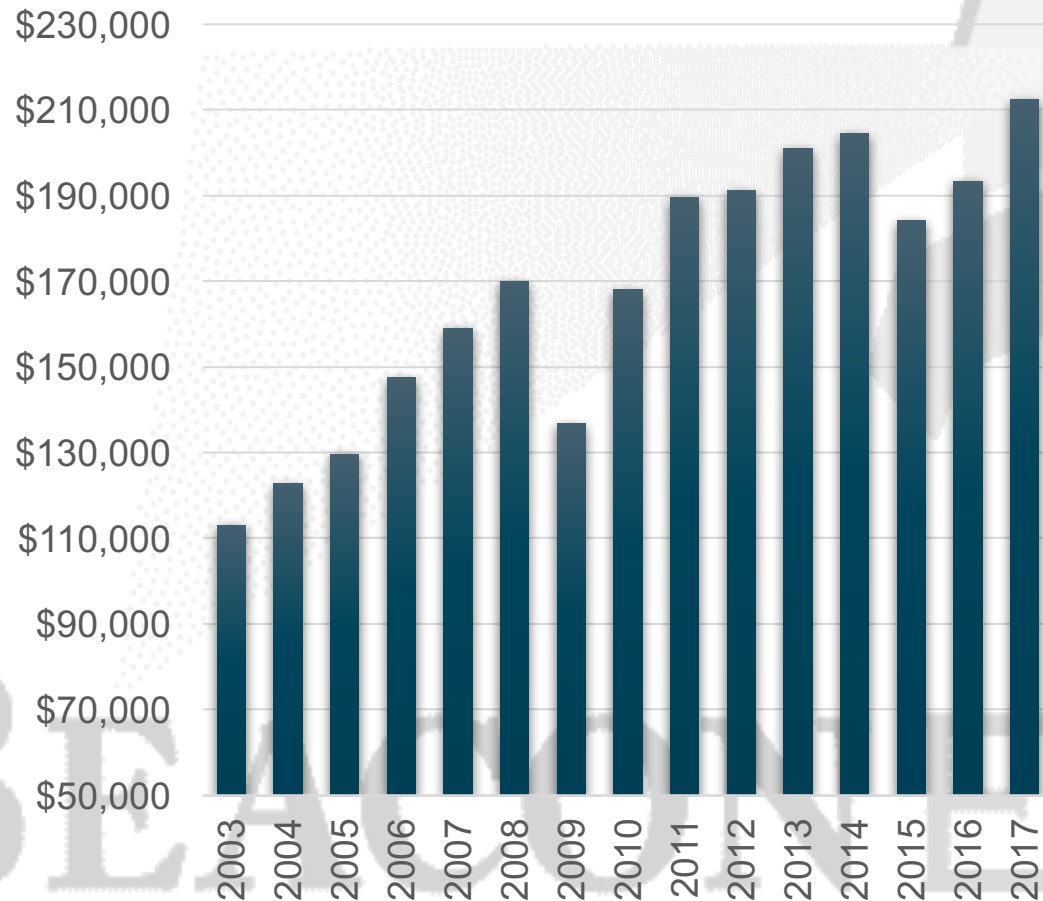
Taxable Sales Growth



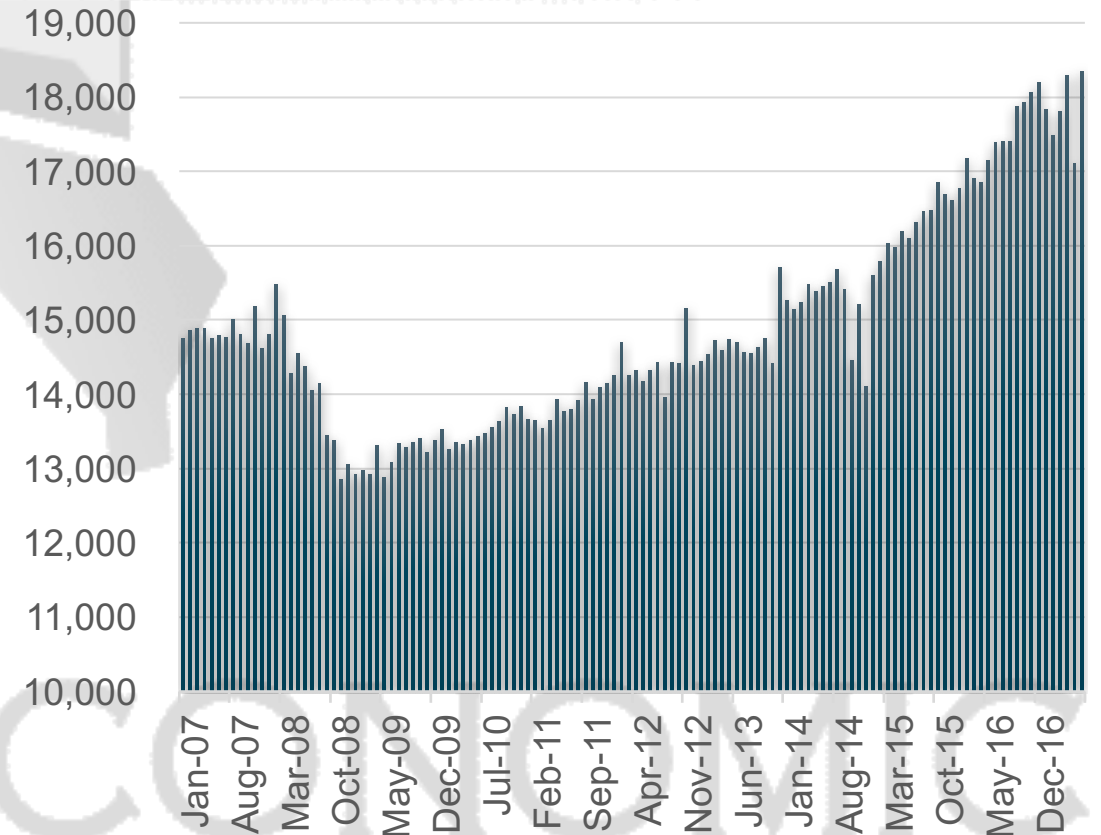
Exports / Travel



California Exports (Nominal)



California Airport Activity (Arrivals / Departures)



Regional Impacts?



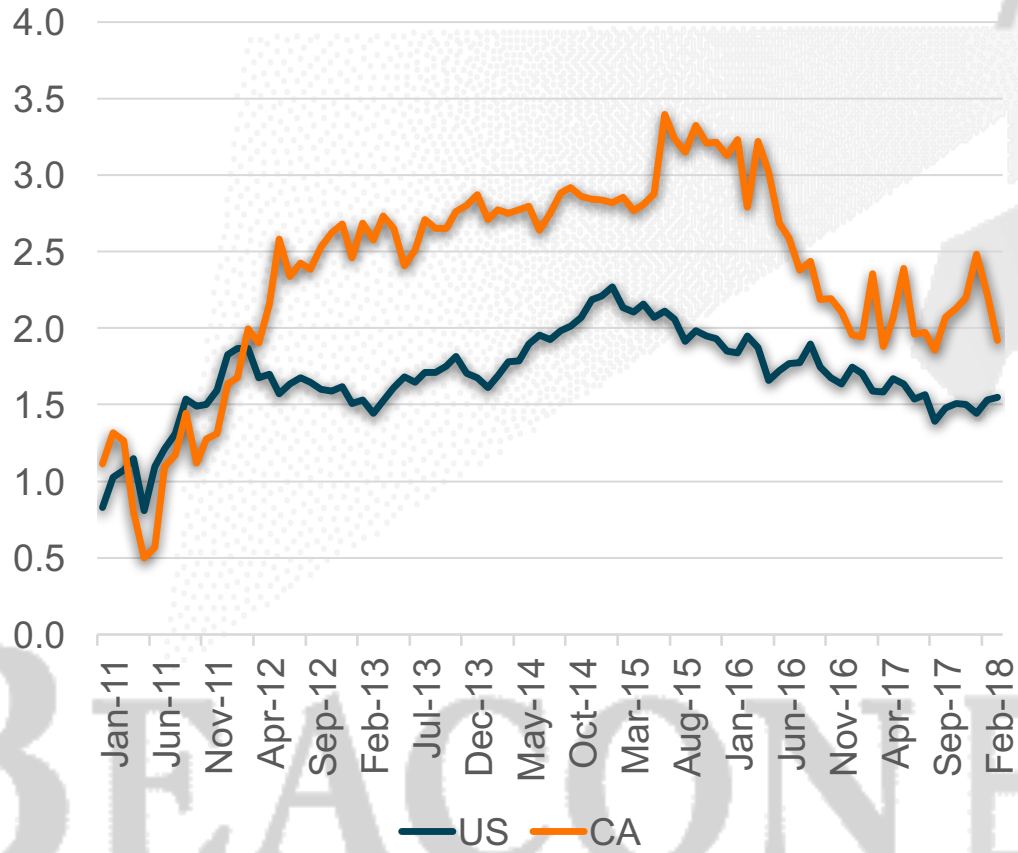
Goods Exports	Share GSP	2017 Total
USA	8.0%	\$ 1,546.7
Texas	15.6%	\$ 264.1
California	6.3%	\$ 171.9
Washington	15.2%	\$ 77.0
New York	4.9%	\$ 75.3
Illinois	7.9%	\$ 64.9
Michigan	11.8%	\$ 59.8
Louisiana	22.9%	\$ 56.5
Florida	5.7%	\$ 55.0
Ohio	7.7%	\$ 50.1
Pennsylvania	5.1%	\$ 38.6
Indiana	10.5%	\$ 37.8
Georgia	6.7%	\$ 37.2
New Jersey	5.8%	\$ 34.5
Tennessee	9.6%	\$ 33.2
North Carolina	6.0%	\$ 32.6

Commodity	2017	
TOTAL ALL COMMODITIES	206,677	6.9%
Industrial Mach, Computers	31,651	19.2%
Electric Machinery Etc	32,397	5.3%
Optic Photo Etc Medic	15,843	3.5%
Nat Pearls Prec Etc Stones	11,614	14.8%
Vehicles	11,223	15.3%
Edible Fruit & Nuts	9,124	5.9%
Plastics And Articles	8,568	5.7%
Aircraft Spacecraft	9,959	-20.0%
Meat	6,790	18.6%
Mineral Fuel Oil Etc.	4,869	37.9%
Chemical Products	4,405	5.0%

The Big Slowdown



YOY Growth Payrolls

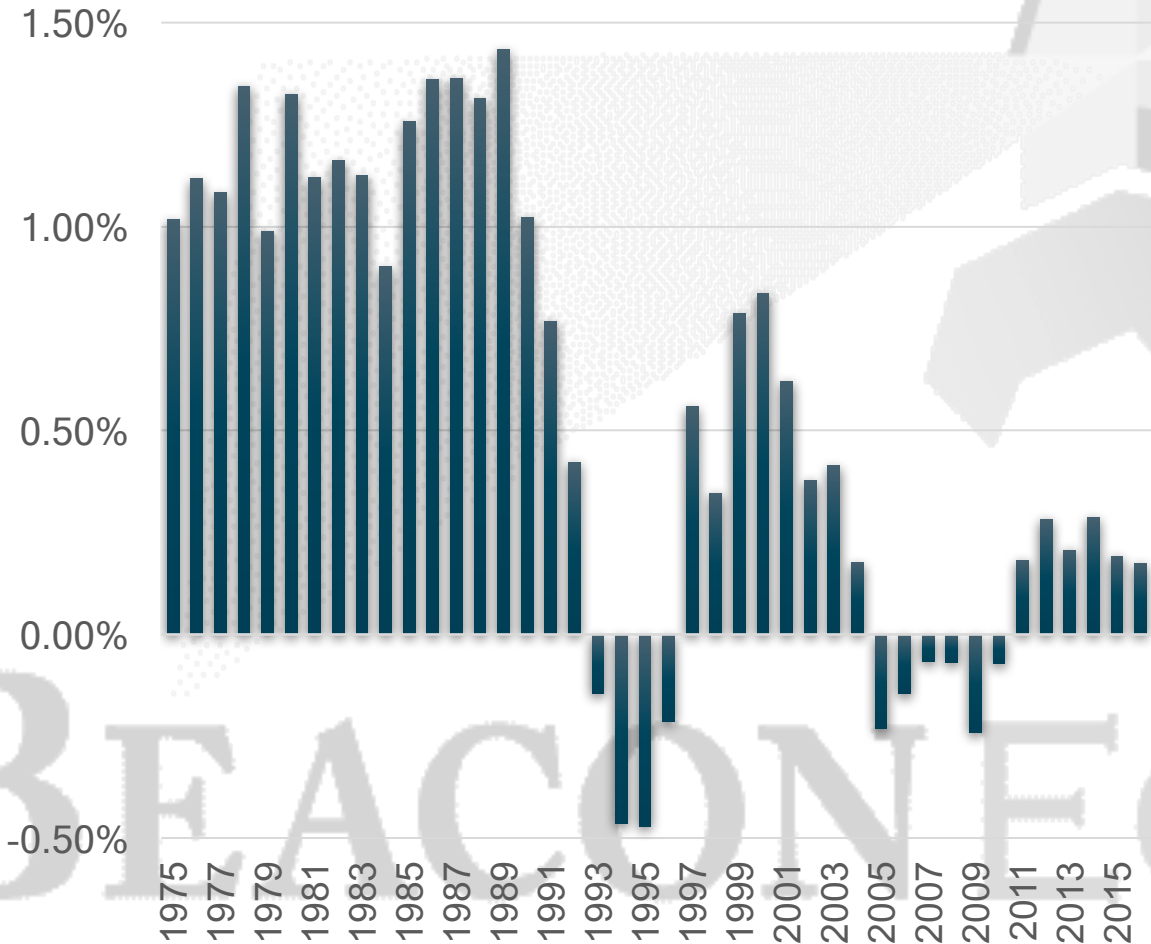


		2016	2017	2018
Stockton-Lodi MSA	239,200	3.9%	3.4%	3.4%
Fresno MSA	351,600	3.6%	2.9%	2.9%
IE MSA	1,479,500	4.0%	3.9%	2.9%
San Jose MSA	1,118,000	3.2%	2.9%	2.6%
Sacramento MSA	980,000	3.5%	2.3%	2.0%
San Diego MSA	1,470,100	2.7%	2.5%	1.7%
East Bay MD	1,180,300	3.2%	3.2%	1.7%
Ventura MSA	307,700	1.4%	1.3%	1.6%
San Francisco MD	1,130,200	4.3%	2.8%	1.6%
Santa Rosa MSA	208,300	2.5%	2.5%	1.4%
Bakersfield MSA	259,800	-1.1%	0.4%	1.4%

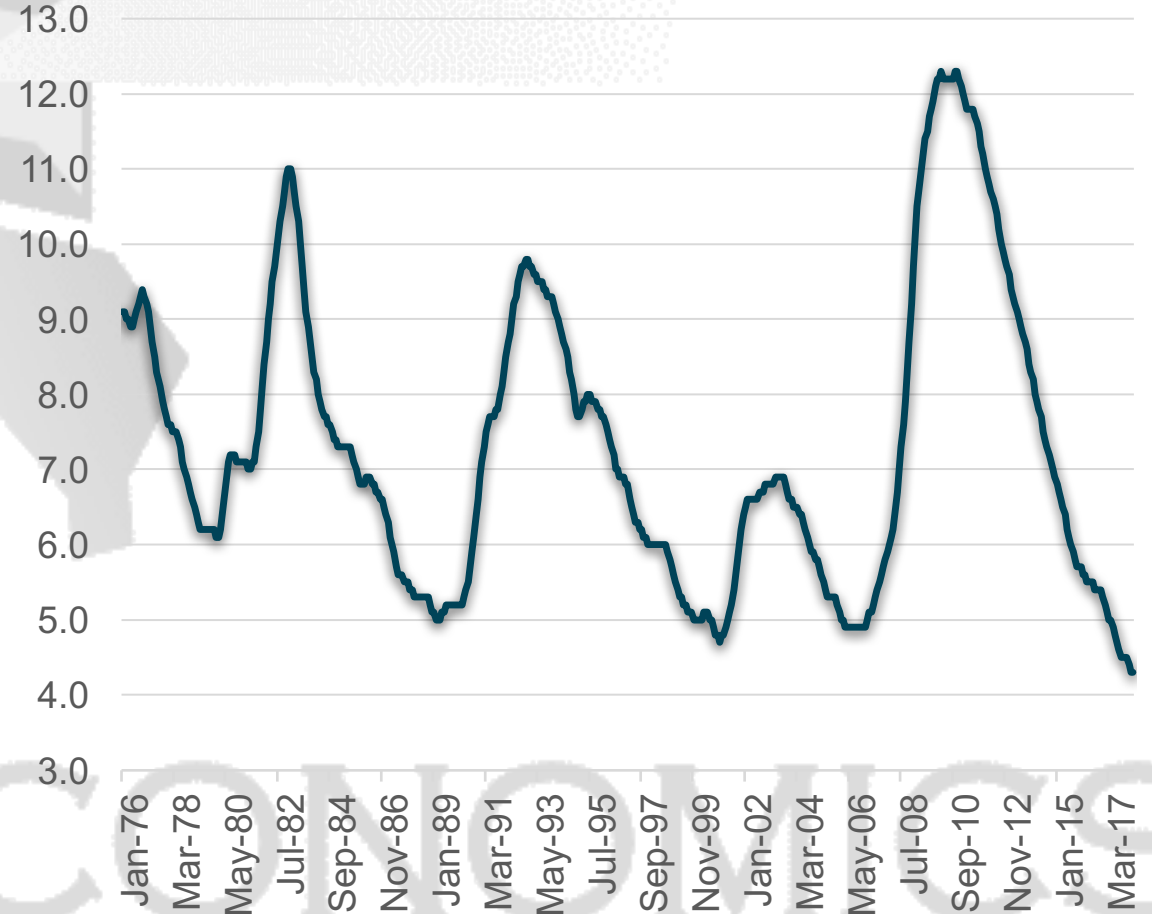
California Net Migration



Net Migration as a % of Pop



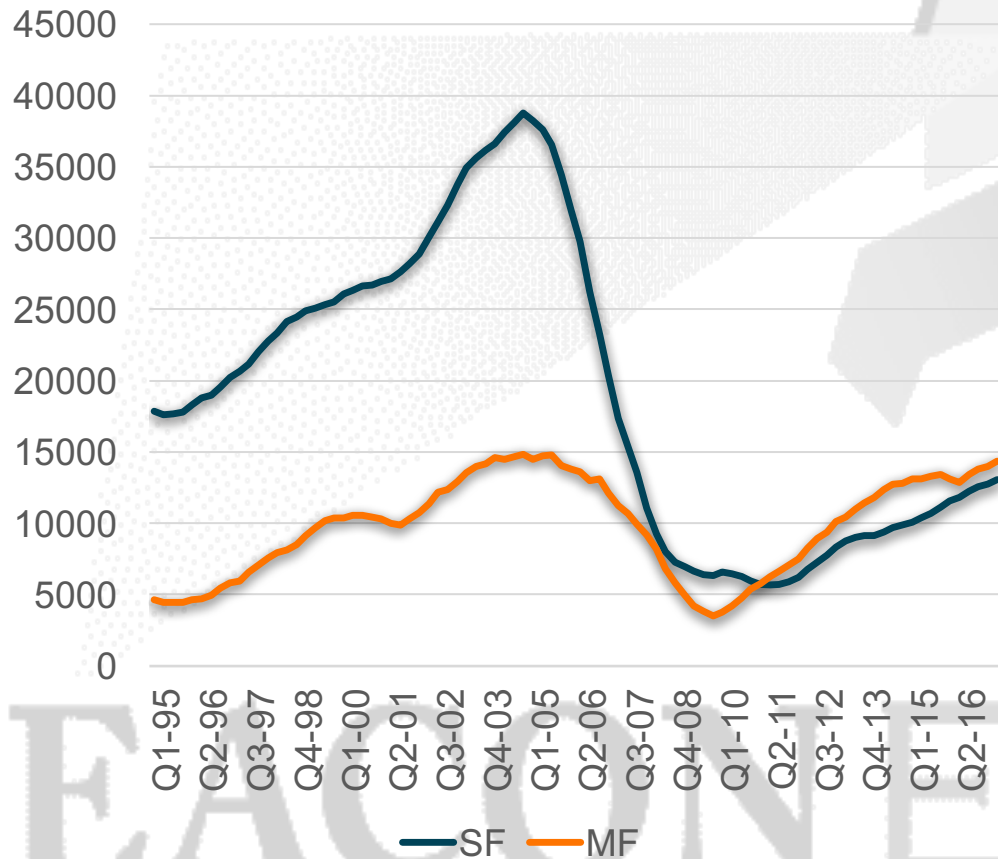
State Unemployment Rate



New Housing Supply



New Home Permits



How Much Housing Needed?
Housing Needed to maintain 2%
State Job Growth

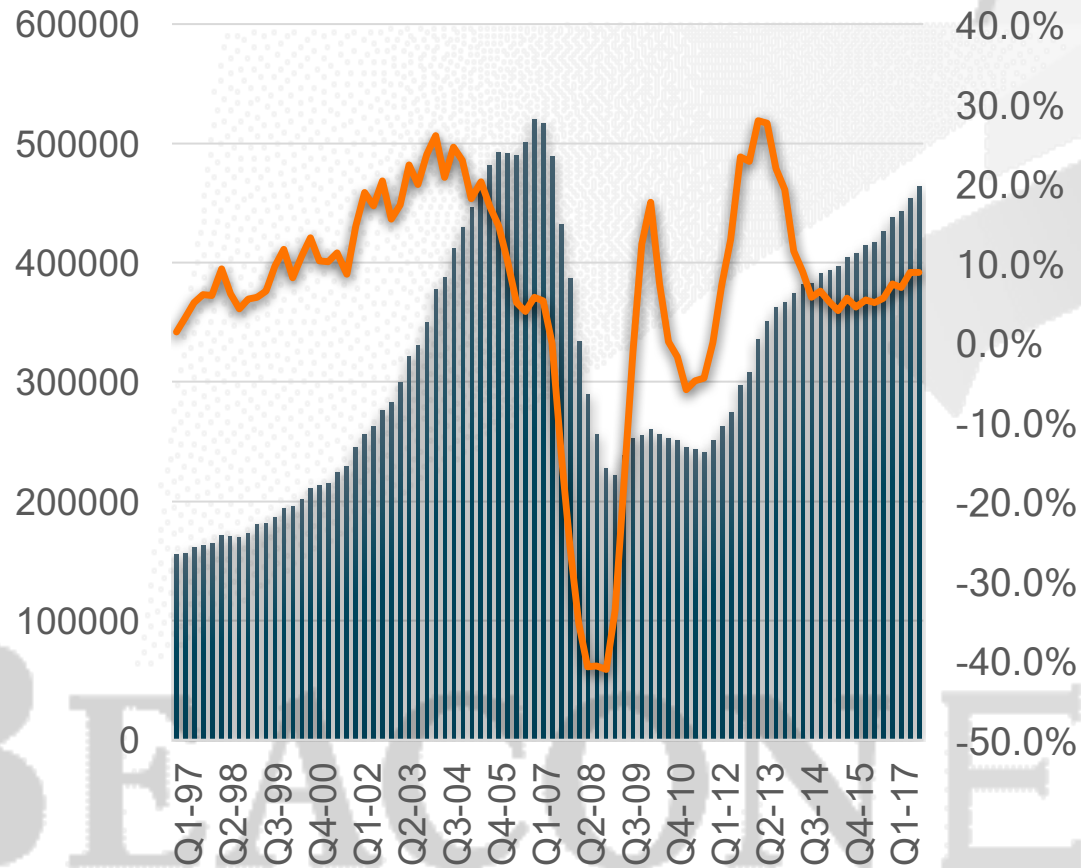
Method 1	
Total	722,022
Per Year	206,674
Current	111,185
Shortfall	100,489
Method 2	
Total	911,001
Per Year	263,667
Current	111,185
Shortfall	157,482

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Residential Real Estate



California Home Prices



	Price	Growth
Alameda	\$830,757	13.1%
San Francisco MD	\$1,339,354	13.0%
Monterey	\$571,343	12.6%
Sacramento MSA	\$380,501	10.1%
Riverside	\$369,835	9.7%
Los Angeles	\$604,650	8.2%
San Diego	\$596,313	7.8%
San Bernardino	\$299,514	7.2%
Orange	\$756,950	6.4%

The Big Picture



- Positives: It will be a good year
 - GDP Growth Outlook for 2018: 3%
 - State revenues will look positive
 - Labor markets to remain tight
 - Rising wages to put pressure on profits
 - Exports, business investment continue to pick up
 - Inflation to remain constrained
 - Interest Rates Still Low
 - Debt Levels still safe
- Negatives: Problems Growing
 - Fed will continue to tighten, yield curve flattening
 - Markets looking frothy
 - Consumer savings: entering dangerous waters
 - Federal deficit will widen sharply
 - Political uncertainty to dominate headlines
 - California housing shortages will constrain growth locally
 - Critical Policy Issues Remain Undiscussed

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The Great Disconnect



- What we are worried about

The Number of Jobs
Who pays for Healthcare
Tax Levels
Income Inequality
Funded Govt. Liabilities
Business Investment
Inflation
The Cost of CA Housing

- What we should be worried about

The Number of Workers
What are we paying for?
Tax Structure
Wealth Inequality
Unfunded Govt. Liabilities
A Lack of Public Investment
Slowing Lending
The Supply of CA Housing

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What can Beacon do for you?



- **Connect with us.** To view again or download this presentation and for further information, go to: www.BeaconEcon.com



- **Continue the conversation.** Do you have questions? Contact Dr. Chris Thornberg directly at chris@beaconecon.com or 310.571.3399



- **Let's discuss your goals and needs.** Beacon has 6 Practice Areas covering a range of services and products, including:



HOUSING, LAND
USE, & REAL
ESTATE ADVISORY



SUSTAINABLE
GROWTH AND
DEVELOPMENT



ECONOMIC &
REVENUE
FORECASTING



ECONOMIC, FISCAL
AND SOCIAL
IMPACT ANALYSIS



REGIONAL AND
SUB-REGIONAL
ANALYSIS



LITIGATION
AND
TESTIMONY

Portfolio Spotlight



REGIONAL AND SUB-REGIONAL ANALYSIS

Beacon conducts analysis at an international, national, state, county, and city level -- and even down to the zip code, pending data availability. We analyze data on **Employment, Industry, Real Estate, and Consumption.**

Past Clients:

- City and County of Los Angeles
- City and County of Riverside
- City of Ontario
- East Bay Economic Dev. Agency



IMPACT (ECONOMIC, FISCAL, SOCIAL) & EB5 ANALYSIS

Beacon has evaluated the impact of entities **like universities, music festivals, infrastructure projects, and real estate development projects.** Beacon has also conducted impact analyses that combine more than one of the above like that of **L.A's Olympic bid.**

Past Clients:

- University of Southern California
- Metropolitan Water District
- LA 2024 Olympic Bid Committee



SUSTAINABLE GROWTH & DEVELOPMENT

Beacon conducts industry and policy analysis on topics like **green innovation, tech and workforce development, and industry sector strategies.** Beacon has strong in-house expertise around **housing policy** and **economic development** support.

Past Clients:

- California Apartment Association
- Long Beach Downtown Dev. Corp.
- Santa Cruz Workforce Dev. Board



HOUSING, LAND USE, & REAL ESTATE ADVISORY



ECONOMIC & REVENUE FORECASTING



LITIGATION AND TESTIMONY