

April 2017 Housing Commentary



Urs Buehlmann

Department of Sustainable Biomaterials

Virginia Tech

Blacksburg, VA

540.231.9759

buehlmann@gmail.com

and

Al Schuler

Economist (retired)

Princeton, WV

Table of Contents

Slide 3:	<u>Housing Scorecard</u>
Slide 4:	<u>New Housing Permits, Starts, & Completions</u>
Slide 5:	<u>New and Existing House Sales</u>
Slide 5:	<u>New Construction Data</u>
Slide 6:	<u>Conclusions</u>
Slide 7:	<u>European Construction Markets</u>
Slide 8-48:	<u>Additional Comments&Data</u>
Slide 49:	<u>Disclaimer</u>

This report is a free monthly service of Virginia Tech. Past issues can be found at: <http://woodproducts.sbio.vt.edu/housing-report/>

April 2017

Housing Scorecard

	M/M		Y/Y	
Housing Starts	▽	2.6%	△	0.7%
Single-Family Starts	△	0.4%	△	8.9%
Building Permits	▽	2.5%	△	5.7%
Housing Completions	▽	8.6%	△	15.1%
New Single-Family House Sales	▽	11.4%	△	0.5%
Existing House Sales ¹	▽	2.3%	△	1.6%
Private Residential Construction Spending	▽	0.7%	△	16.0%
Single-Family Construction Spending	△	0.8%	△	7.7%

M/M = month-over-month; Y/Y = year-over-year

Housing Data

	April	March	April 2016
Total permits*	1,229,000	1,226,000	1,163,000
Single-family permits	789,000	826,000	743,000
Multi-family 2-4 unit permits	37,000	37,000	33,000
Multi-family ≥ 5 unit permits	403,000	397,000	387,000
Total starts	1,172,000	1,203,000	1,164,000
Single-family starts	835,000	832,000	767,000
Multi-family 2-4 unit starts**	9,000	8,000	13,000
Multi-family ≥ 5 unit starts	328,000	326,000	384,000
Total completions	1,106,000	1,210,000	961,000
Single-family completions	784,000	821,000	721,000
Multi-family 2-4 unit completions**	12000	16,000	9,000
Multi-family ≥ 5 unit completions	294,000	373,000	240,000

* All data are presented at a seasonally adjusted annual rate (SAAR).

** US DOC does not report 2-4 multi-family starts and completions directly, this is an estimation.

Source: U.S. Department of Commerce-Construction: www.census.gov/construction/nrc/pdf/newresconst.pdf; 05/16/17

Housing Data

	April	March	April 2016
New single-family sales	569,000	642,000	566,000
Median price	\$309,200	\$318,700	\$292,700
Existing sales ^a	5,570,000	5,700,000	5,480,00
Median price	\$244,800	\$236,600	\$230,900
Private Residential Construction	\$516.7 billion	\$520.4 billion	\$445.6 billion
SF construction	\$262.1 billion	\$260.1 billion	\$243.3 billion
MF construction	\$64.9 billion	\$65.0 billion	\$58.9 billion
Improvement construction ^b	\$189.7 billion	\$195.3 billion	\$143.3 billion

^a NAR®

^b The US DOC does not report improvements directly, this is an estimation. All data is SAAR and is reported in nominal US\$.

Sources:

NAR® www.realtor.org/topics/existing-home-sales; 05/24/17

U.S. Department of Commerce-Construction: www.census.gov/construction/nrs/pdf/newressales.pdf; 05/23/17

U.S. Department of Commerce-C30 Construction: www.census.gov/construction/c30/pdf/privsa.pdf; 06/01/17

Conclusions

Housing in April was mixed. However, first time buyers, according to Fannie Mae, filled 42.5% of mortgage applications, up from the 30s during the great recession and the years thereafter. However, short supply of houses (new and existing) is driving up prices, keeping a lid on demand and affordability. Interest rates are heading up as the labor market tightens.

April's housing data is mostly negative – total starts are down by 2.6% (m/m), single family homes starts are down by 0.4% (m/m), permits down by 2.5% (m/m), completions down by 8.6% (m/m), and existing home sales were down by 2.3% from the month before.

With meager economic growth (average growth since 2009 2.1%, slowest recovery since WWII) and with 51% of all worker's in the U.S. making less than \$30,000/year, it's hard to envision a scenario where the U.S. housing market returns to "normal" anytime soon. Slowing economies in China, Brazil, among others, and continuing problems in Europe's banking sector all add up to numerous negative macro-factors endangering a robust housing recovery, in particular:

- 1) A constrained quantity of well-paying jobs being created;
- 2) a tepid economy;
- 3) declining real median annual household incomes;
- 4) strict home loan lending standards – though loosening with new programs
- 5) slow world economy; and
- 6) global uncertainty

March 2017

EU Housing Scorecard

		M/M	Y/Y
Production in Construction ^A	EU 28	▽ 0.8% ^s	△ 3.7% ^s
	EU 19	▽ 1.1% ^s	△ 3.6% ^s
	Germany	△ 0.9%	△ 5.7%
	France	▽ 5.3%	△ 5.3%
	UK	△ 1.0% ^p	△ 4.6% ^p
	Spain	▽ 1.6% ^{ps}	▽ 4.1% ^p
Building permits (m ² floor) ^A	EU 28	-.-	-.-
	EU 19	▽ 5.6% ^(o2)	▽ 0.8% ^{s(o2)}
	Germany	△ 1.4%	▽ 2.7%
	France	△ 11.8% ^s	△ 22.9% ^e
	UK	-.-	-.-
	Spain	▽ 1.4 ^{s(o2)}	△ 33.4 ^{e(o2)}

M/M = month-over-month; Y/Y = year-over-year

Source: Eurostat (<http://ec.europa.eu/eurostat/web/short-term-business-statistics/data/main-tables>;
06/14/17)

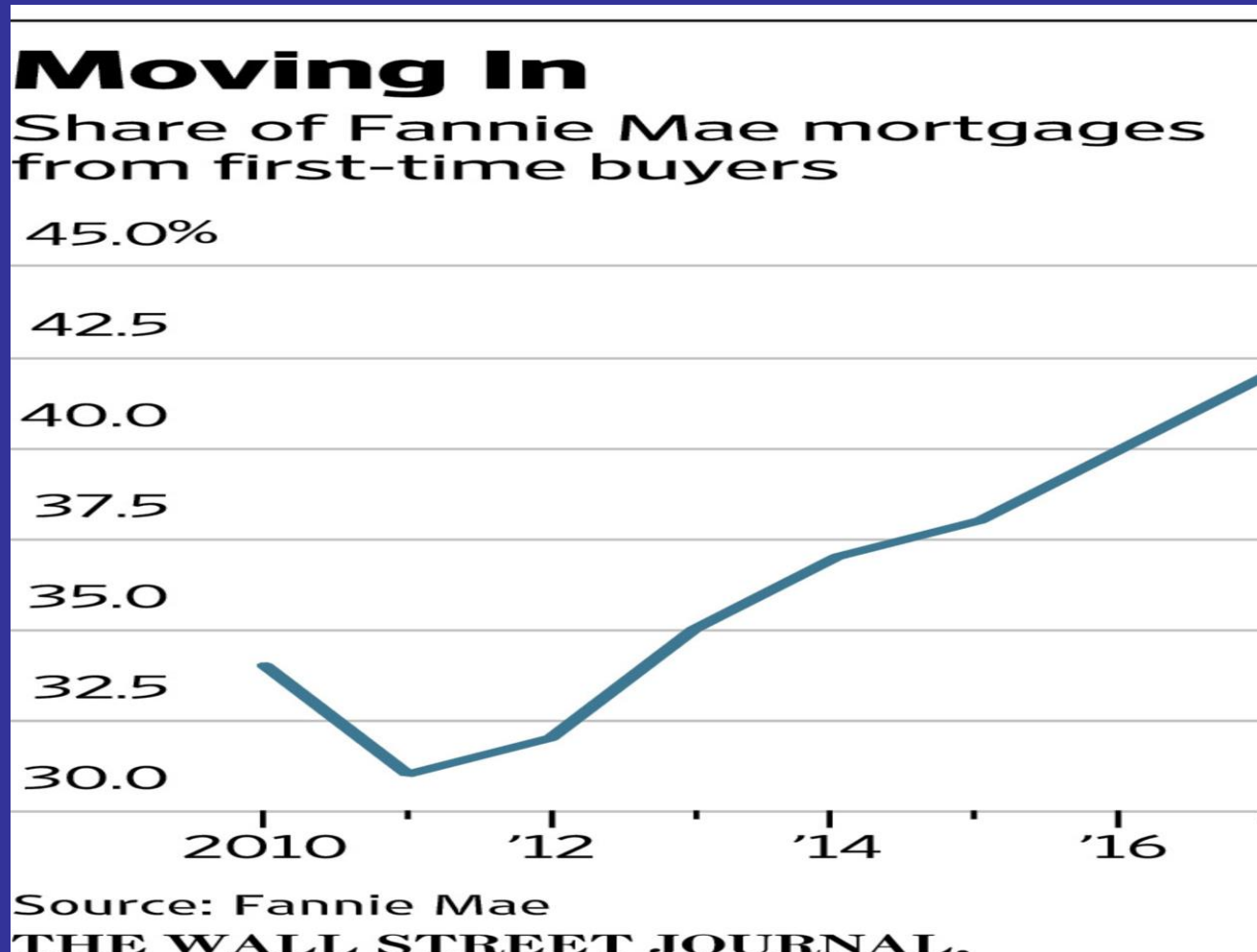
^A see <http://ec.europa.eu/eurostat/web/short-term-business-statistics/overview/sts-in-brief>

^e estimate ^s Eurostat estimate ^p provisional -.- no data available ^(o2) February data

Housing comments – April 2017

- *April starts were down 2.6% to 1.172 (SAAR) - SF at 835,000 (SAAR) – up 0.4% - MF was down 9.7% – MF is typically quite volatile, and is down 14.6%YOY, total starts are up 0.7% while SF up 8.9%. Making progress!*
- *Some good news – 1st time buyers are returning to the market (see slide on next page). These buyers are critical to housing demand and have been relatively absent for a decade. New owner households were double the number of renter households in qtr 1 2017.*
- *Resale market up 4.4% - 5,710,000 (annual rate) – low inventory (3.8 months) driving prices higher – prices up 6.6% YOY*
- *New home sales were up 5.8% to 621,000 SAAR, up 16% annual basis*
- **Job creation bounced back in April - +211,000 - driving unemployment to 4.4% - participation rate steady at 62.9%!**
- *Main problem for housing is lack of supply. This drives prices higher and out of reach, particularly for 1st time buyers. Typical supply is 6 months – today, it is 3.8 for existing homes and 5.2 for new homes. Additional problems include tight credit, and now, rising mortgage rates.*
- *GDP was disappointing at 0.7% for 1st Qtr 2017, and longer term prospects are not good unless we improve productivity and increase the workforce. A smarter immigration system is best solution for short term improvement!*

Some good news – 1st time buyers are returning – historically, they made up about 45% of the market – that dipped to 30% during the crash. New owner households numbered 854,000 compared with 365,000 renters in Qtr1 2017 – reversing a decade long trend. **1st time buyers are critical as eventually, many become “move up” buyers as family and incomes grow.**

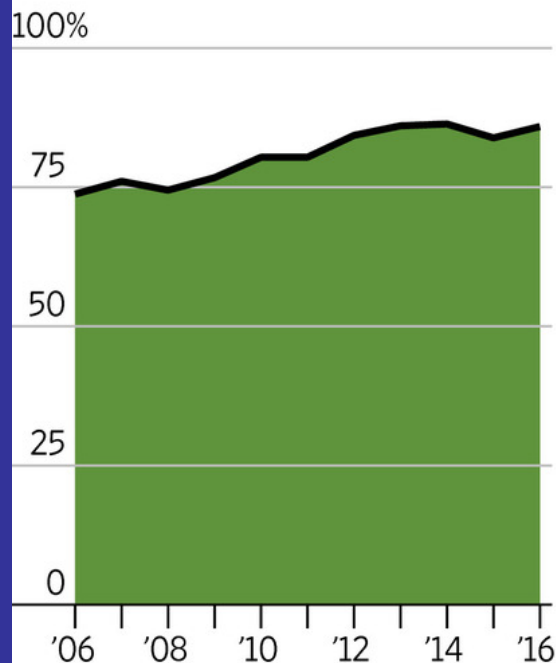


The 20% lumber tax will hurt smaller Canadian mills most and make U.S. housing more expensive – 28% of softwood lumber purchases comes from Canada according to NAHB. Canadian strategies have focused on buying mills in the U.S. South and diversifying markets. China destinations now 13% - up from 1%.

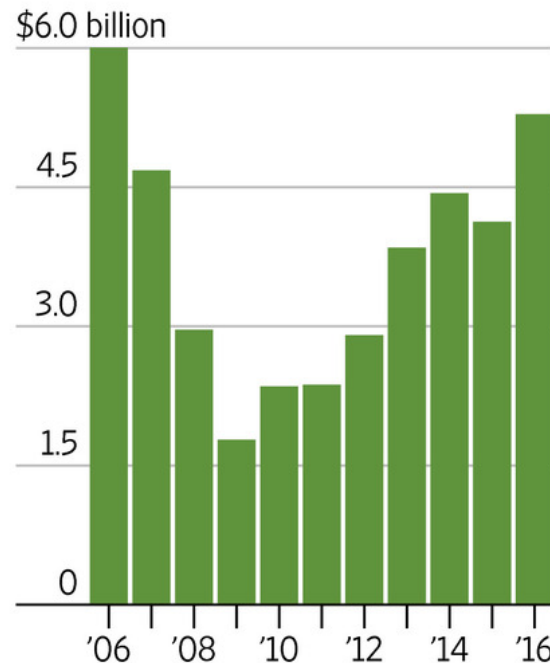
Log Jam

Amid a housing upturn, U.S. demand is up for Canadian sawmill products such as softwood lumber, leading to a widening trade deficit. Meanwhile, Canada is less reliant on the U.S. as exports to China grow.

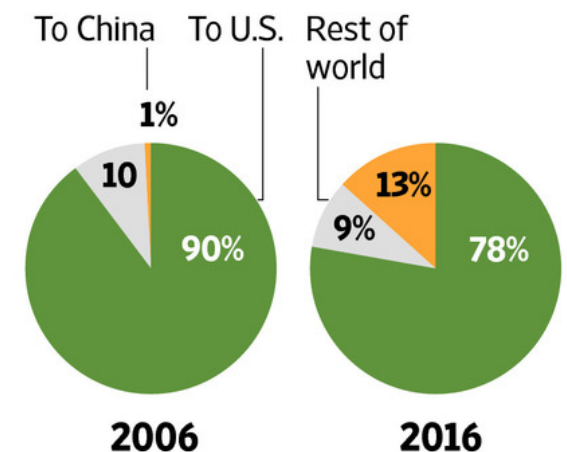
Share of U.S. sawmill-product imports that come from Canada



U.S. trade deficit with Canada for sawmill products



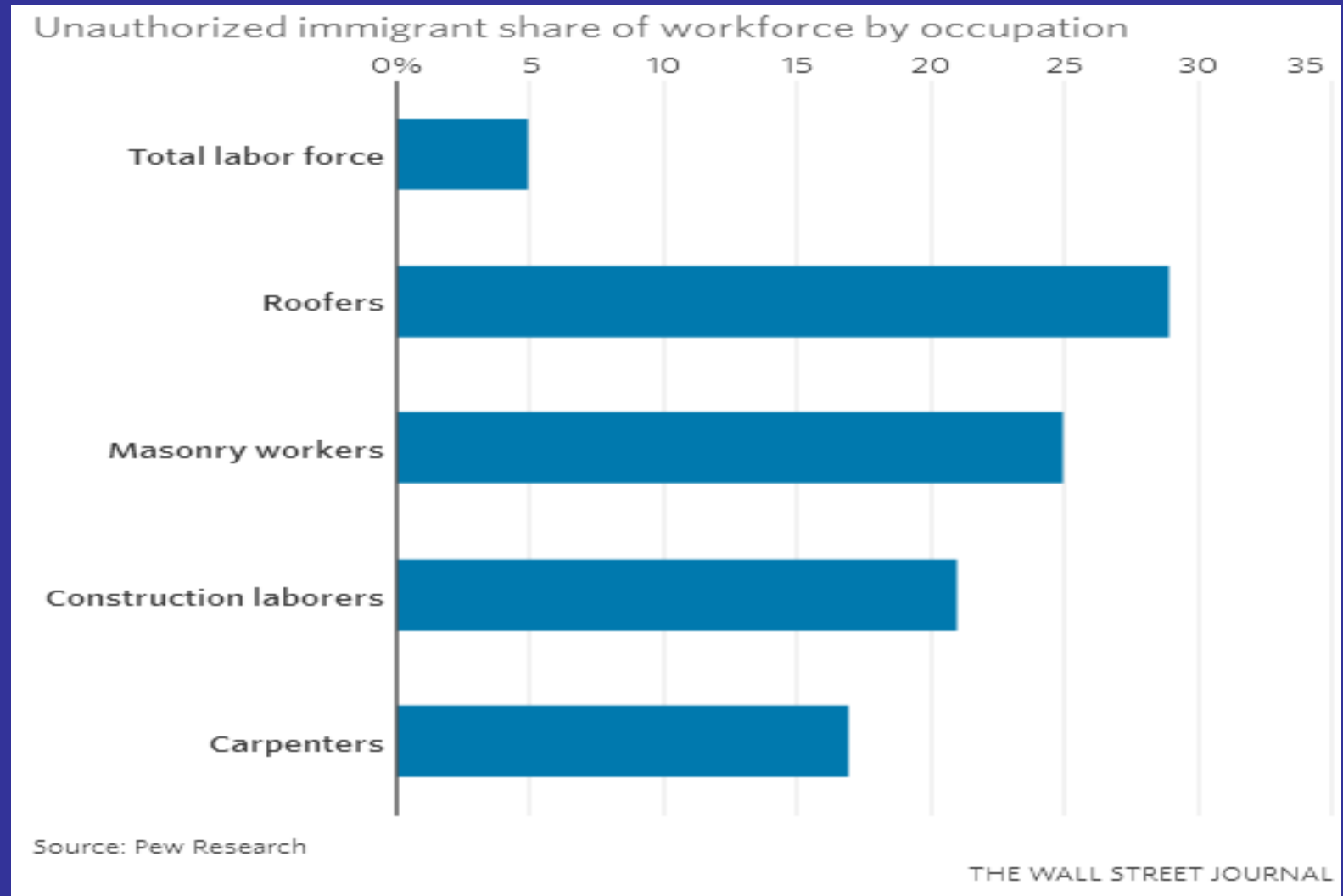
Share of Canadian softwood lumber exports, by destination*



*Based on weight, doesn't add to 100% due to rounding Sources: U.S. Commerce Department (U.S. imports, deficit); Statistics Canada (Canadian exports)

THE WALL STREET JOURNAL.

Interesting twist – fewer illegal's plus 20% lumber tax – latest GOP moves could kill the industry needed to resuscitate the economy



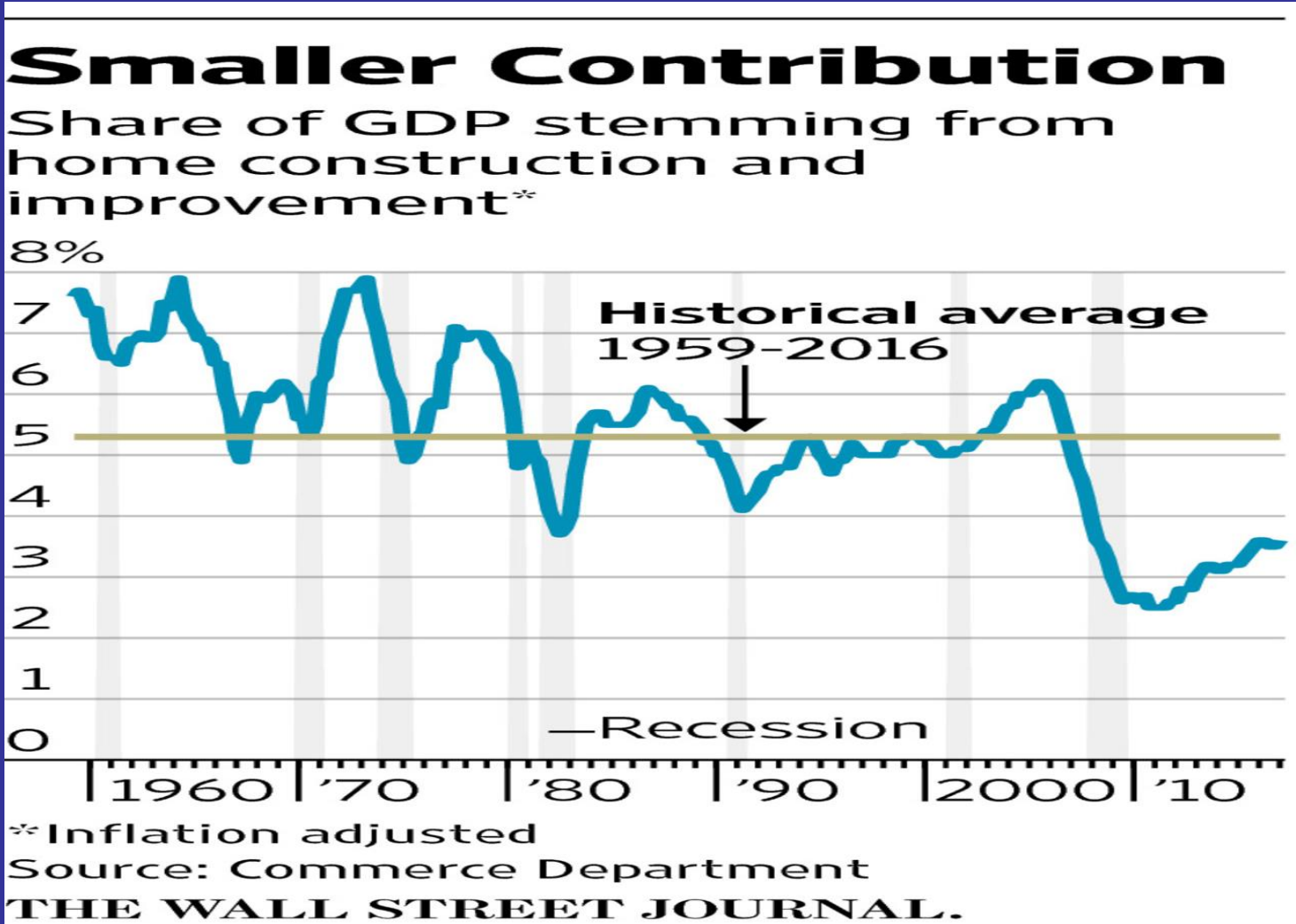
Solution to fixing the economy – get housing back to trend levels – yes, this is a “chicken and egg type issue”, but as the chart on the next page shows, spending on housing is an important contributor to GDP.

Tight credit is a big problem, especially for 1st time buyers.

Now, we have the “lumber tax” on Canadian lumber to deal with. That will only increase construction costs and make housing less affordable.

“Housing serves as an economic engine through home construction as well as ancillary activities such as appliance purchases, spending on home renovations and jobs for real-estate agents”. “Total spending on housing fell to 15.6% of GDP in 2016, compared with 19% over past 60 years. A more specific measure, spending on new construction and remodeling fell to 3.6% of GDP” – see chart below.

Source: WSJ (<https://www.wsj.com/articles/sluggish-housing-recovery-took-300-billion-toll-on-u-s-economy-data-show-1490526643>)



Big problem for housing – too little supply!

This drives prices higher and out of reach for many buyers, especially 1st time buyers.

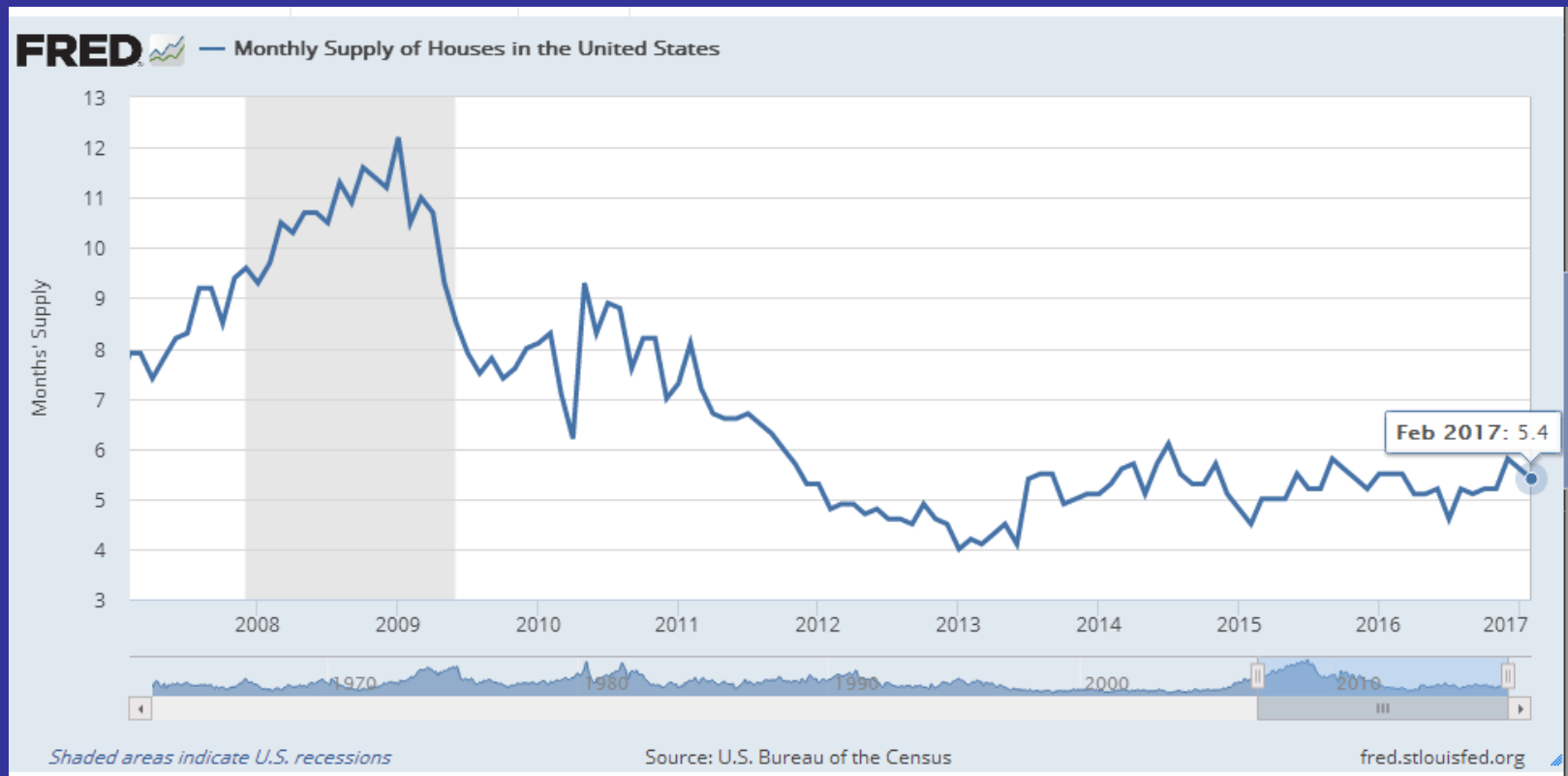
Typically, supply is about 6 months (time it takes to sell existing inventory at current sales rates). Today, existing home inventory is 3.8 months while new home inventory is 5.4 months. Many homeowners are reluctant to list their homes because buying another one is expensive while builders are reluctant to build new homes due to costs, driven partly by labor and land shortages in parts of the country.

Today, prices are increasing twice as fast as incomes, so this problem is actually getting worse. Also, mortgage rates are increasing, and credit remains tight following new rules in the aftermath of the 2008 financial crisis.

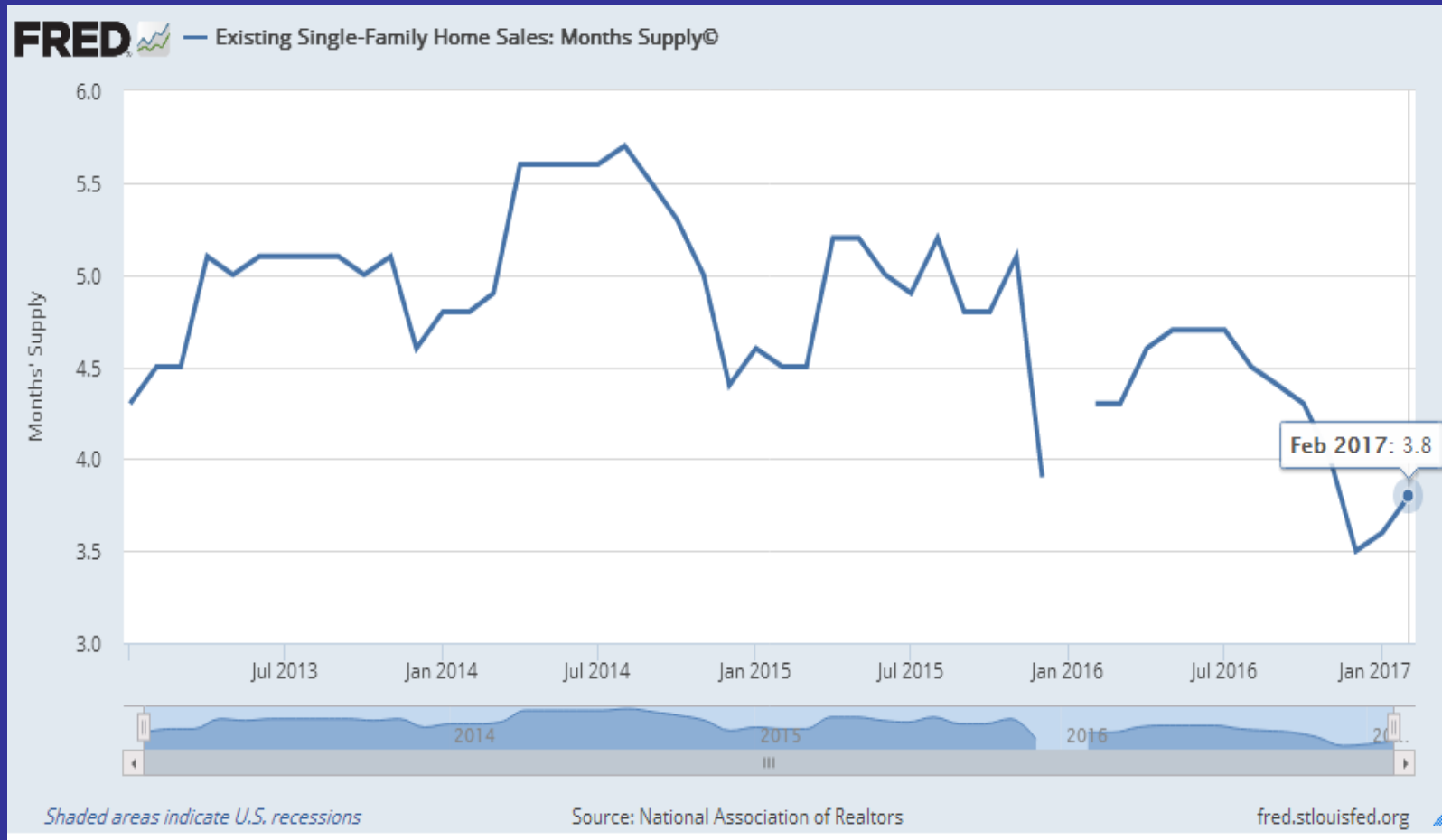
Prognosis – housing could remain below par for some time!

Low new home inventory (5.2 months) drives prices higher and out of reach to most 1st time buyers

But, builders can't find enough carpenters, masons, electricians, etc. So construction costs keep escalating = this exacerbates the inventory problem – also, land shortages in parts of the country drive costs higher!



Low Existing home inventory (3.8 months) drives prices higher - out of reach to most 1st time buyers.



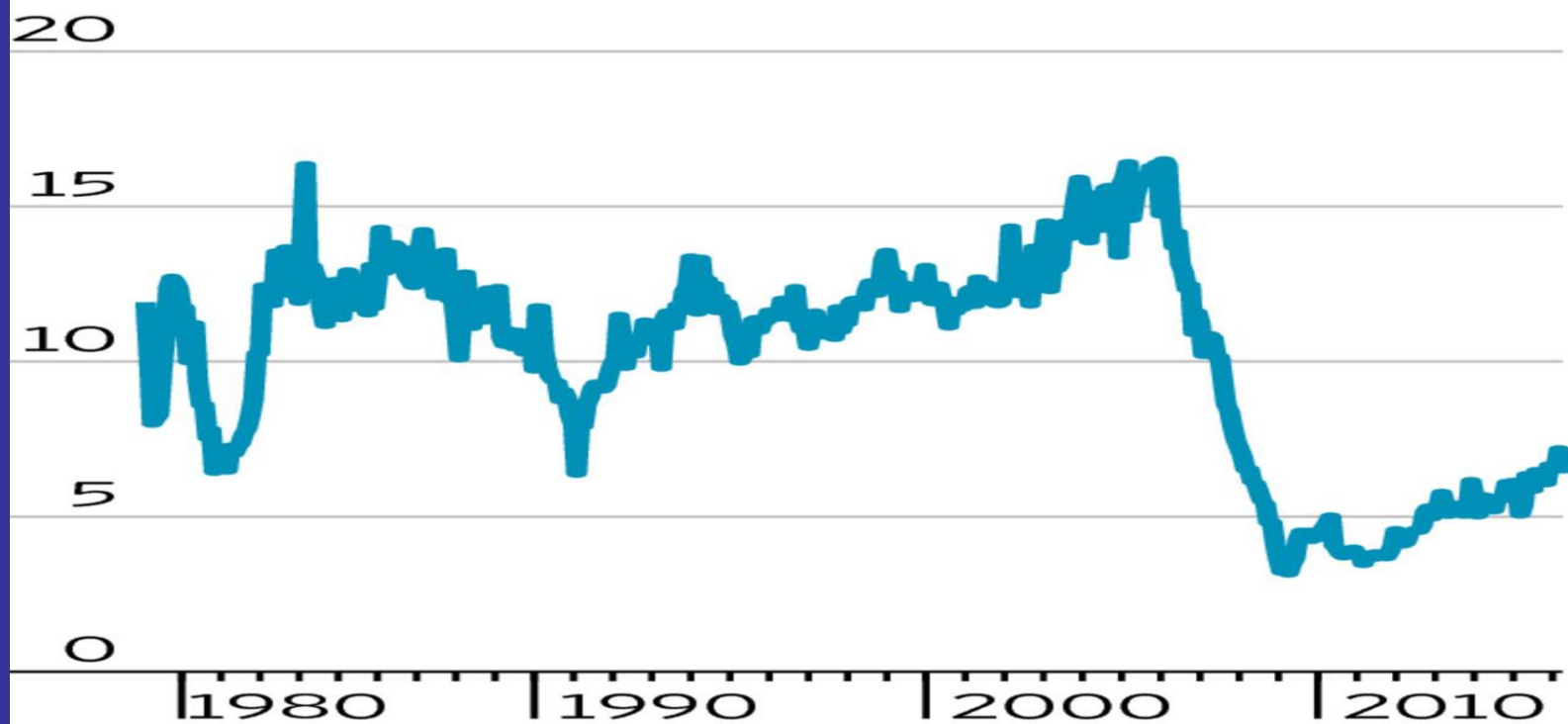
Case Shiller National existing home prices – up 35% in past 5 years – driven primarily by short supply



“Adjusting for population growth, single-family construction is barely back to the prior troughs of recessions in 1981 and 1991, according to research from mortgage giant Fannie Mae (Chris Kirkham, WSJ).” Weak demand from young people remains big problem as job prospects, credit problems and student debt forced many to renting.

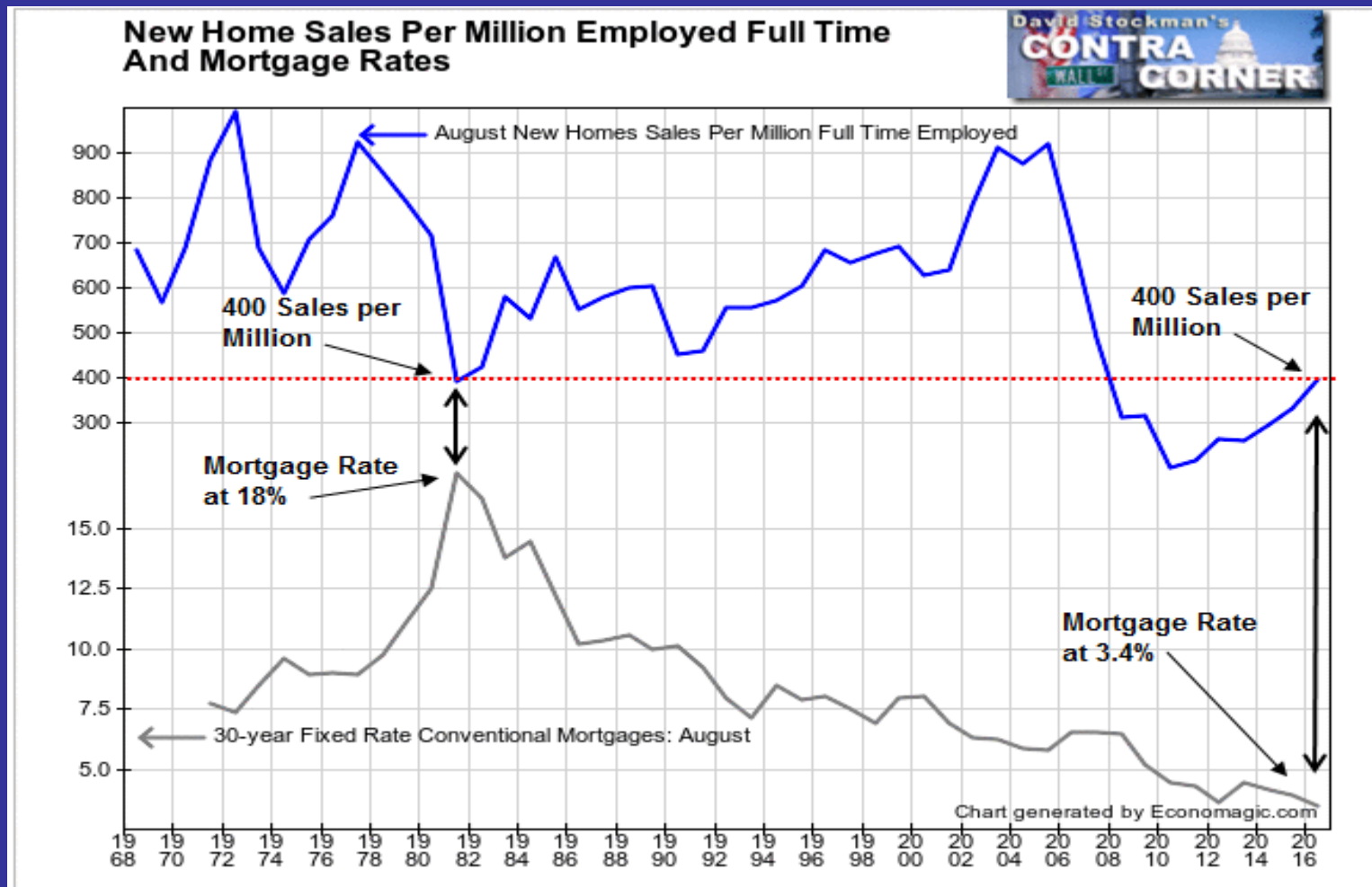
Rebuilding, Slowly

U.S. single-family housing starts per 1,000 households



Source: U.S. Census; Fannie Mae
THE WALL STREET JOURNAL.

Same story showing new home sales versus population – despite lowest mortgage rates in history, today's new home sales per million are no better than back in 1980 when mortgage rates were almost 20%. Tells me that low mortgage rates are not the answer – people need good jobs and a belief in their future – today, both are in jeopardy!



Here is another suggestion on how to fix the economy – a “no brainer.”

GDP = (labor force) (productivity). “Economics 101”

We have an aging work force and our fertility rate has been falling for decades. That means slow growing labor force. Productivity has been weak for decades too. Yes, we need to invest for the future – R&D; Infrastructure spending; less regulation; fix K-12 system; But, we also need immigrants

Solution – develop a smart immigration system that brings in educated, hard working people with technical skills that will support better productivity growth., and address our shrinking labor force too.

Yes, we still need to bring in refugees too – that is the mark of a great country. But, the focus today needs to be highly educated, English speaking (doesn't have to be perfect, but workable) people with technical skills and a strong work ethic.

Growth comes from workforce and productivity – can't increase very fast over the long term unless we deal with declining workforce and weak productivity

Growth of the prime working age population has slowed as baby boomers age...

People aged 25 to 54; Annual change, 10-year moving average



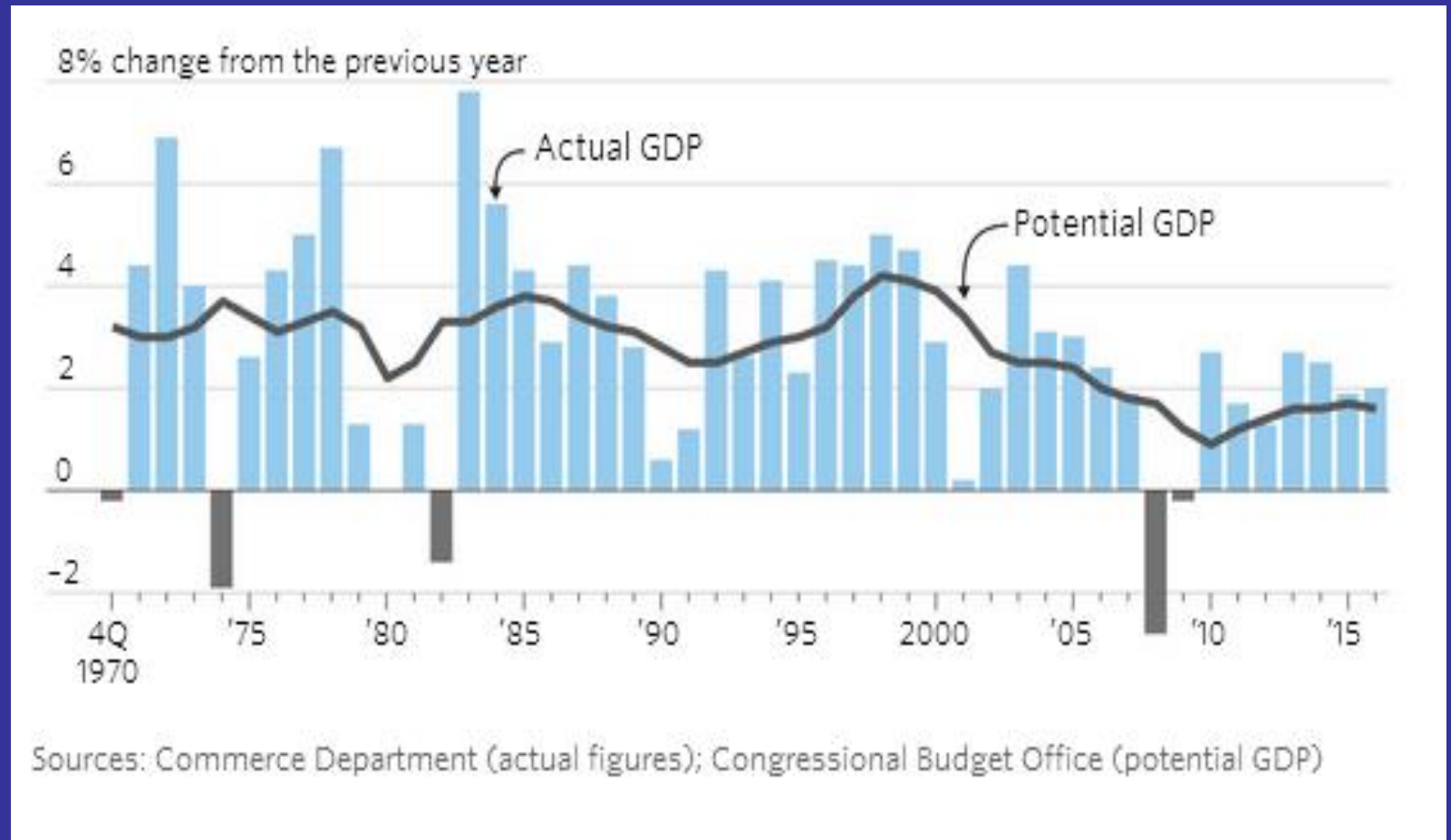
Source: Labor Department

...and productivity growth has fallen off in recent years, reflecting weaker investment and innovation.

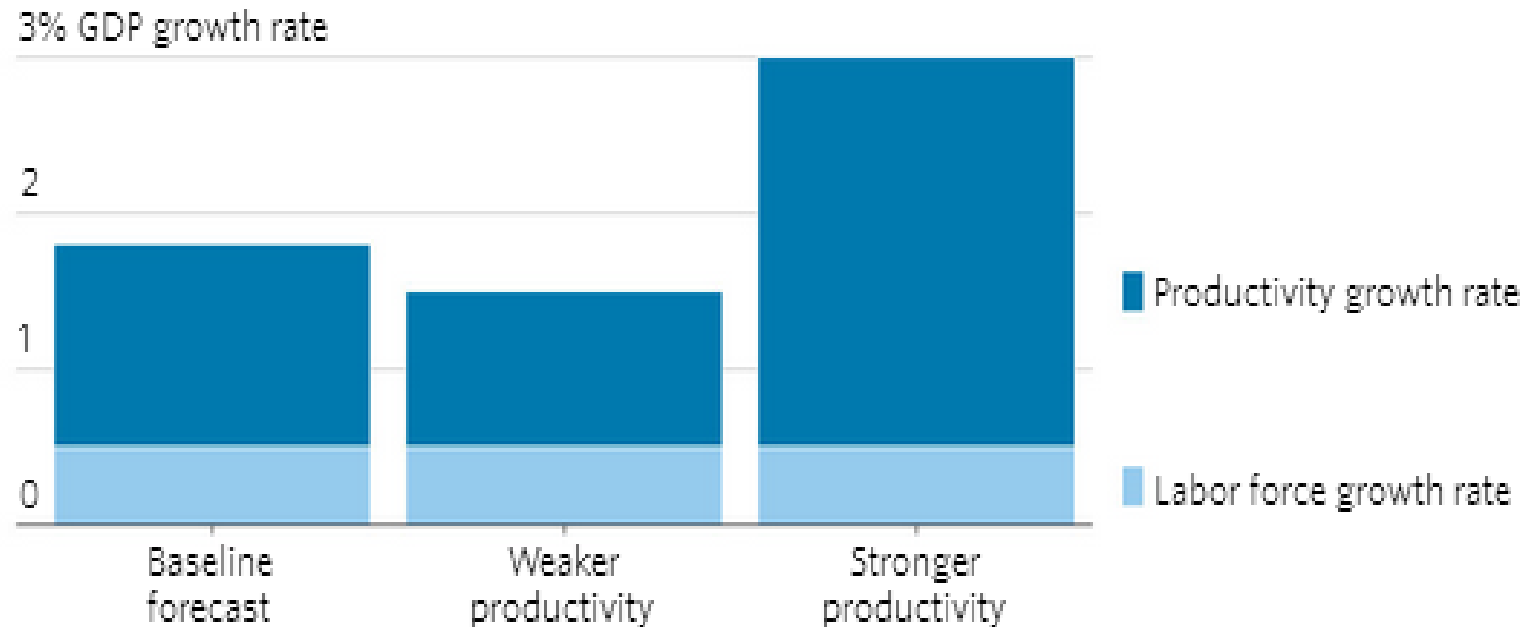
Output per hour in the nonfarm business sector; adjusted for inflation; Annual change, 10-year moving average



The economy's “speed limit” :
GDP Growth = (growth in labor force)(growth in productivity)
Chart below shows projections from CBO



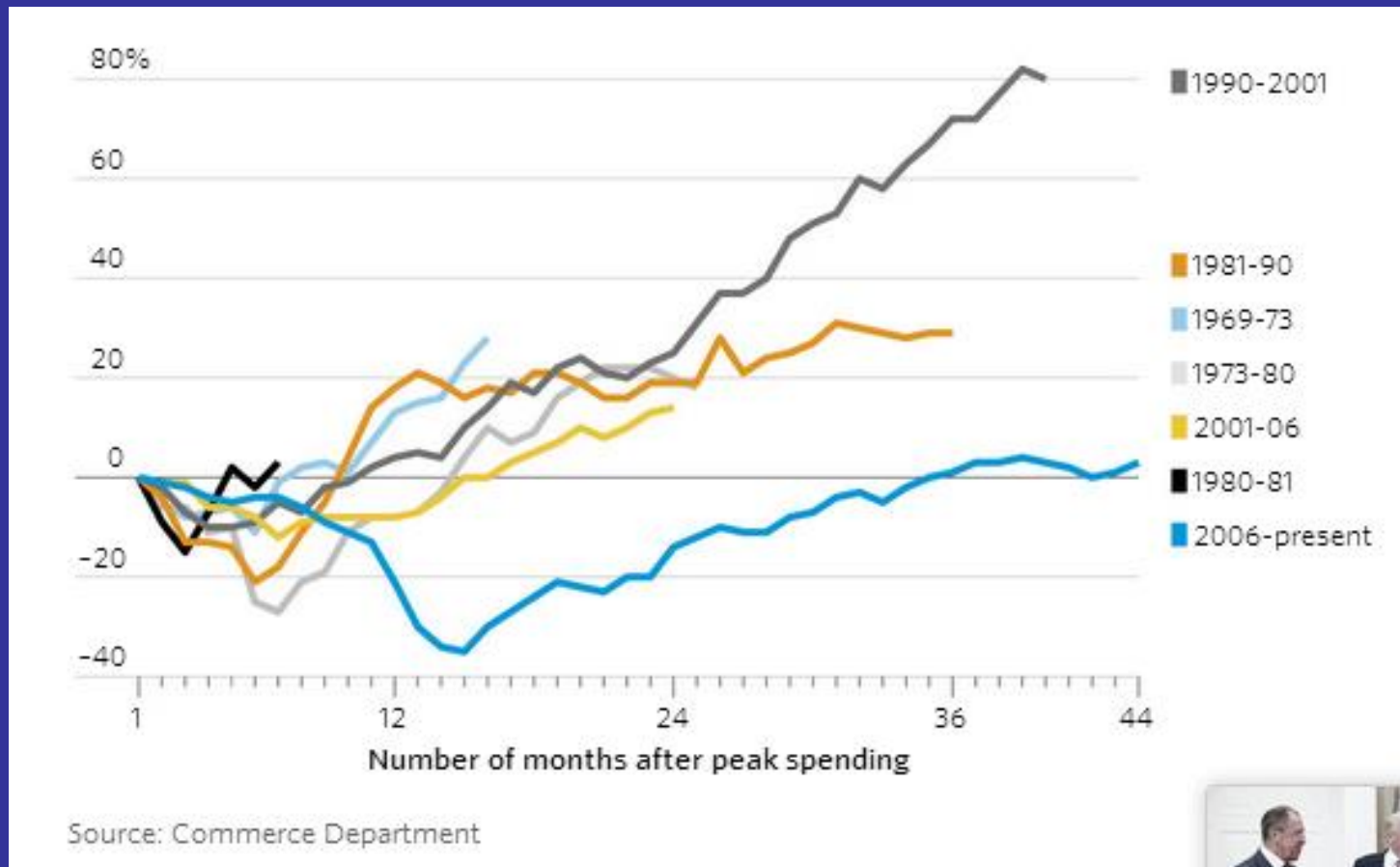
Some (GPO) projections of GDP growth with weaker productivity versus stronger productivity



*Forecast from the Congressional Budget Office †Since 1958

Sources: Congressional Budget Office (baseline forecast, workforce projections); Jason Furman of the Peterson Institute for International Economics (productivity projections)

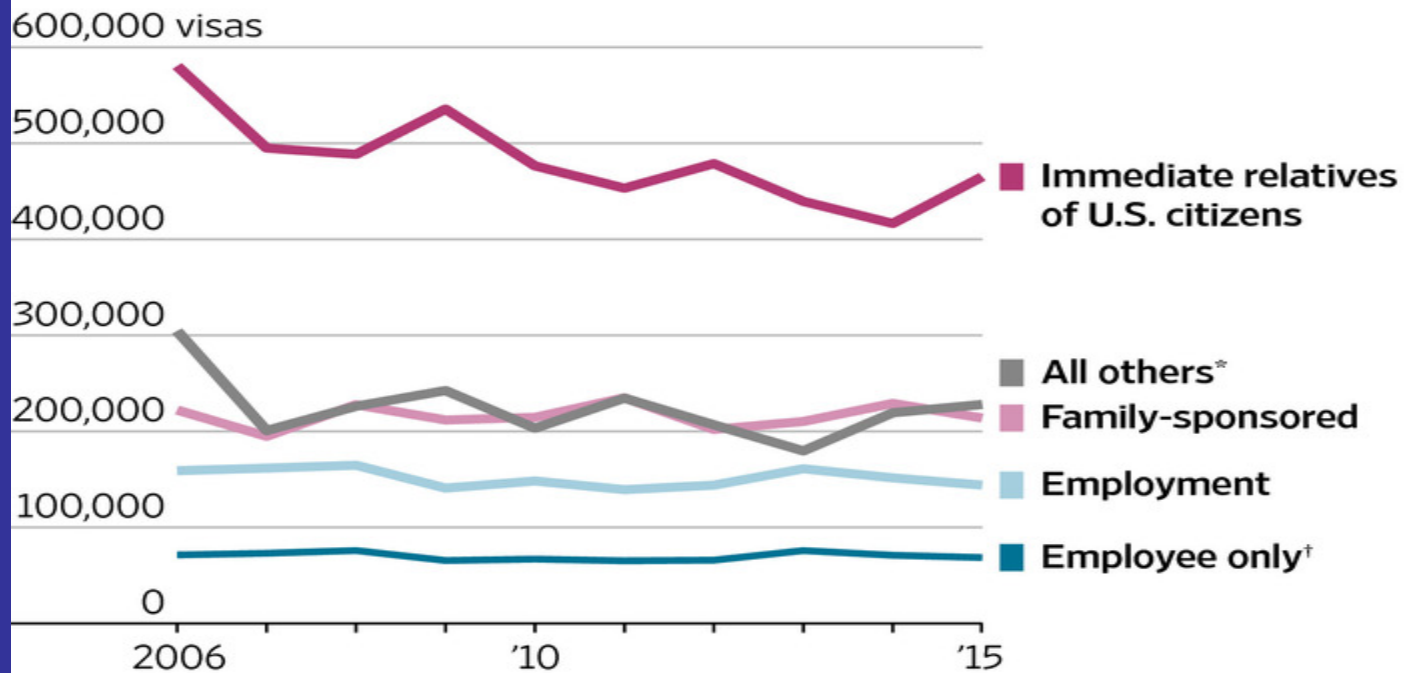
Gross private investment spending over the last three decades - chart compares recovery in investment following recessions. **Latest recovery is pathetic!**



Immigration system heavily skewed to family – needs to focus on employment (skills, education, assimilation) to deal with shrinking workforce and pathetic productivity - otherwise , GDP will remain weak for decades. And, housing will remain below par for decades too.
(<https://www.wsj.com/articles/a-senate-plan-to-reduce-the-flow-of-legal-migrants-1490197378>)

Family First

Legal immigration is dominated by relatives of citizens and prior immigrants.



*Includes refugees, asylees, and diversity entrants

†Excludes children and spouses included in employment-based

Sources: Department of Homeland Security; Sen. Tom Cotton (employee only)

THE WALL STREET JOURNAL.

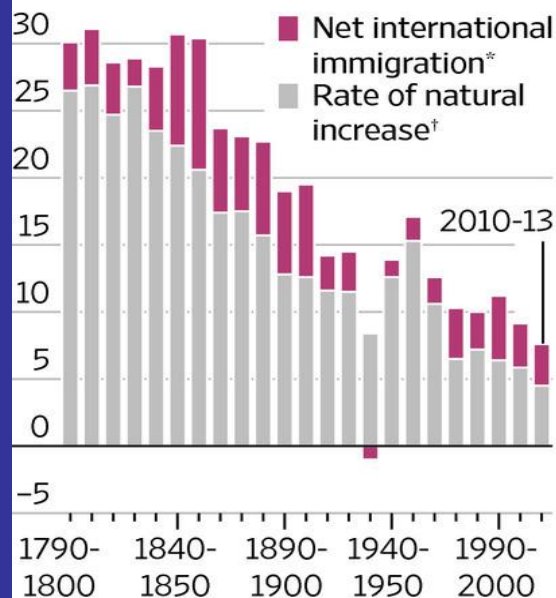
Why we need immigrants – aging population, declining birth rate, and weak productivity means weak economic growth.

Why? Growth = (work force) (productivity) Basic math – it's that simple. Without a smart immigration policy, we risk following Japan's experience.

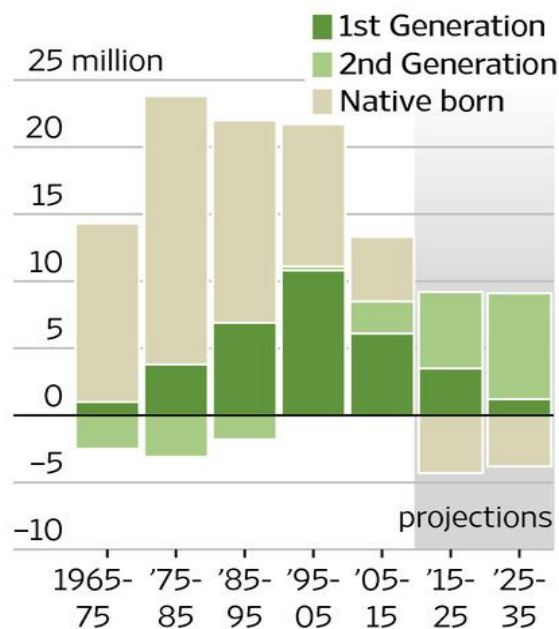
An Antidote to Aging

With the U.S. birth rate declining, curtailing immigration will slash future population growth and make entitlements more burdensome.

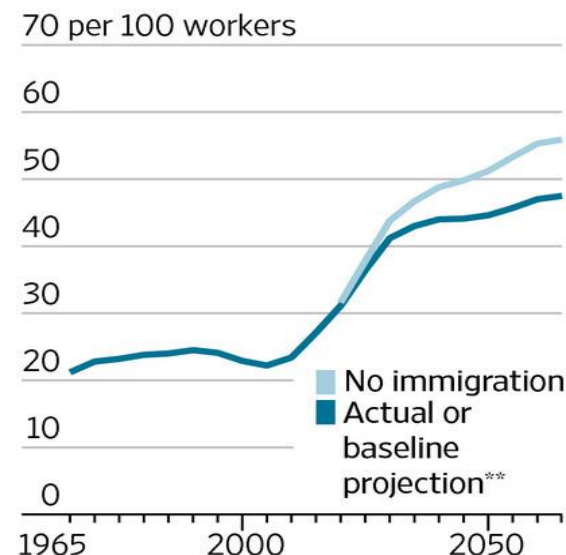
Components of population increase per 1,000 residents, by decade



Contributions to working age population*



Number of elderly-65 and over



*Legal plus illegal immigration minus emigration †Births minus deaths

**Projections assume annual migration rising from 1.2 million per year now to 1.5 million by 2035.

Sources: National Academies of Sciences, Engineering and Medicine; Pew Research Center

THE WALL STREET JOURNAL.

OK – more on the economy --- from Michael Porter

**How to Fix the U.S. Economy? Start With the Broken Political System – new report from M. Porter, et. al.
(we started this past November)**

Political dysfunction has become the biggest economic stumbling block for the U.S., according to a Harvard report.

Here is the hyperlink to the Porter study

(<http://www.hbs.edu/competitiveness/Documents/problems-unsolved-and-a-nation-divided.pdf>)

Interesting report from experts on competitiveness. Slow reading, but lots of good analysis, charts, and recommendations from some of America's leading thinkers on competitiveness.

Here are suggestions from the Porter study on how to fix America's economy – however, to accomplish this, we need a functioning government which we don't have. Hopefully, the new administration will begin the process of fixing the problems!

FIGURE 1: THE EIGHT-POINT PLAN FOR WASHINGTON

1	Simplify the corporate tax code with lower statutory rates and no loopholes
2	Move to a territorial tax system like all other leading nations
3	Ease the immigration of highly skilled individuals
4	Aggressively address distortions and abuses in the international trading system
5	Improve logistics, communications, and energy infrastructure
6	Simplify and streamline regulation
7	Create a sustainable federal budget , including reform of entitlements
8	Responsibly develop America's unconventional energy advantage

Source: Michael Porter and Jan Rivkin. "An eight-point plan to restore American competitiveness." The Economist: The World in 2013. (Nov 2012).

What happens when innovation is missing!

Dismal productivity growth - - worst performance for US economy since the 1980's when we experienced back to back recessions.

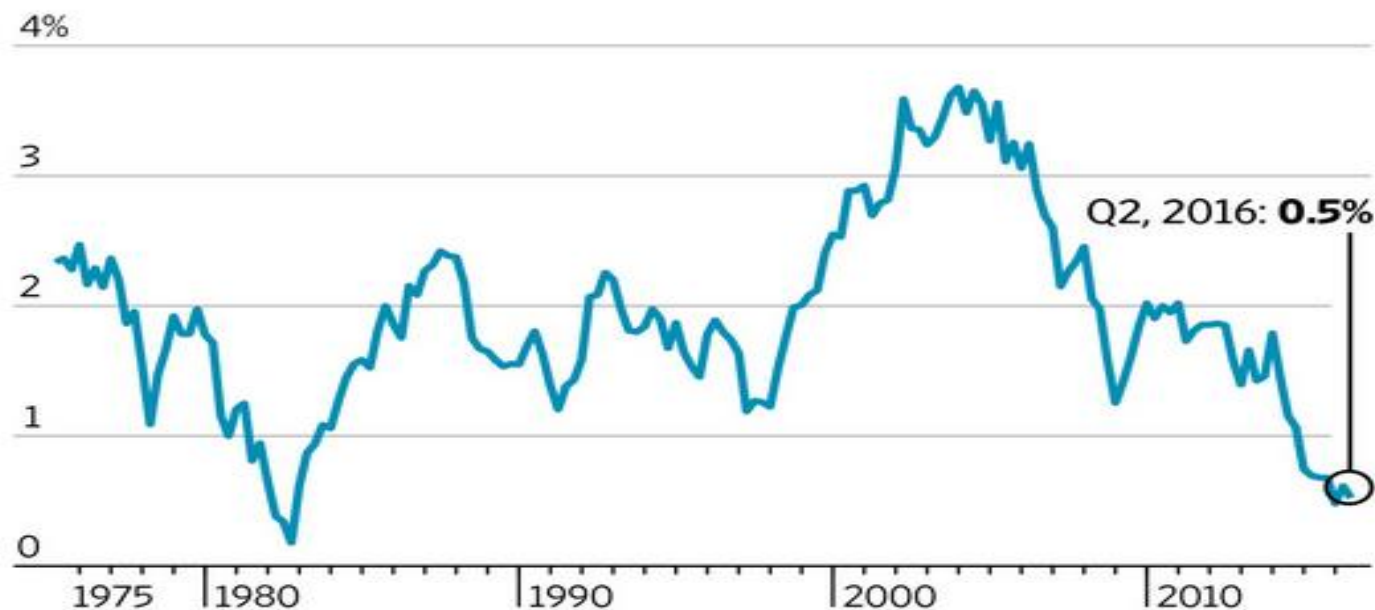
(PS - I understand that productivity measurement is a problem as new products/services quality is difficult To measure so maybe we are underestimating real productivity?)

Plunging Productivity

Gains in U.S. worker productivity have slowed dramatically since the early 2000s, a trend that could restrain the economy's future growth.

Labor productivity (output per hour)

Percentage change from previous quarter at annual rate,
5-year moving average



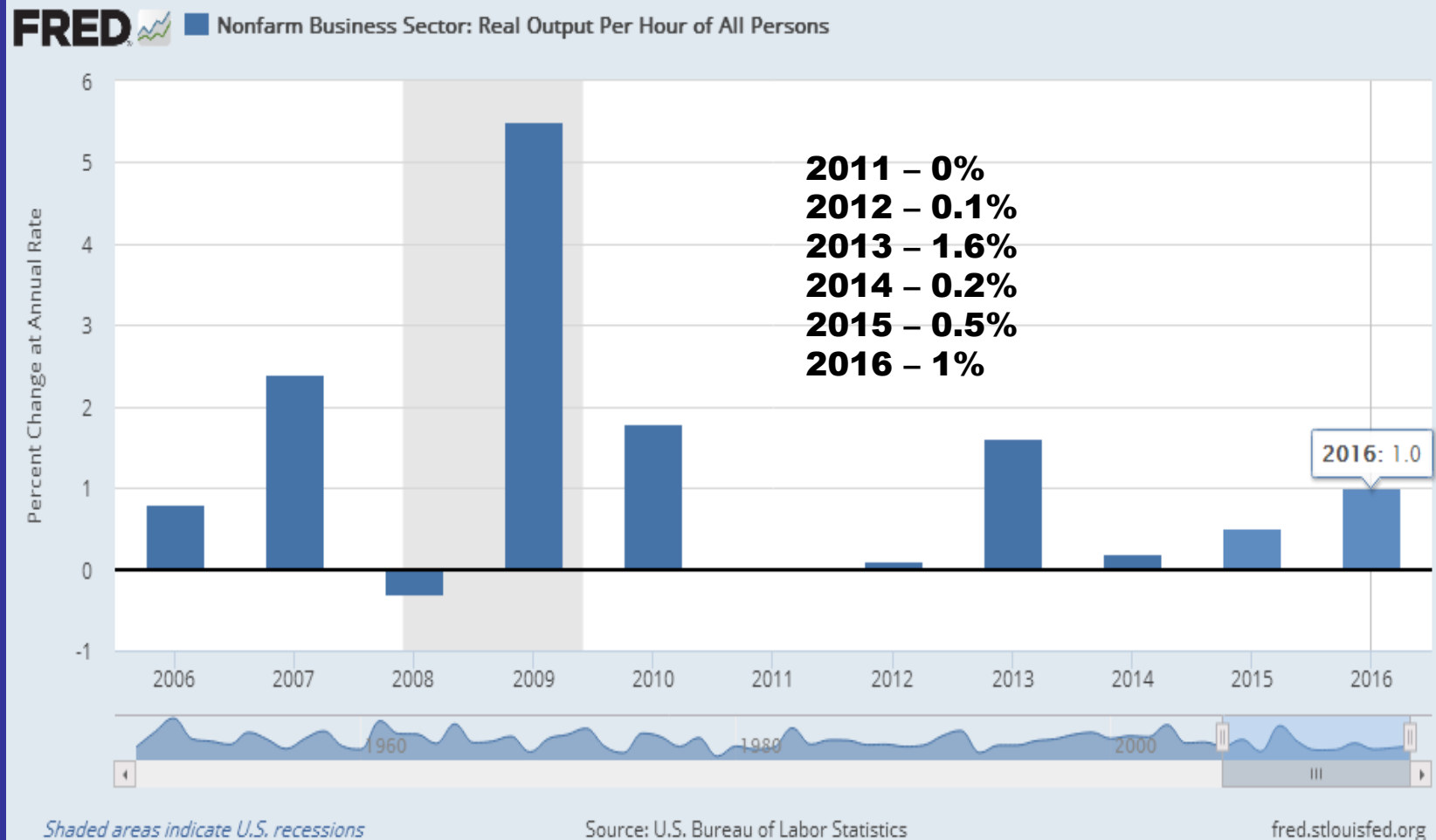
Note: Figures are seasonally adjusted

Source: Labor Department

THE WALL STREET JOURNAL.

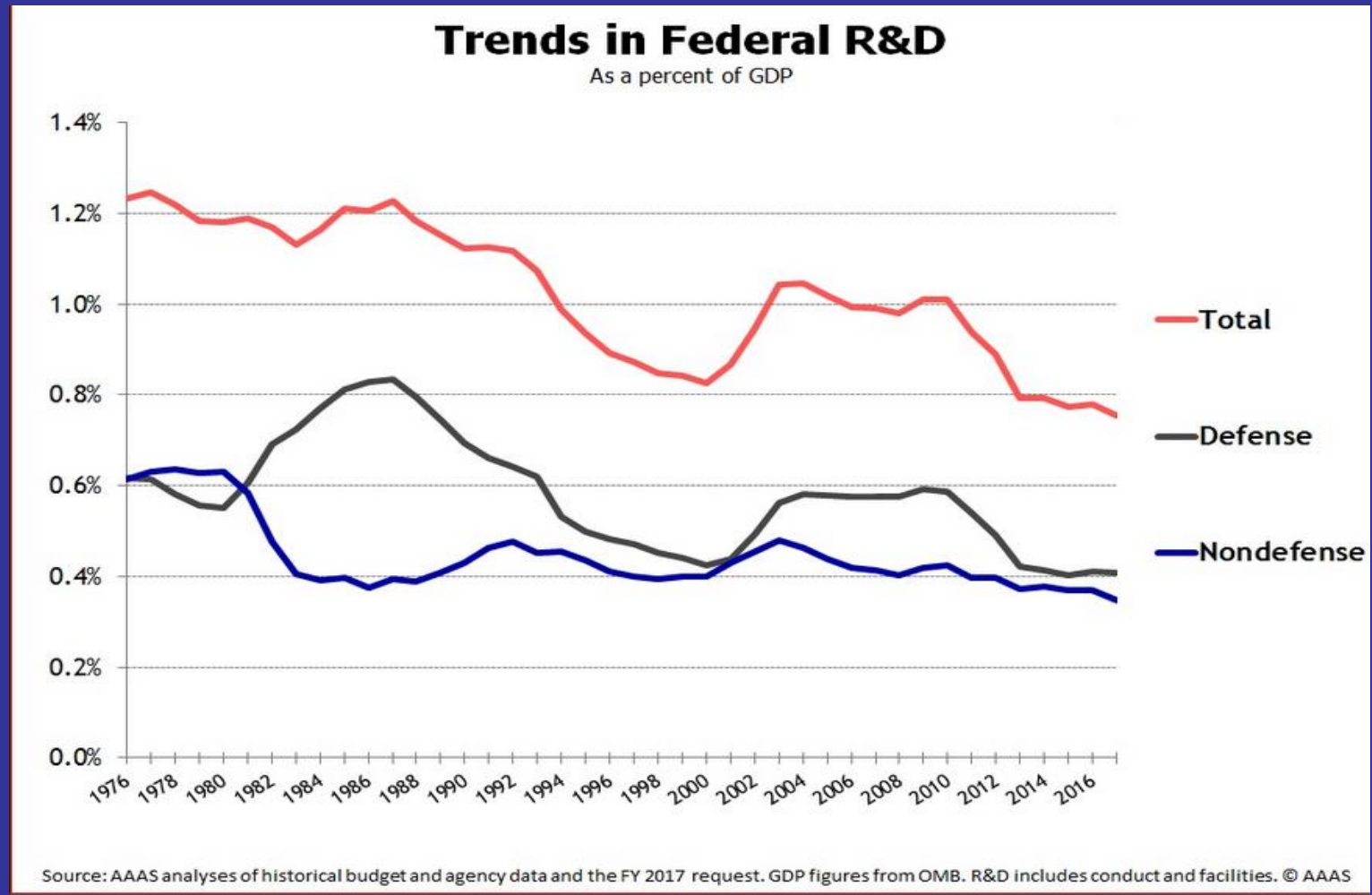
Source: WSJ (<http://www.wsj.com/articles/u-s-productivity-dropped-at-0-5-pace-in-the-second-quarter-1470746092>)

Declining Productivity is a major problem – has averaged 0.6% annually since 2011 – this plus declining work force means weak GDP and declining standard of living



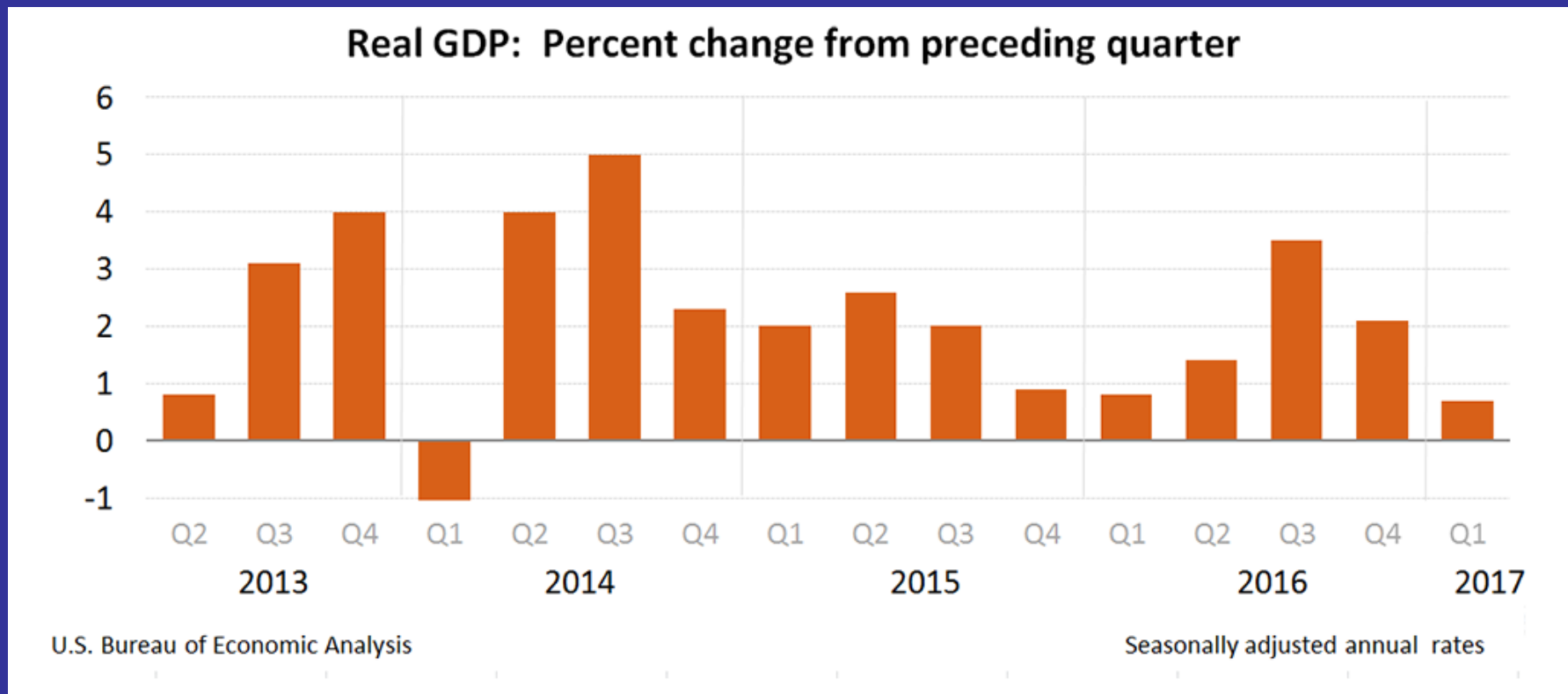
Falling Basic R&D - - funding basic science is declining – big problem that needs fixing

Federal government funds basic research while industries fund applied research – basic research is critical to development of new technology and innovation in science and engineering - critical to economic and job growth, and productivity (http://www.wsj.com/articles/the-dividends-of-funding-basic-science-1480982516?mod=rss_opinion_main)



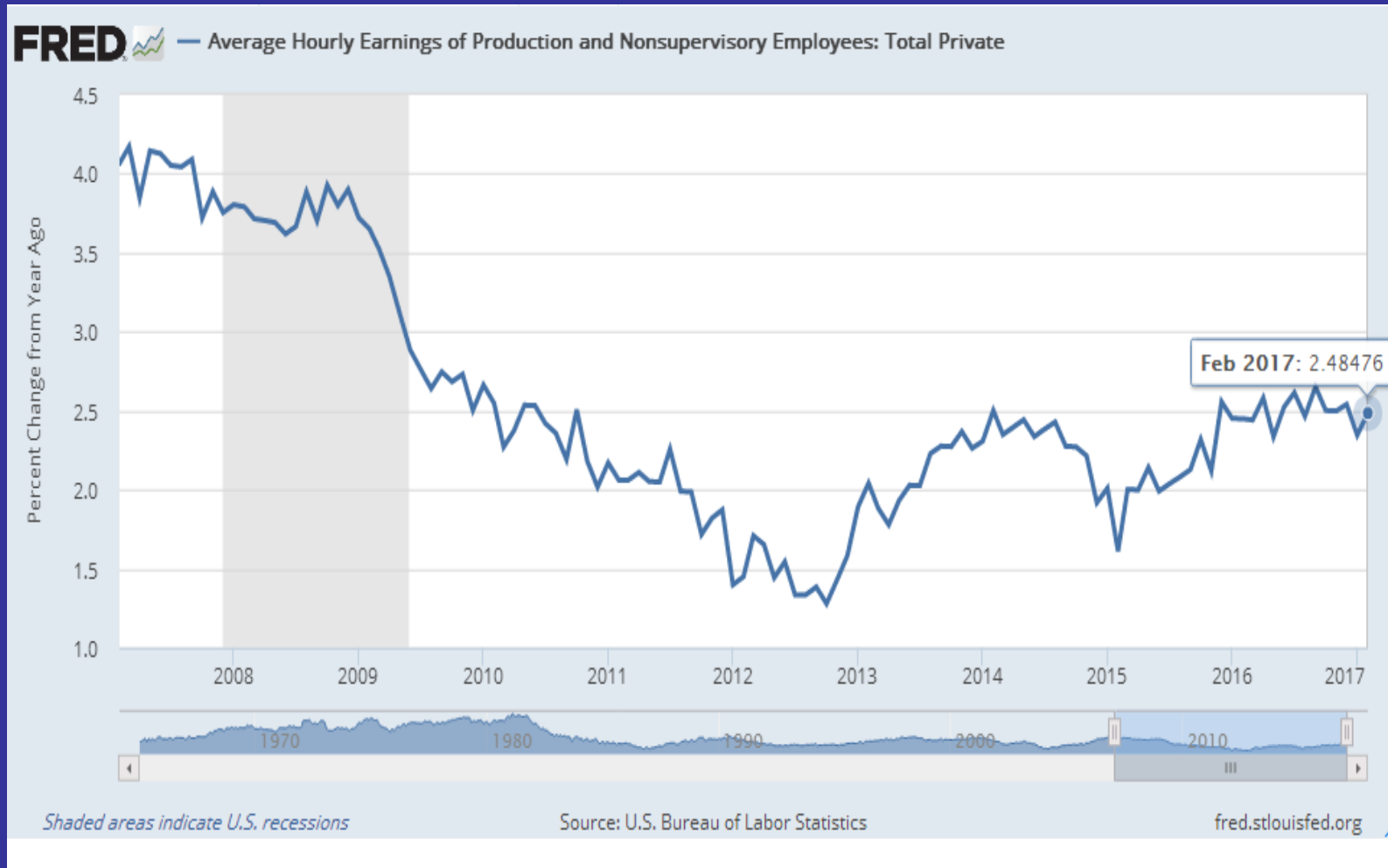
U.S. 1st Qtr 2017 Economic growth 0.7% - 1.7% for 2016 - terrible the slowest expansion since WWII.

- (1) Slowing world economy (weaker China , European, and South American growth)
- (2) Stronger dollar will reduce exports and increase imports – negative impact on manufacturing jobs which is key to income growth in USA
- (3) Political stalemate/weak leadership, terrorism, currency wars, growing national debt, ...
- (4) Weak income growth and continuing high “real unemployment”



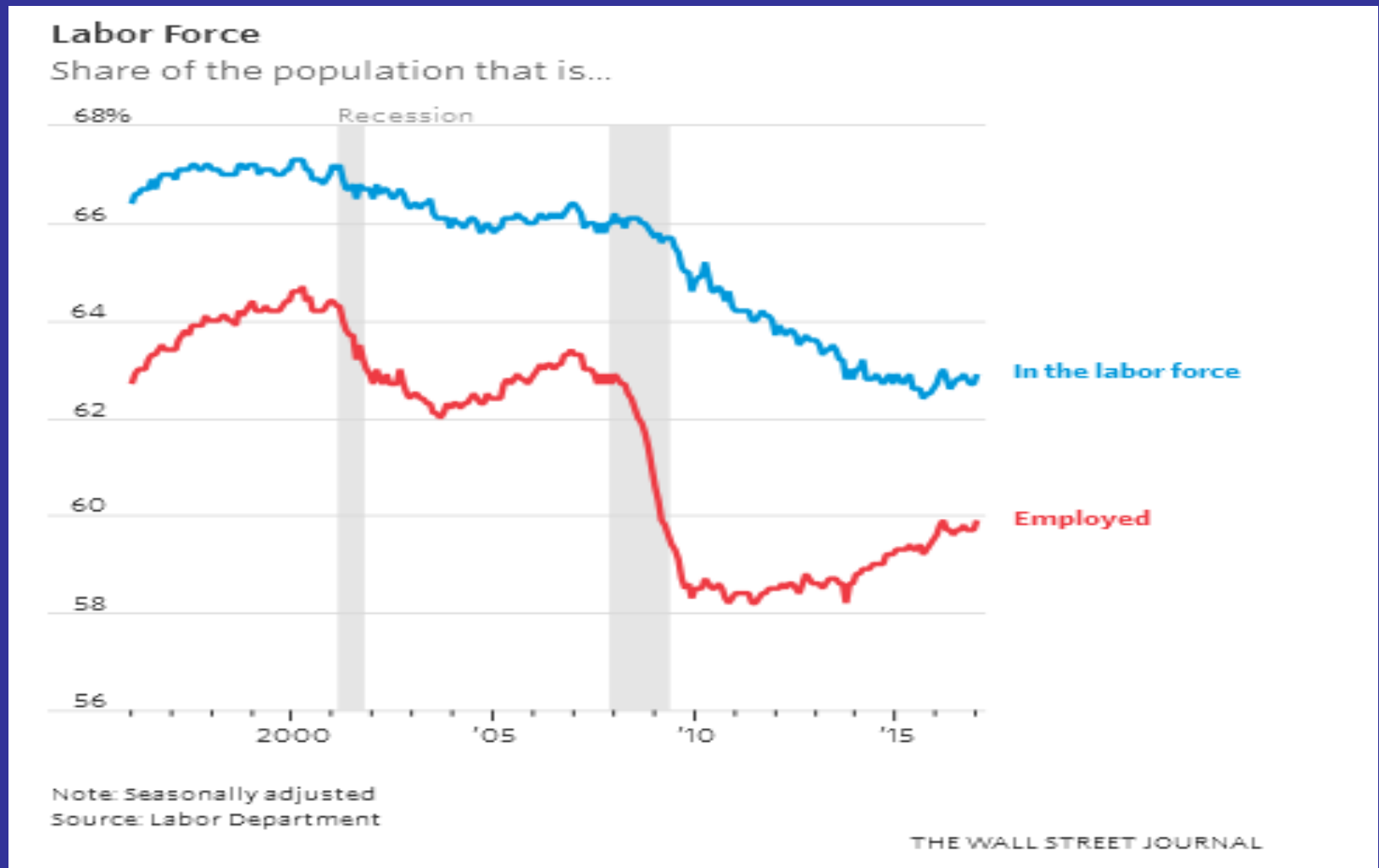
Here are a few slides on labor market conditions – problems persist, but there are solutions

Wage trend is good, but not spectacular



(<https://fred.stlouisfed.org/series/AHETPI#0>)

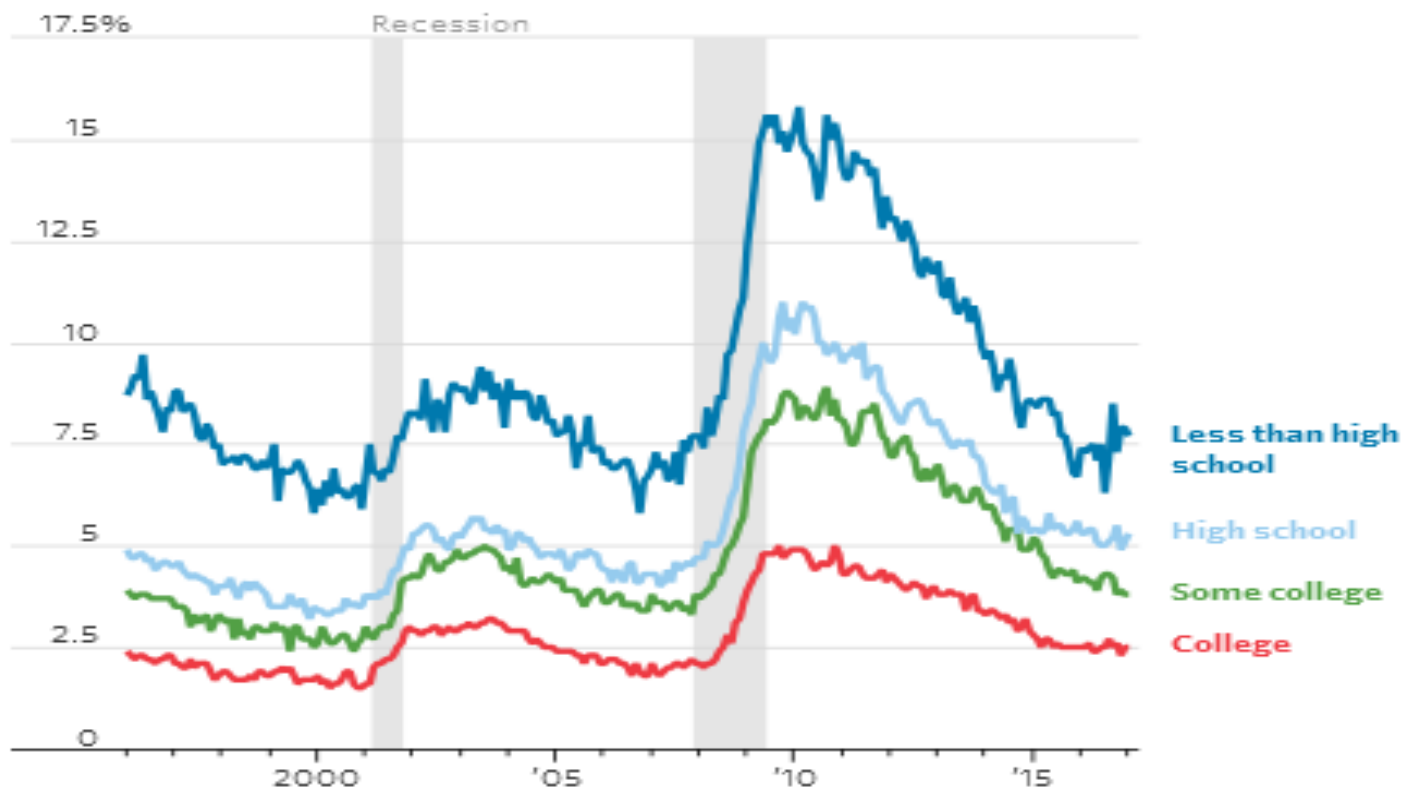
Not a good trend for the economy – employment population ratio keeps decreasing
Much welfare, plus many people don't have the required job skills
(half the population on some form of welfare – food stamps, Medicaid, long term disability, housing allowances, etc.) – yes, aging work force and retiring baby boomers is another reason the participation rate is dropping



Education will help keep you out of the unemployment line

School Work

Unemployment rate by educational attainment, age 25 and over



Note: Seasonally adjusted
Source: Labor Department

THE WALL STREET JOURNAL

Additional housing comments

Starts are inching forward – But, low Interest rates can't fix housing!
This is basically a two-tiered market – healthy upper end
versus weak entry level housing - not sustainable

Single family starts, Thousand units, SAAR



April 2017 - - 835,000, up 8.9%
versus March 2016

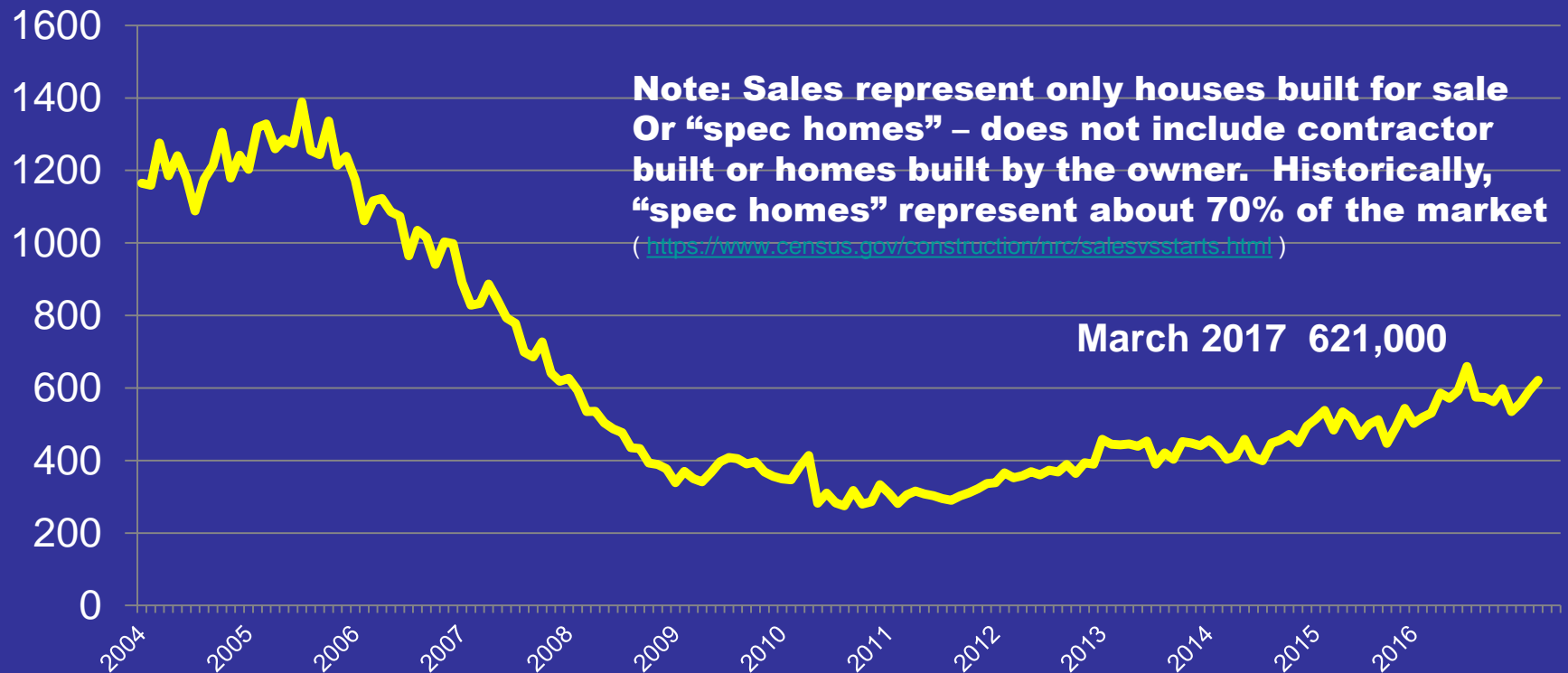
Source: Census (<http://www.census.gov/const/www/newresconstindex.html>)

New Single Family Home sales are the key statistic to watch for wood Products demand – Sales drive housing starts – this drives demand for wood products!!!

up 16% year over year!

OK. We're making progress, but still a relatively weak market

Thousands, SAAR



Source: Census (<http://www.census.gov/const/www/newressalesindex.html>**)**

Resale market continues to improve - however, tight supply (which drives prices), currently at 3.8 months, remains a problem. Healthy market is about 6 months supply. **Median prices are up 8%, annual basis - 59th consecutive monthly increase.** **Here is good report from NAR on 2016 totals**

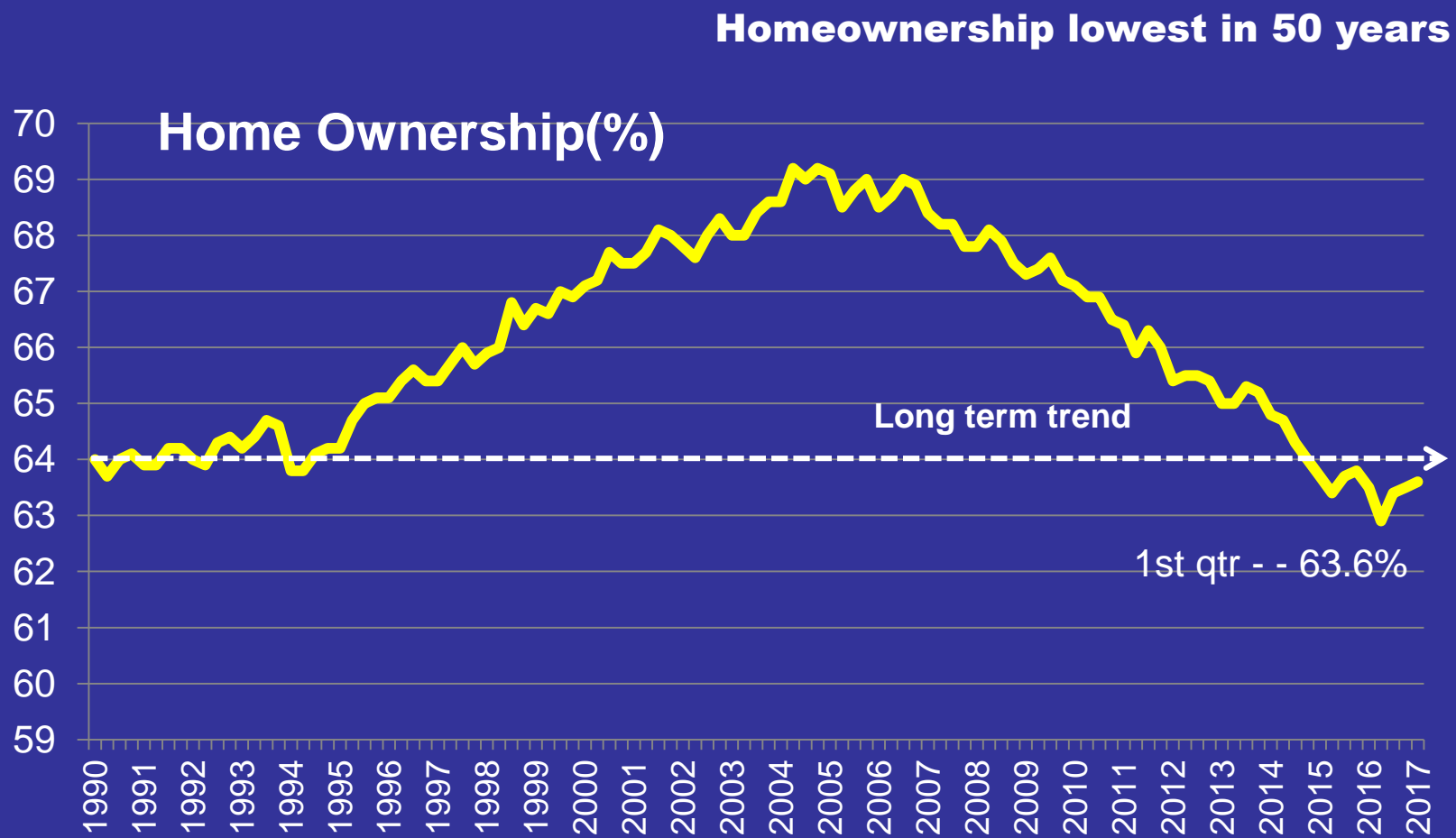
(<https://www.nar.realtor/news-releases/2017/01/existing-home-sales-slide-in-december-2016-sales-best-since-2006>)

Single family (incl condos), Monthly, Thousand units, SAAR



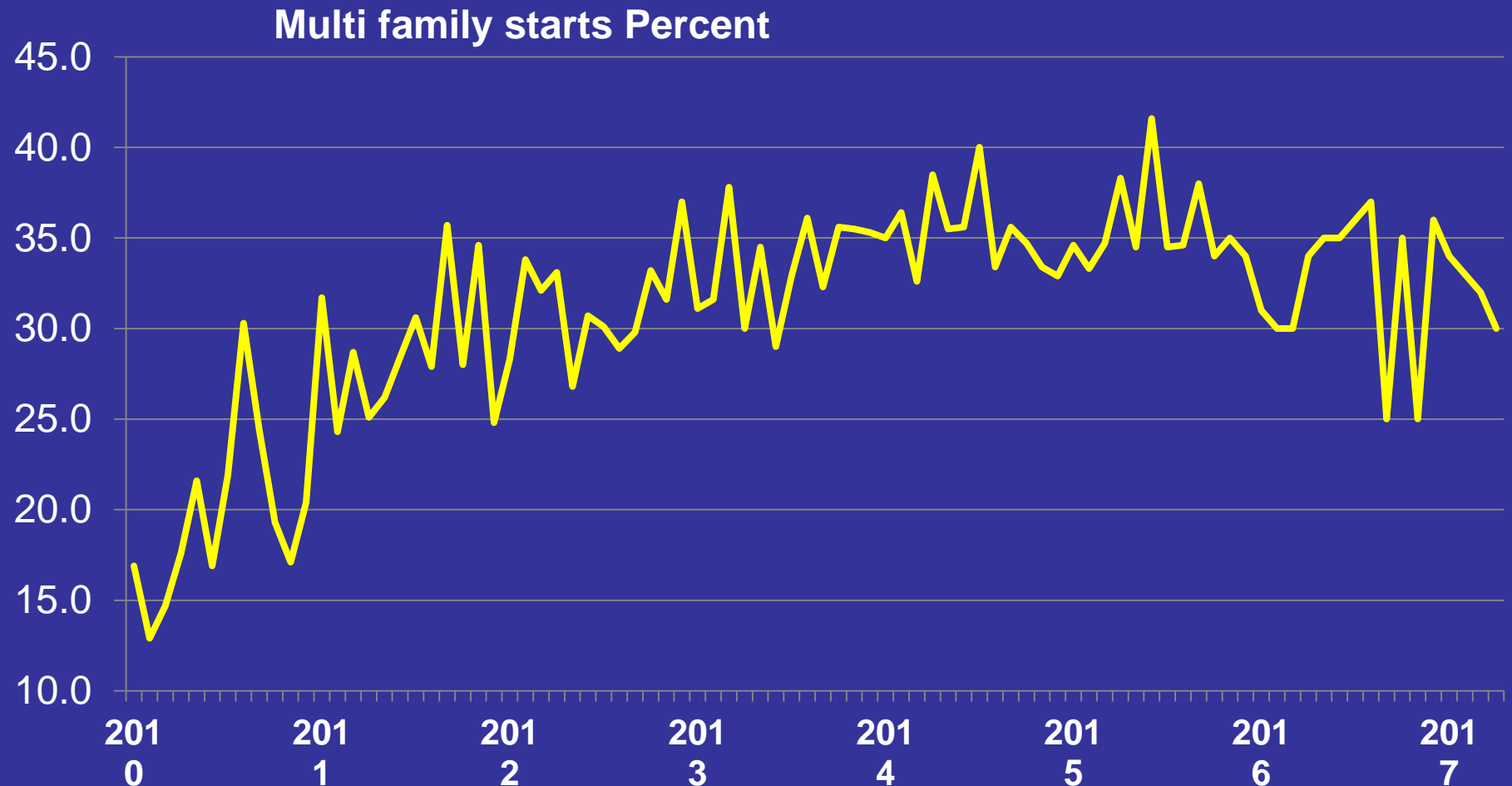
Source: NAR (<http://www.realtor.org/news-releases/2015/06/existing-home-sales-bounce-back-strongly-in-may-as-first-time-buyers-return>)

Falling Homeownership rate has bottomed (?) – 1st qtr , new owner HH were 854,000 compared with 365,000 renters – reversing a decade long trend.



Source: Census (<https://www.census.gov/housing/hvs/data/q413ind.html>)

Multi family share of housing starts – upward trend has leveled off. Also, first time since the housing crash in 2008 it looks like millennials are buying.

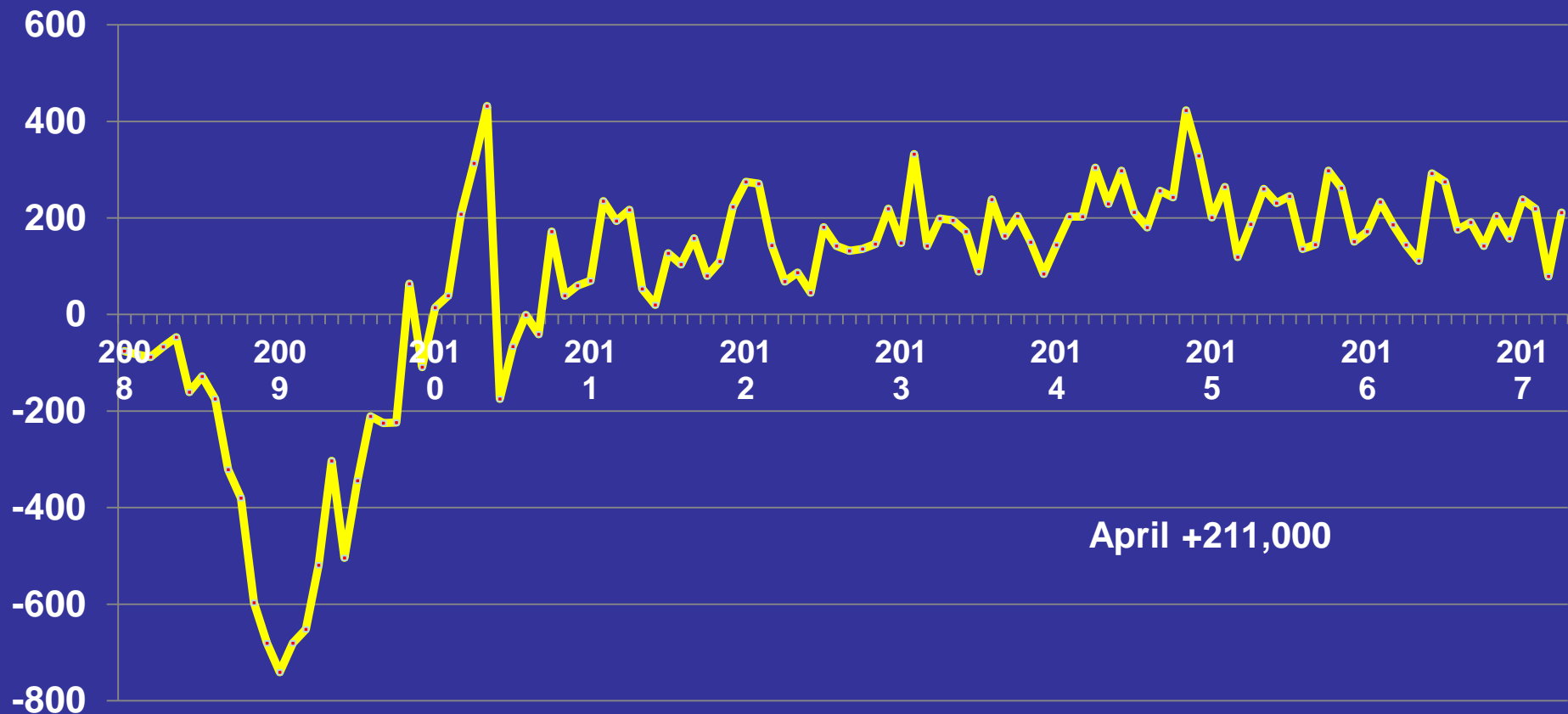


Source: Census

More news on the labor front

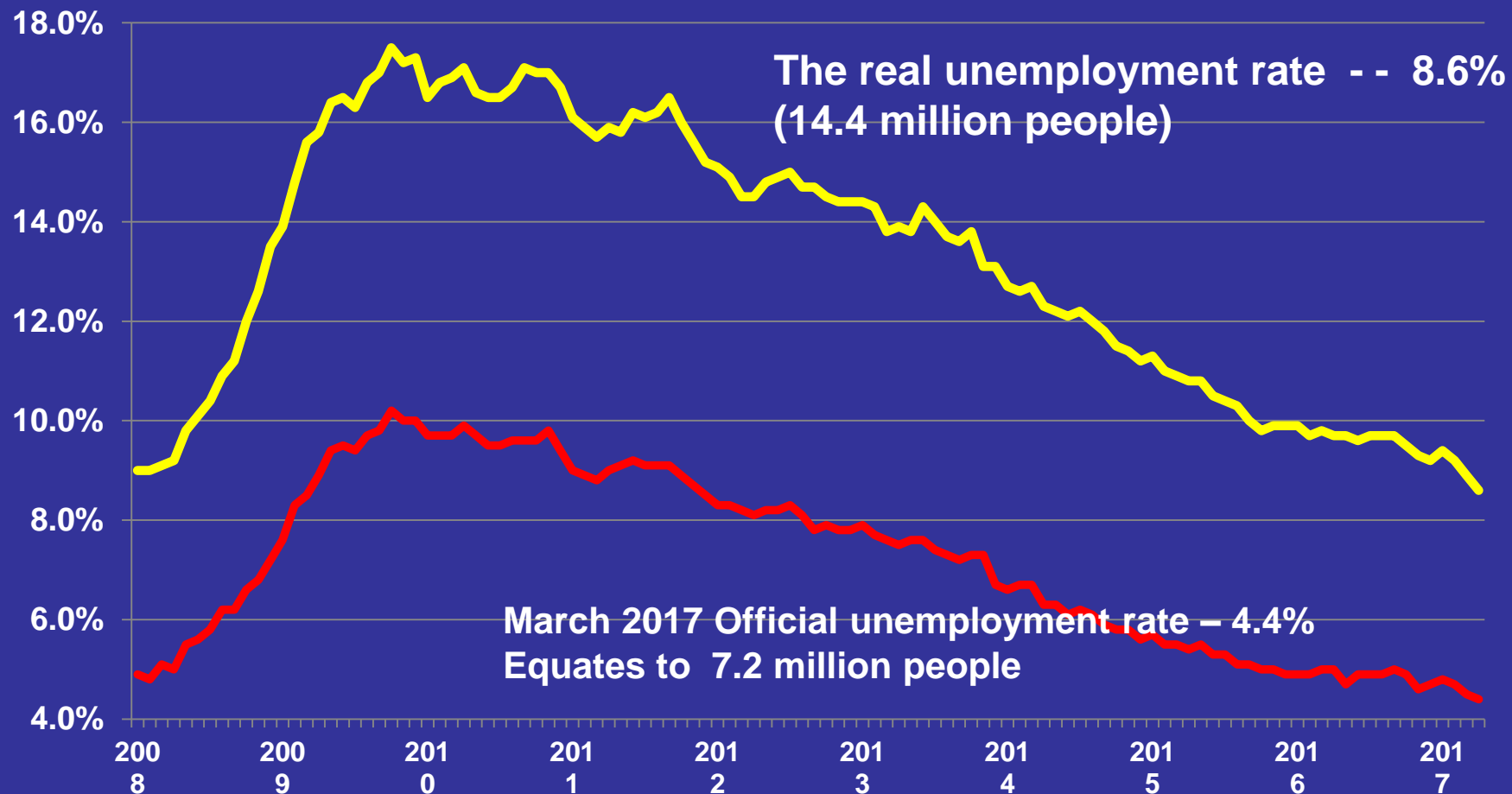
Employment situation - our biggest problem – stuck around 200,000, and many of these jobs are part time with little or no benefits – not conducive to driving housing demand higher - need to encourage innovation and investment in future - that means less government and more research

Net change in non farm payrolls – monthly, thousands



Source: U.S. BLS (www.bls.gov)

Unemployment rate keeps coming down – but, 5.6 million remain “underemployed” – working part time, but want full time jobs – another 1.6 million are “marginally attached” including 460,000 discouraged – total = 14.2 million including official 7.2 million unemployed



Labor force participation rate is shrinking – demographics is one reason – Another reason – bloated welfare system – 130 million people on some form of welfare (food stamps, long term disability, housing allowances, Medicaid, ...) - - we'll see skilled labor shortages **increase over the next decade - we're already seeing construction related shortages with brick layers, masons, electricians, plumbers, etc.**

Excellent article (<http://finance.yahoo.com/news/should-i-go-to-a-trade-school-162413337.html#>)



But, taking a closer look,, from July 2015 – February 2017, more people are returning to the work force. That's a good sign!



Some conclusions – housing continues to improve albeit very slowly and this will not change soon for the reasons listed below:

- (1) Economy is improving (slowly) -- **2016 growth was 1.9% while 2017 expected to be about the same.**
- (2) Housing market still not healthy - 1st time buyers (33% today) are below trend (42%) - household formations are improving, but more people will continue to rent
- (3) Productivity a major problem for U.S. economy – real GDP driven by population (number of workers) and real GDP/worker or productivity. During past 7 years, productivity has grown 1.7% annually whereas the average over previous 17 years was 2.4%.
- (4) “QE” not working – bulk of “printed money” hoarded by the banks to shore up capital positions – not being loaned out to the economy - GDP languishes - We need a new and more effective approach to our competitiveness problems!
- (5) The fed increased rates, finally, with more increases expected in 2017. Low rates are not the solution to the weak economy! Innovation, investment, tax reform, is the solution, but that will be challenging with \$20 trillion (and counting) federal debt and 41% of the population on some form of welfare. Many business leaders have lost confidence in where the country is headed so they are not investing. Plus, we need a smart immigration policy.

Virginia Tech Disclaimer

Disclaimer of Non-endorsement

Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by Virginia Tech. The views and opinions of authors expressed herein do not necessarily state or reflect those of Virginia Tech, and shall not be used for advertising or product endorsement purposes.

Disclaimer of Liability

With respect to documents sent out or made available from this server, neither Virginia Tech nor any of its employees, makes any warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

Disclaimer for External Links

The appearance of external hyperlinks does not constitute endorsement by Virginia Tech of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, Virginia Tech does not exercise any editorial control over the information you may find at these locations. All links are provided with the intent of meeting the mission of Virginia Tech's web site. Please let us know about existing external links you believe are inappropriate and about specific additional external links you believe ought to be included.

Nondiscrimination Notice

Virginia Tech prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the author. Virginia Tech is an equal opportunity provider and employer.