

Welcome!

Lawrence Area **ECONOMIC OUTLOOK CONFERENCE**

— Program Agenda —

- 11:00 Registration / Networking
- 11:30 Lunch Served
- 11:55 Welcome
- 12:00 State Economic Outlook
- 12:30 Real Estate Outlook
- 1:00 KU's Effect on the Regional Economy
- 1:20 Local Economic Outlook
- 1:30 Panel Discussion
- 2:00 Closing Remarks / Adjourn

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STATE OUTLOOK



JEREMY HILL

Director

Center for Economic Development
& Business Research (CEDBR)
Wichita State University



Economic Outlook - Kansas

Jeremy Hill

Agenda

- **U.S. Economy** - Has there been a shift in the force?
- **Labor markets** - Is there enough Jedi left within Kansas to hold off the Galactic Empire?
- **Households** - Has consumer confidence increased within the galaxy?
- **Industry** - Are we building drones?
- **Outlook** - "Future unknown, it is!"

The Star Wars logo, featuring the words "STAR" and "WARS" in a bold, yellow, outlined font on a black background.

US Outlook – (May 2017 forecast)

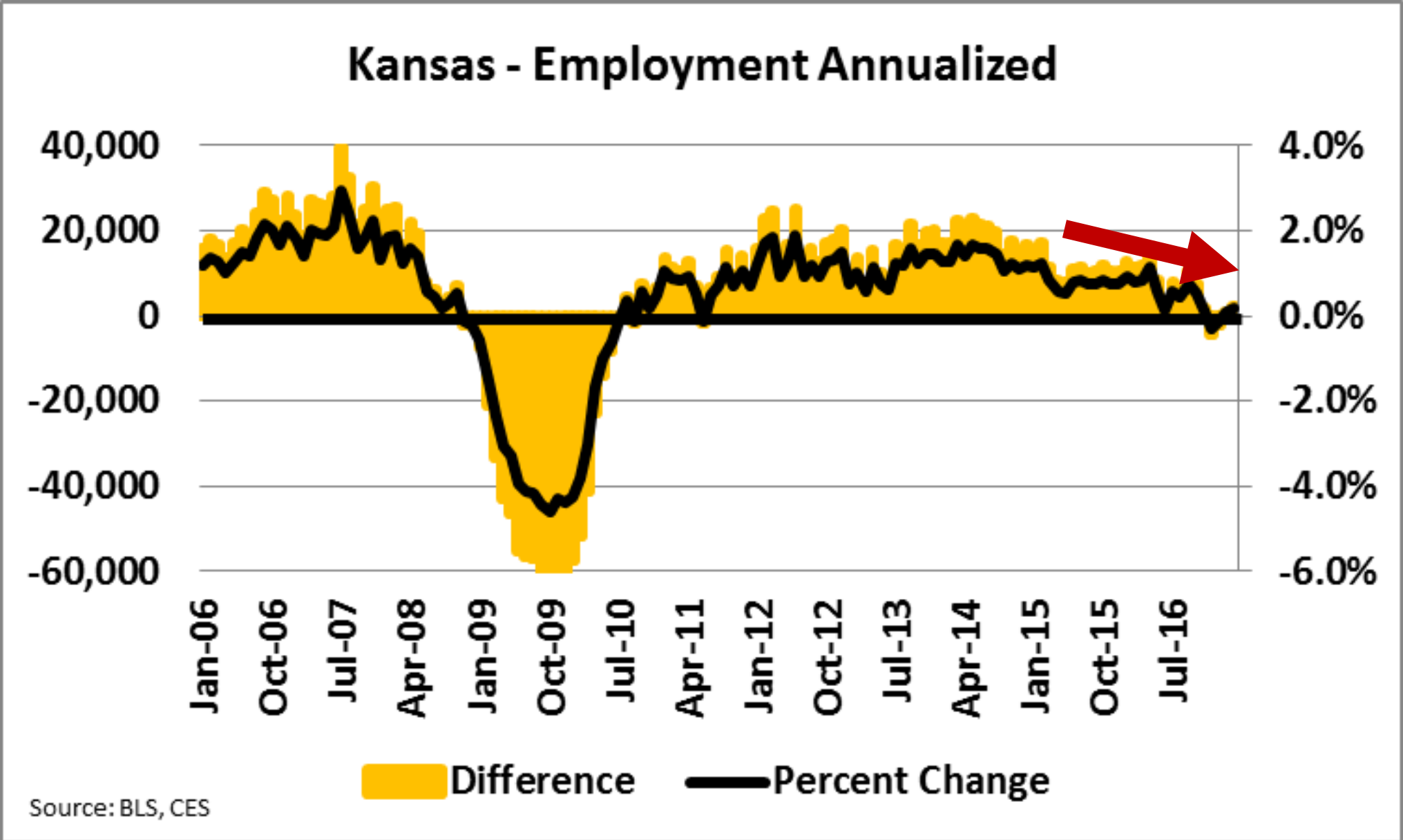
	2015	2016	2017 F	2018 F
GDP	2.6	1.6	2.2	2.6
Employment	2.1	1.8	1.6	1.3
CPI	0.1	1.3	2.6	2.5

Labor Market

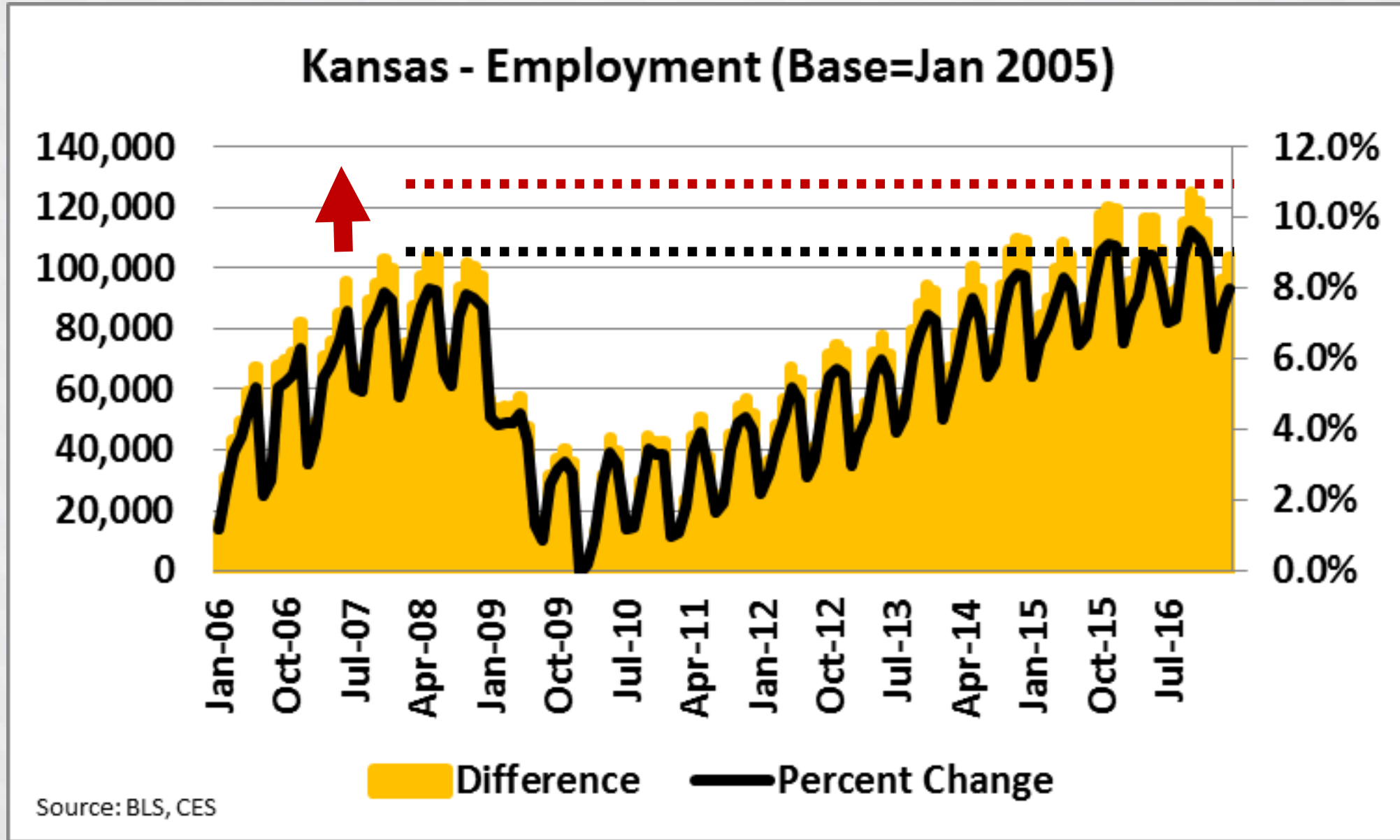
- Has Kansas run out of available Jedi (skilled labor) to protect the galaxy?
 - "Yes!"
- Are employers hiring Siths (marginal workers) to keep up with demand?
 - "Yes!"
- Is it easier for Yoda to train a Jedi or purchase more drones (equipment)?
 - "We are willing to train, but purchasing drones is a lot easier."



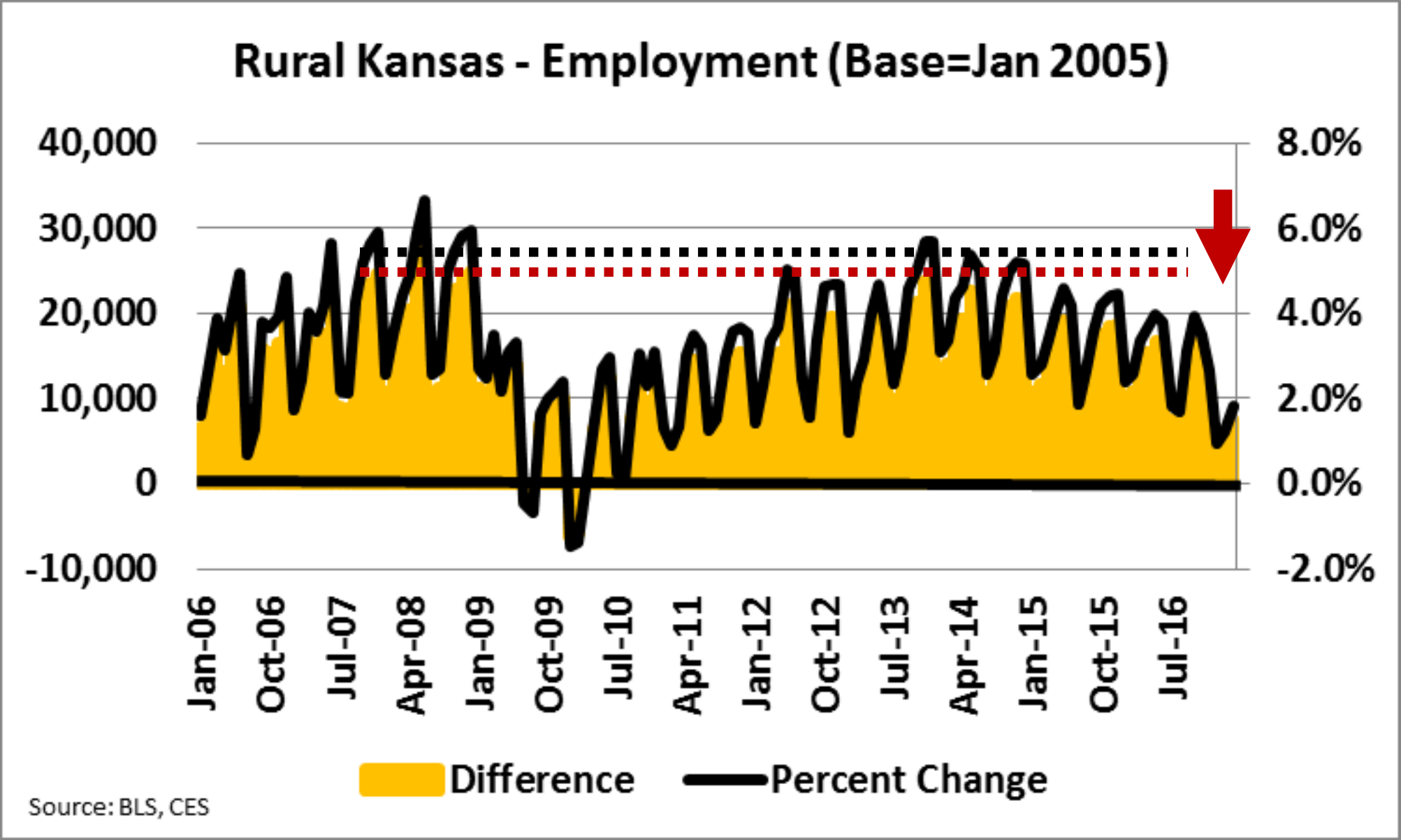
Kansas employment growth slowed



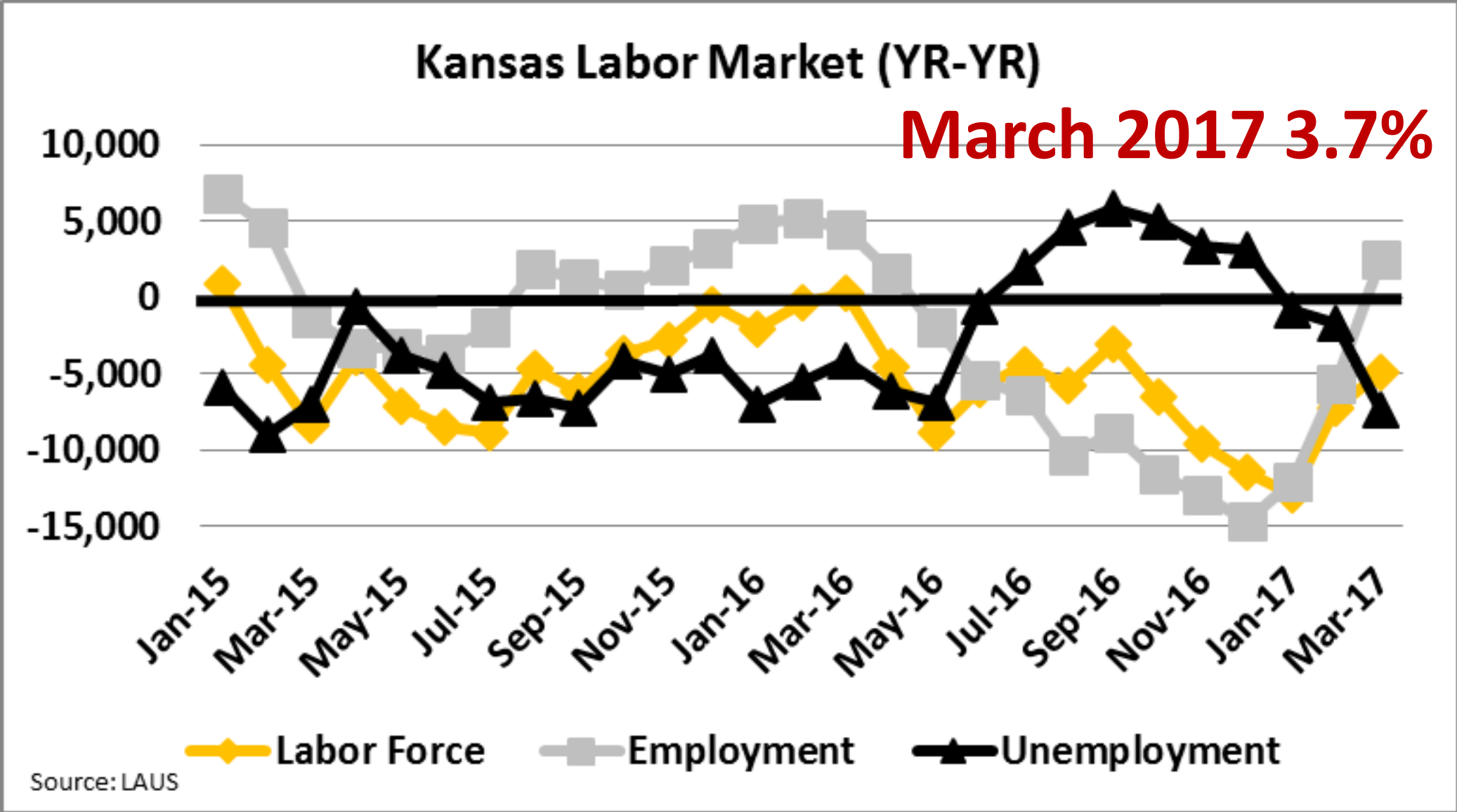
Job creation likely surpassed natural growth and availability



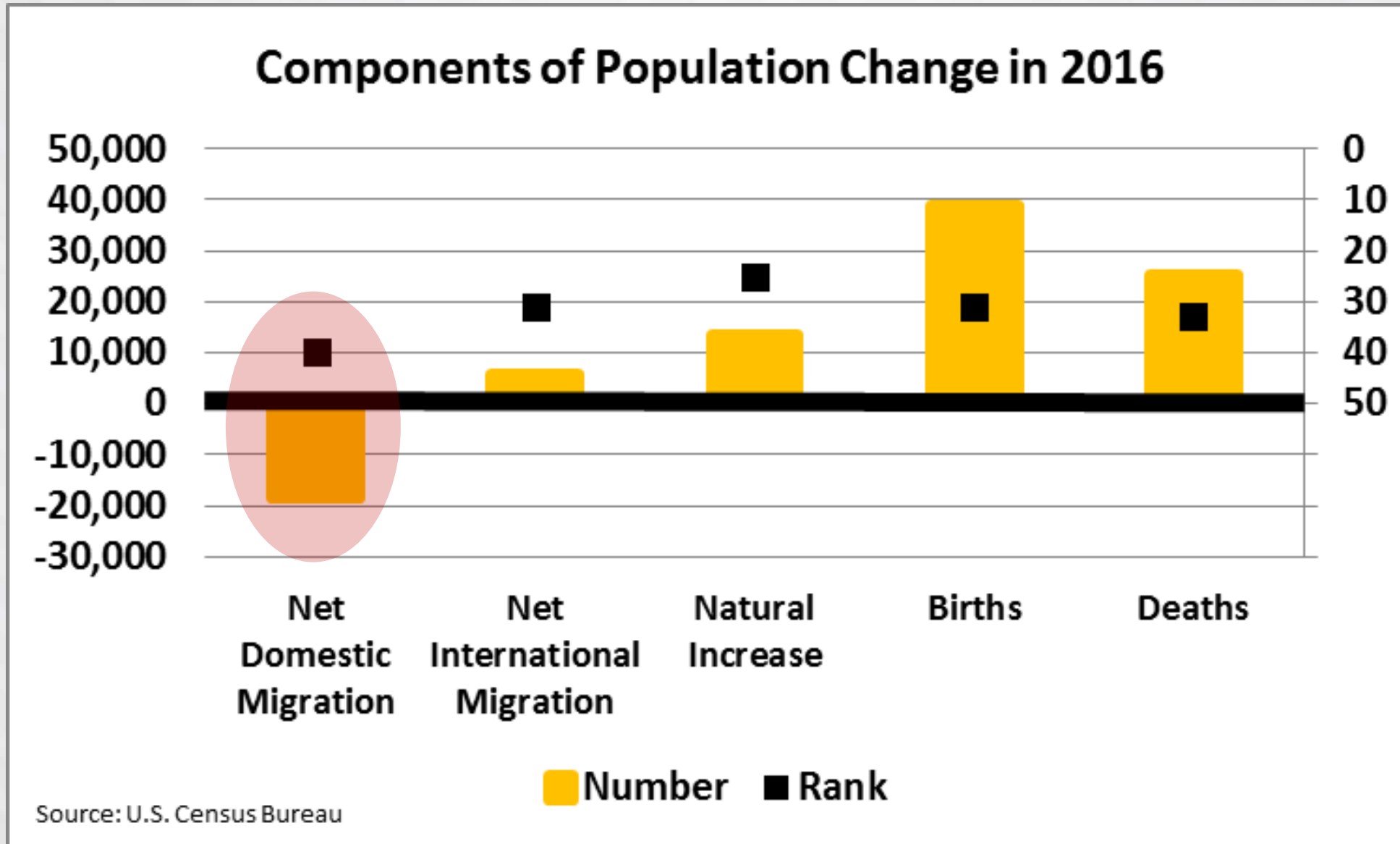
Rural Kansas has not kept up with the State's growth



Kansas labor continues to shrink

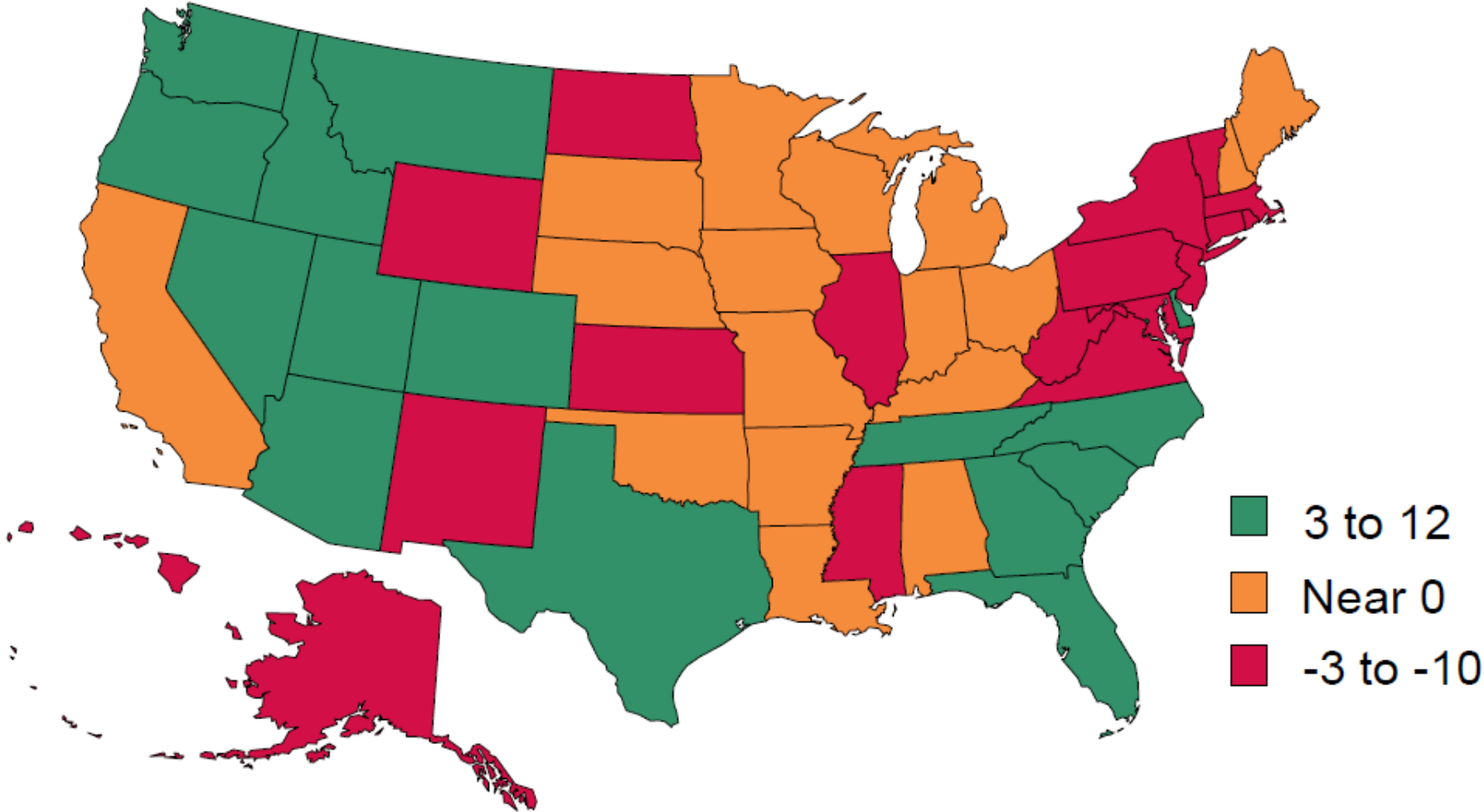


Working age population is dwindling due to migration



Kansas labor is following job opportunity

Net domestic migration, 2016, rate per 1,000 population



Sources: Census Bureau, Moody's Analytics

Summary



- **Skilled labor**

- Skilled labor is likely following better opportunity, and dampening future growth potential within Kansas.

- **Moderate growth has maxed out**

- Unlike the U.S., the state has likely maxed out on employment growth due to migration and natural growth.

Expectations

- **Limited labor supply**

- KS employment growth is not likely to continue due to limited labor.

- **Pressures on wages will bring inflation**

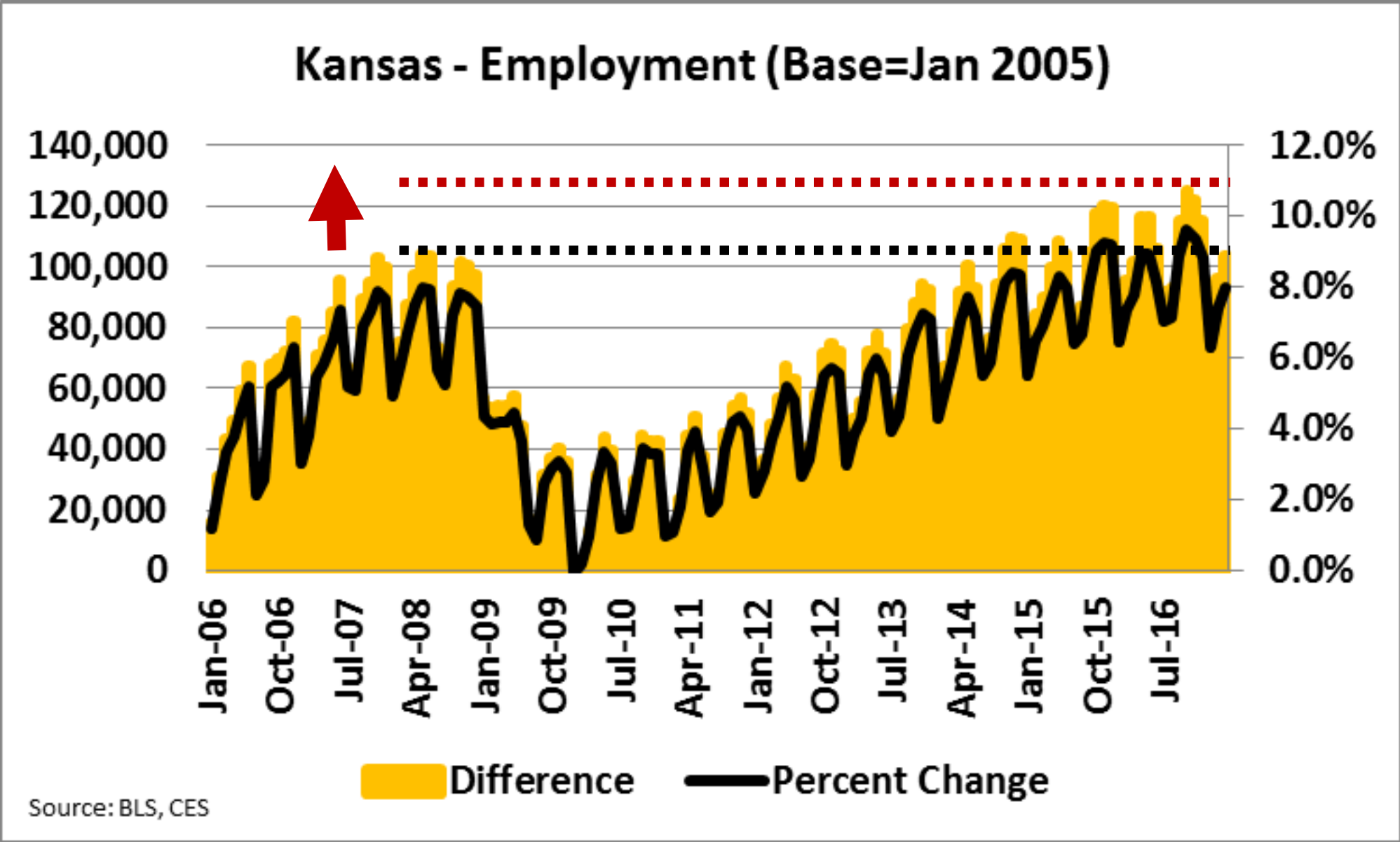
- Wages will have to increase to either bring people back into the market or to attract them here.

Households

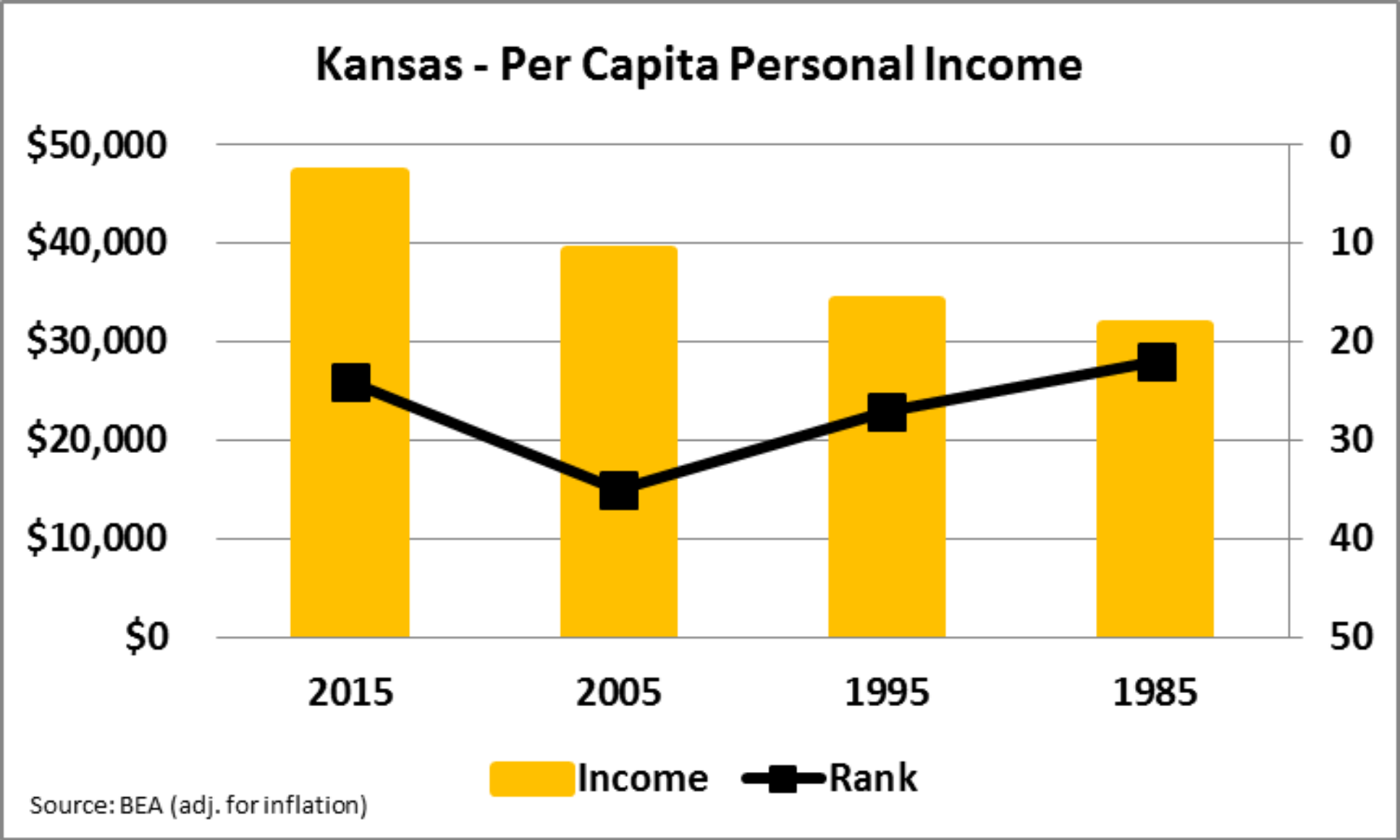
- Will the slowing employment growth negatively impact households?
 - As long as it is still expanding, no.



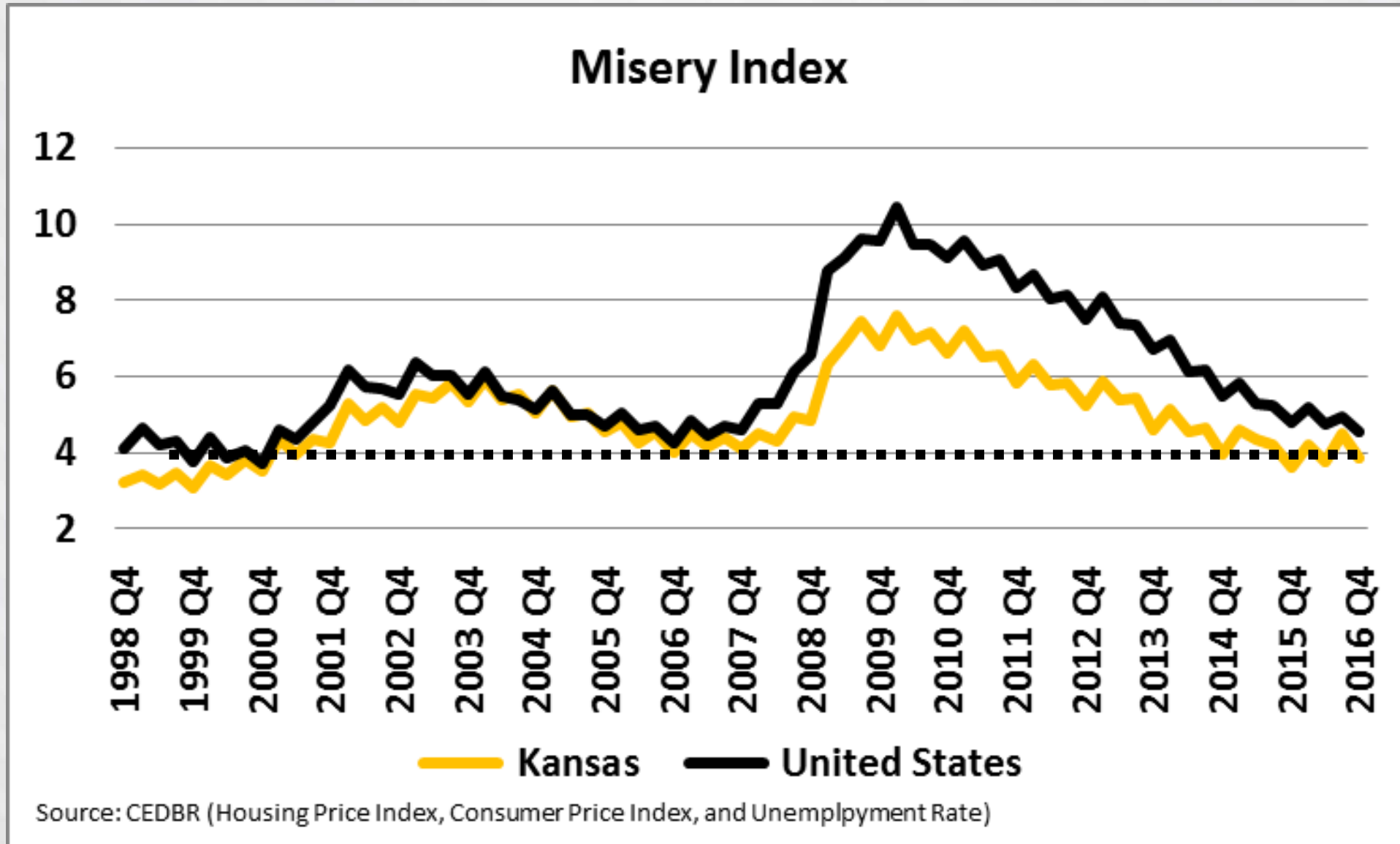
Full employment creates upward mobility opportunities



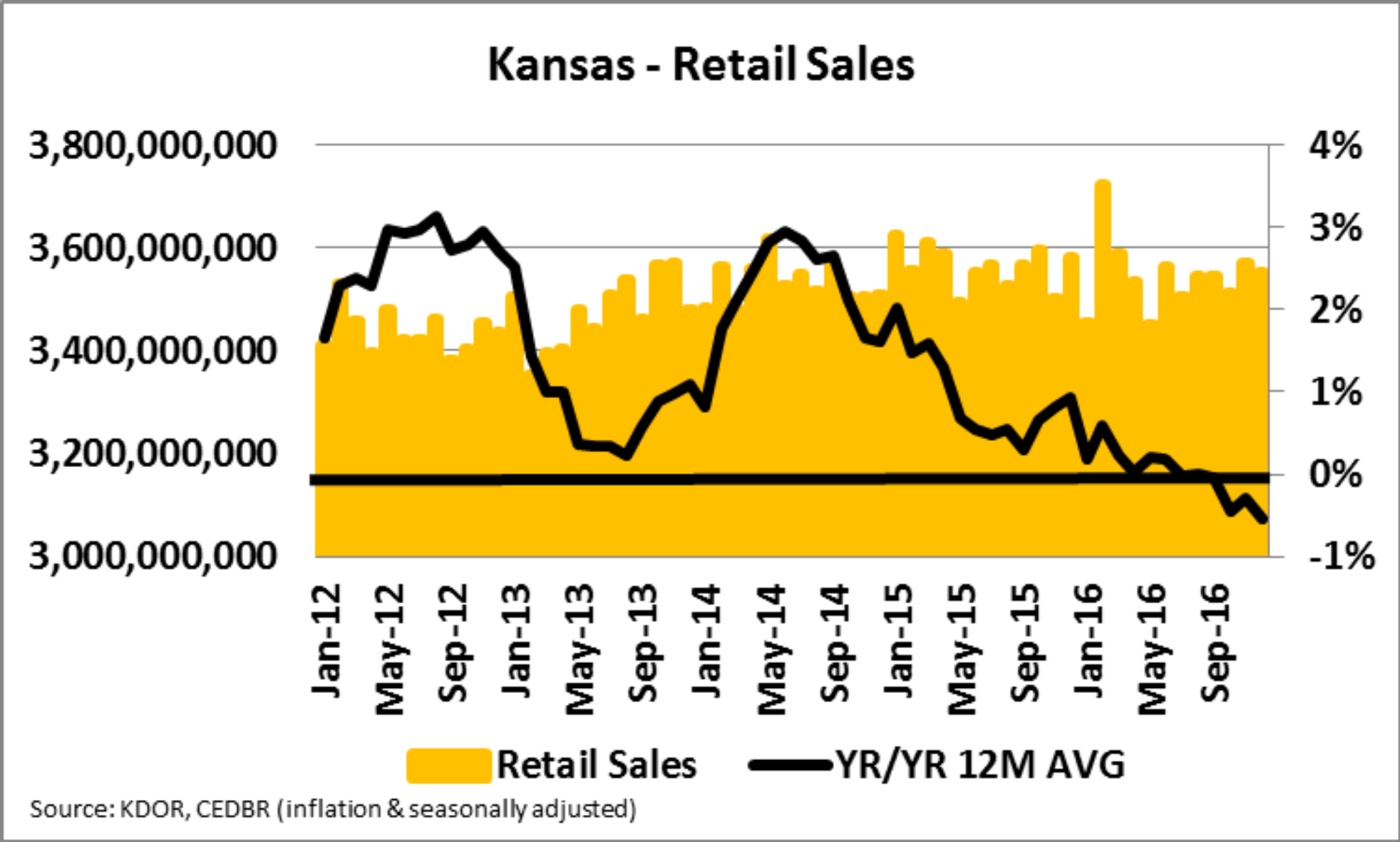
Increased income was improving, but not for all segments



Level of misery is now at record lows



Growth in retail sales flattened



Summary

- Households are feeling great about recent opportunities.

Expectations

- Wages will likely improve, as competition and inflation are both rising.
- Retail sales will not likely see dramatic improvements due to the weak economy and uncertainty.

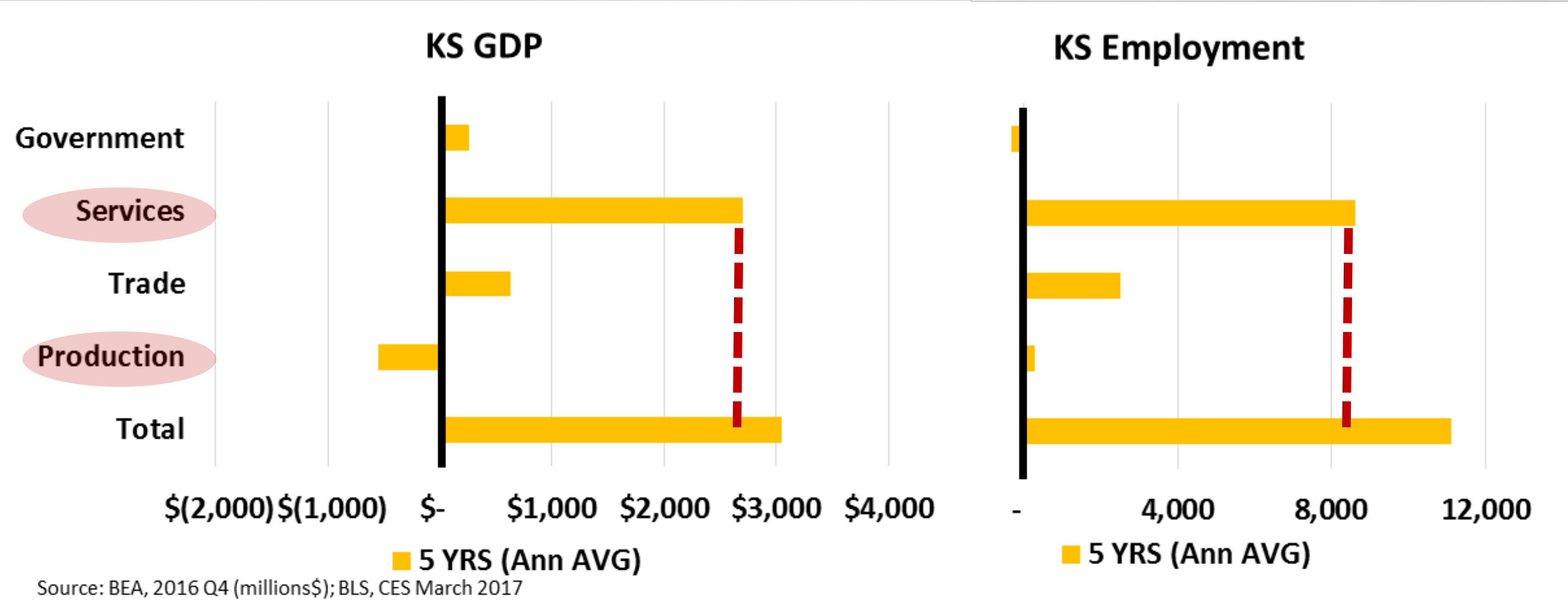


Industry Growth

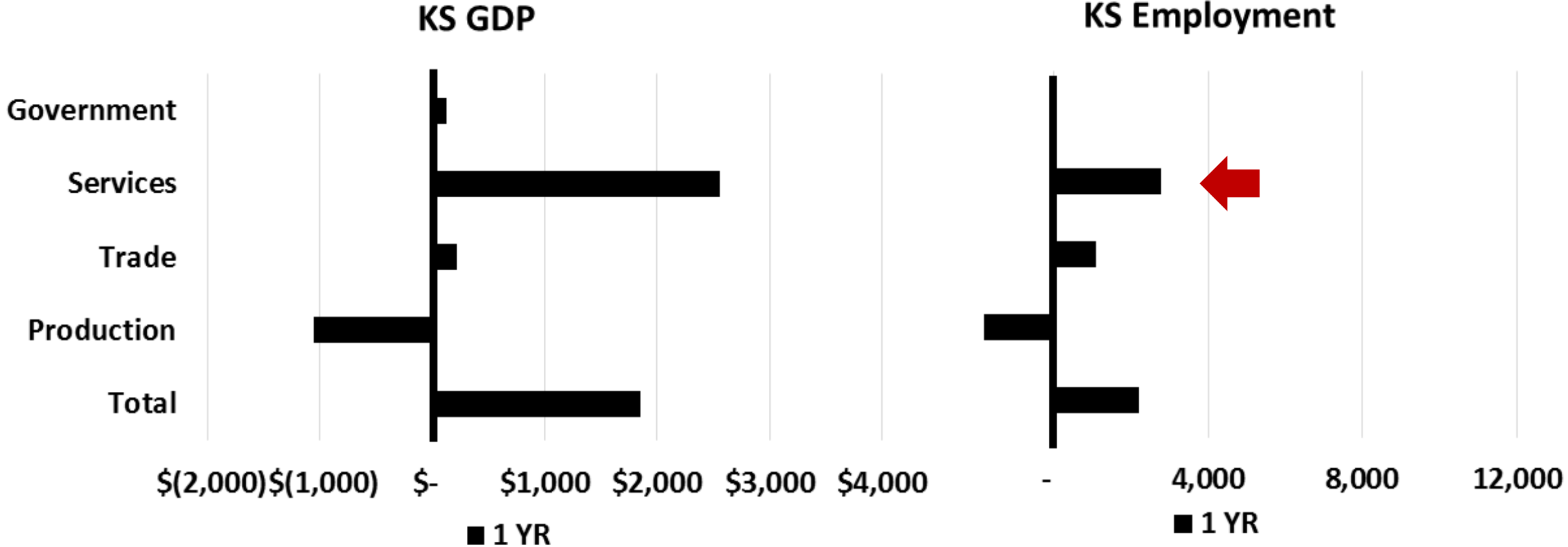
- Is there “steam” in the economy to pull off two more years of growth?
 - Agriculture and Manufacturing have potential, but it is unlikely.



Manufacturing and Oil weighted down growth

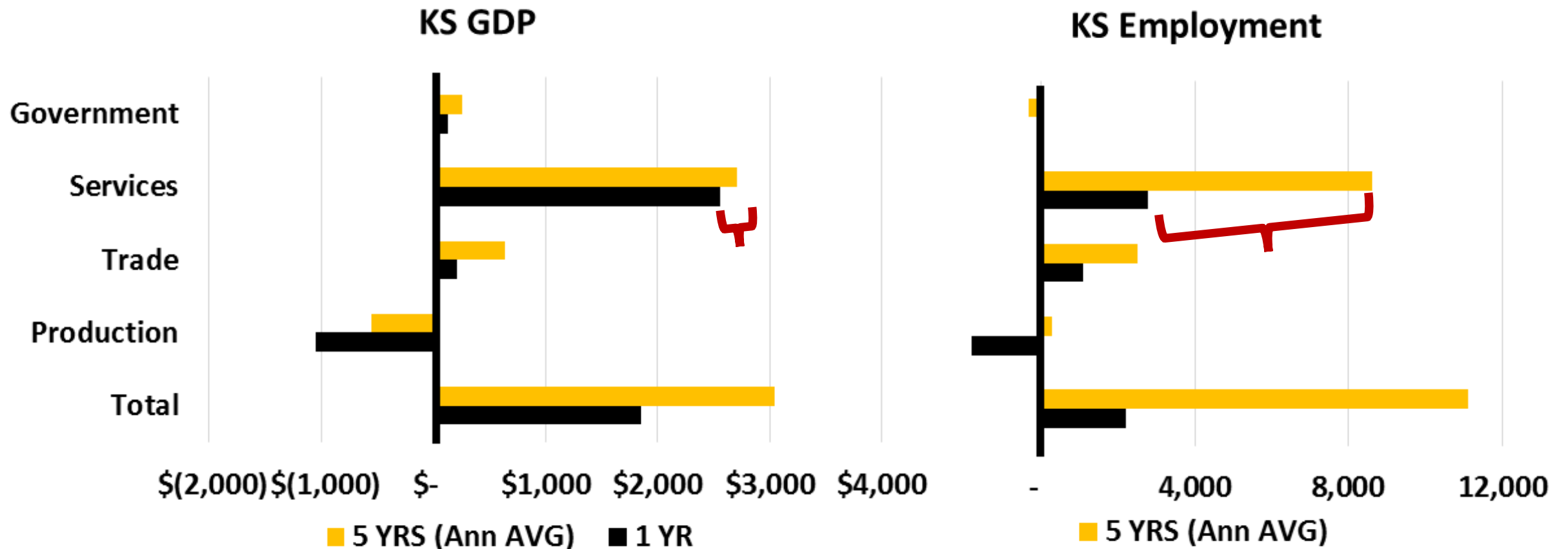


Kansas was the second slowest state in Q4 2016



Source: BEA, 2016 Q4 (millions\$); BLS, CES March 2017

Service employment growth has slowed



Source: BEA, 2016 Q4 (millions\$); BLS, CES March 2017

Summary

- **Work boots in the boardroom?**

- Jobs have shifted from the farm and manufacturing plant to service related sectors

Expectations

- **Can the U.S. "tide" float the Kansas "boat"?**

- Kansas has likely already reached the peak, based on U.S. economic strength.

- **Exports and Trade**

- Opportunity exists for commodities and manufacturing; however, political uncertainty is very concerning.

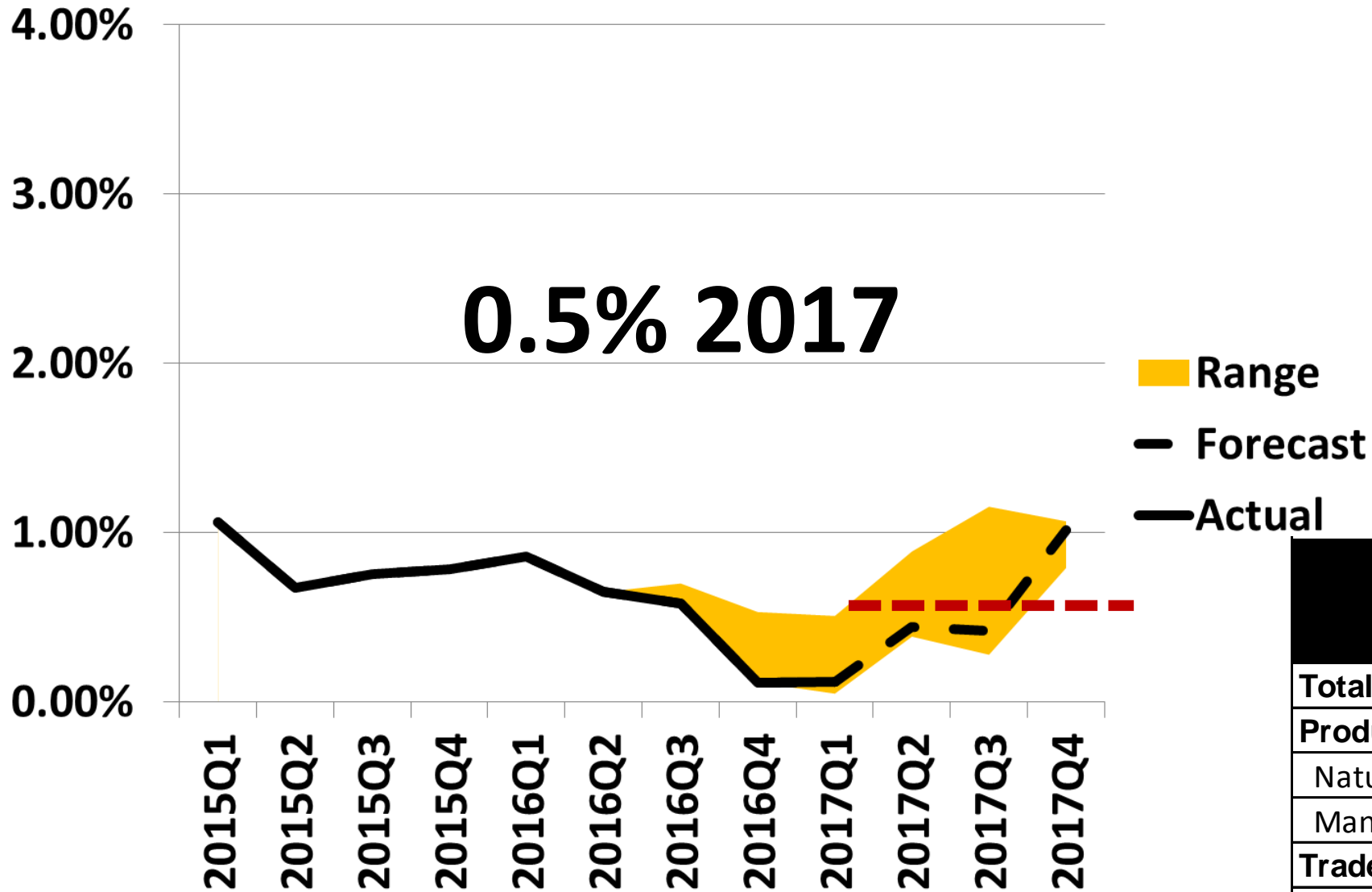


Kansas outlook

- Will employment increase despite weak core sectors and limited labor?
 - Yes, but increased caution should be exercised for businesses serving a local/regional market.

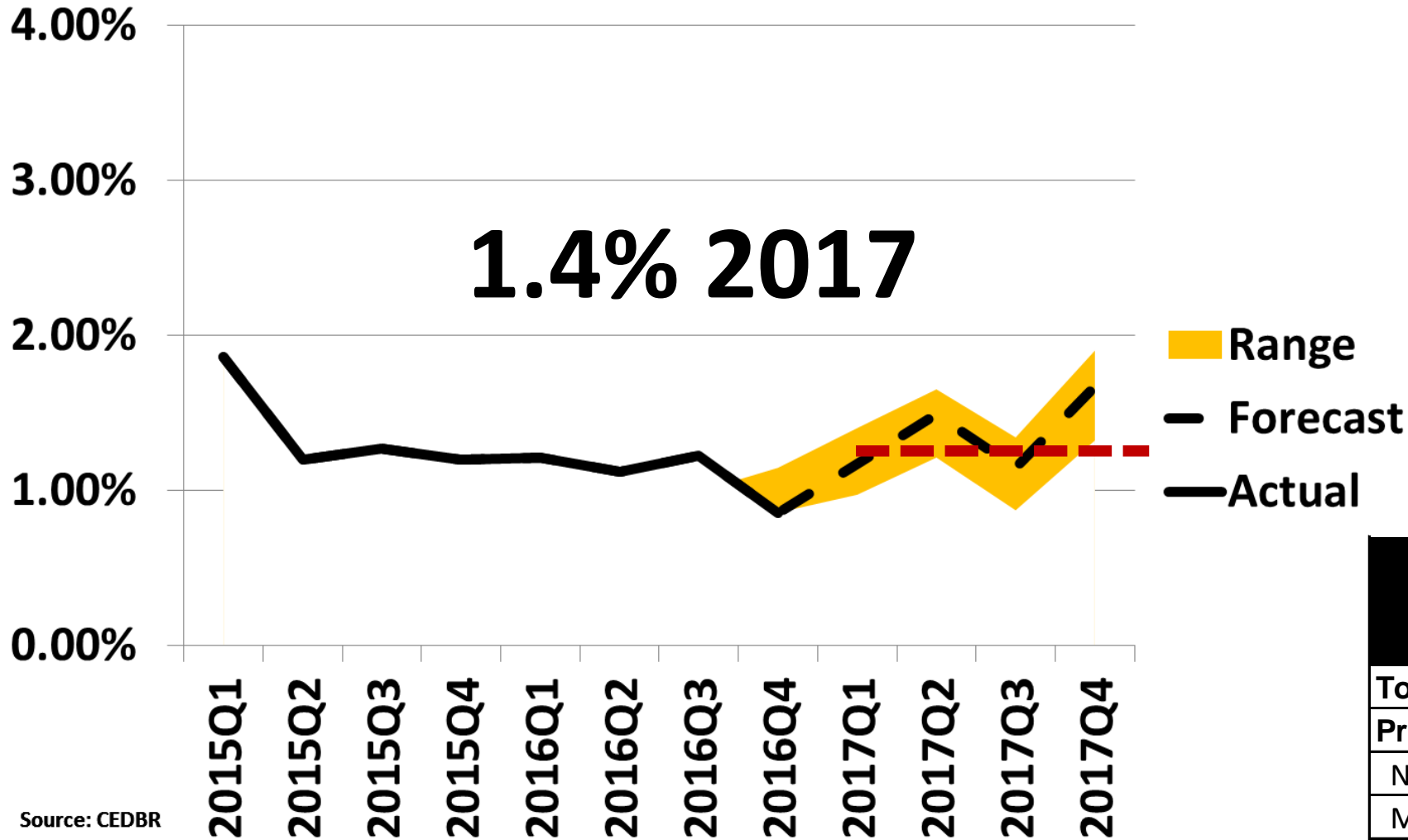


Kansas Total Nonfarm Employment



	2016-2017 Level Change
Total Nonfarm	7,049
Production Sectors	600
Natural Resources, Mining & Cons.	578
Manufacturing	22
Trade, Transportation & Utilities	863
Service Sectors	5,396
Government	190

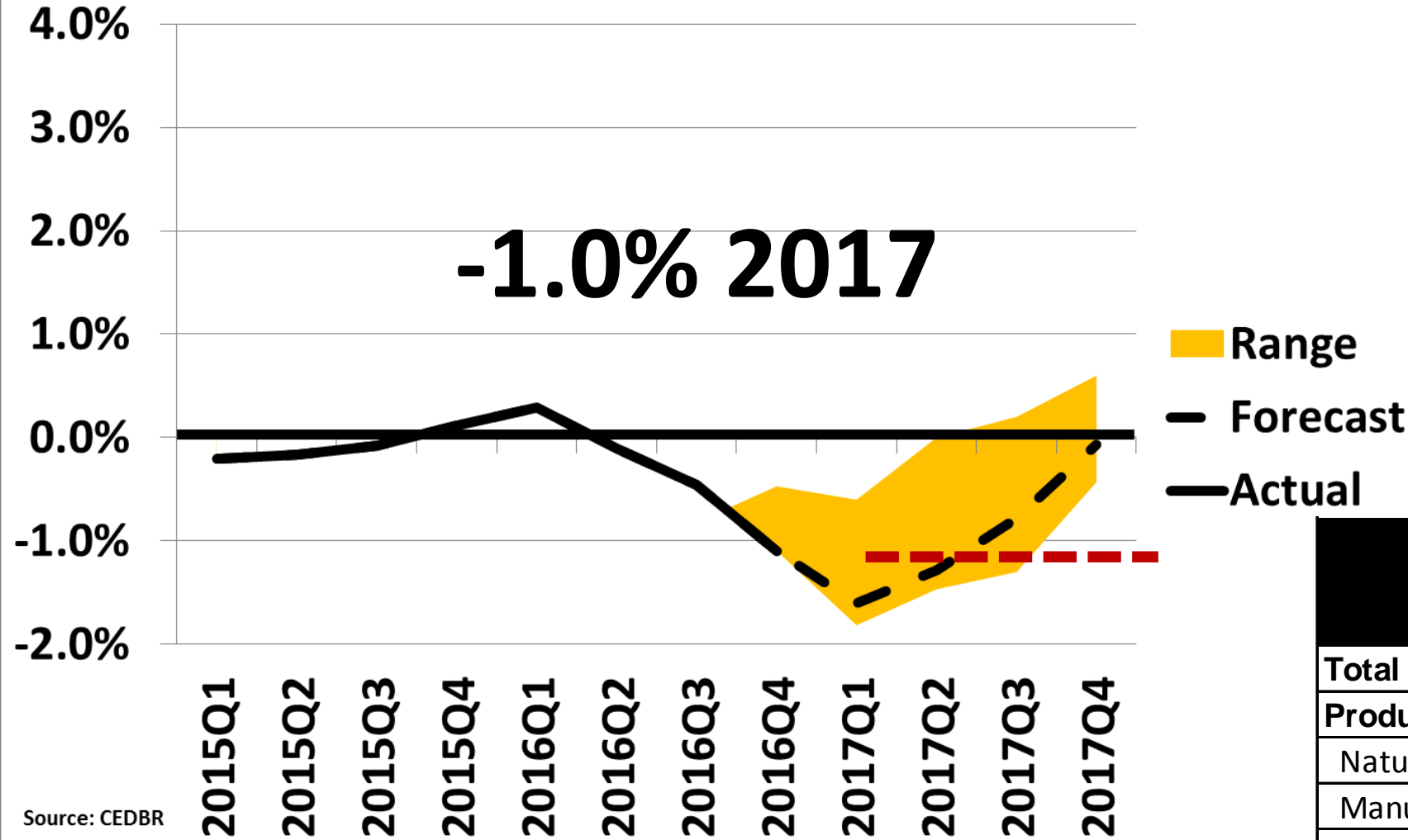
Major Kansas MSA Total Nonfarm Employment



Source: CEDBR

	2016-2017 Level Change
Total Nonfarm	12,543
Production Sectors	857
Natural Resources, Mining & Cons.	850
Manufacturing	7
Trade, Transportation & Utilities	1,816
Service Sectors	7,512
Government	26

Kansas non-MSA Total Nonfarm Employment



Source: CEDBR

	2016-2017 Level Change
Total Nonfarm	-5,494
Production Sectors	-258
Natural Resources, Mining & Cons.	-272
Manufacturing	15
Trade, Transportation & Utilities	-954
Service Sectors	-2,116
Government	164

Summary

- Not even Yoda could determine the future.

“Future unknown, it is!”



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REAL ESTATE OUTLOOK



STAN LONGHOFER

Director

Center for Real Estate
Wichita State University

2017 Lawrence Real Estate Outlook

Lawrence Area Economic Outlook Conference

May 17, 2017

Dr. Stanley D. Longhofer
WSU Center for Real Estate

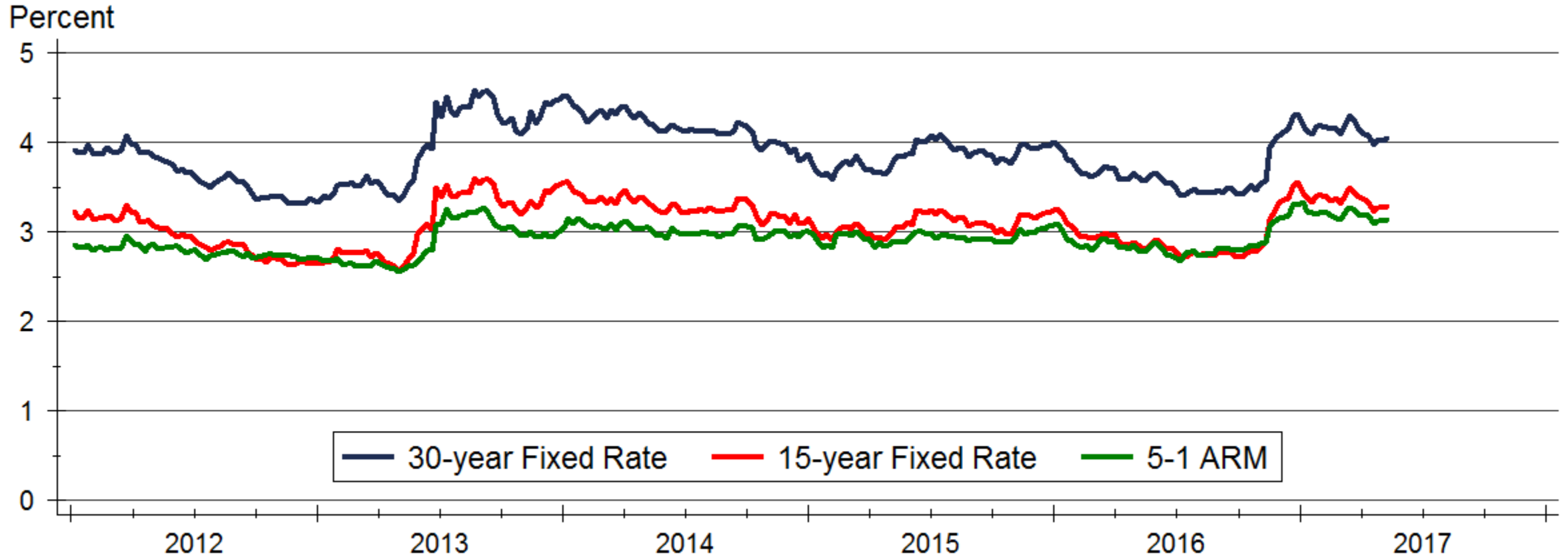


WICHITA STATE
UNIVERSITY

W. FRANK BARTON
SCHOOL OF BUSINESS

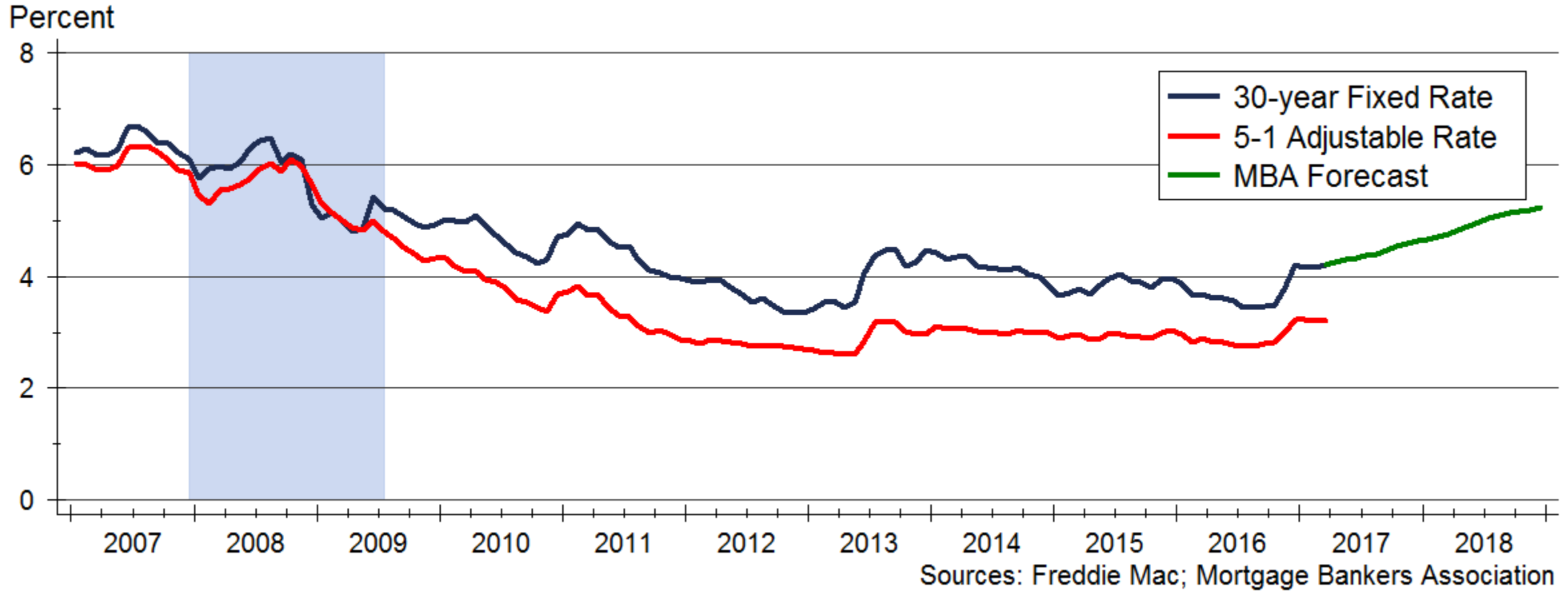


Weekly Mortgage Rates

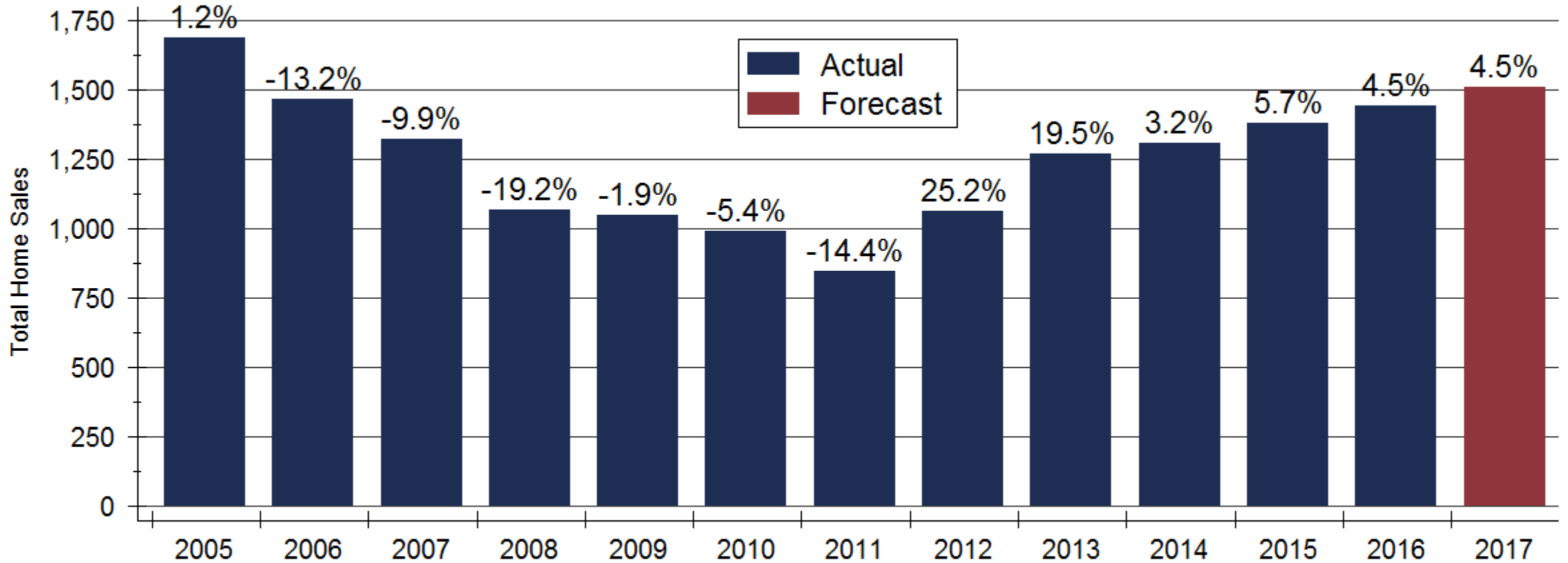


Source: Freddie Mac

Mortgage Rate Forecast

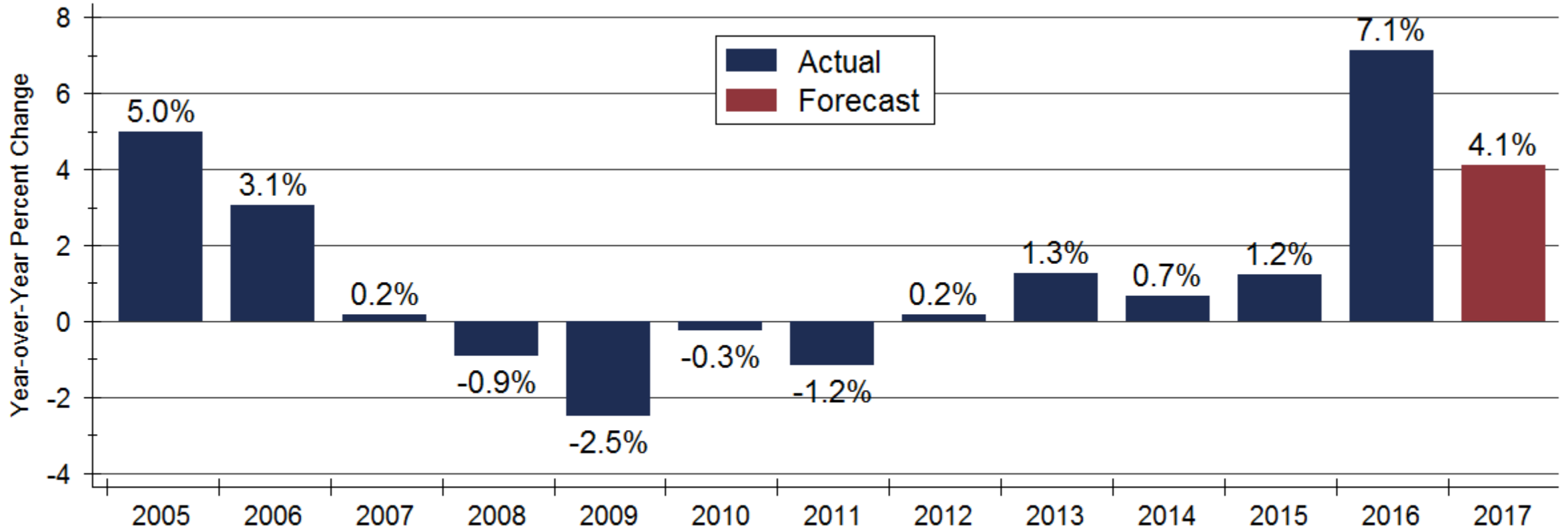


Lawrence Home Sales Forecast



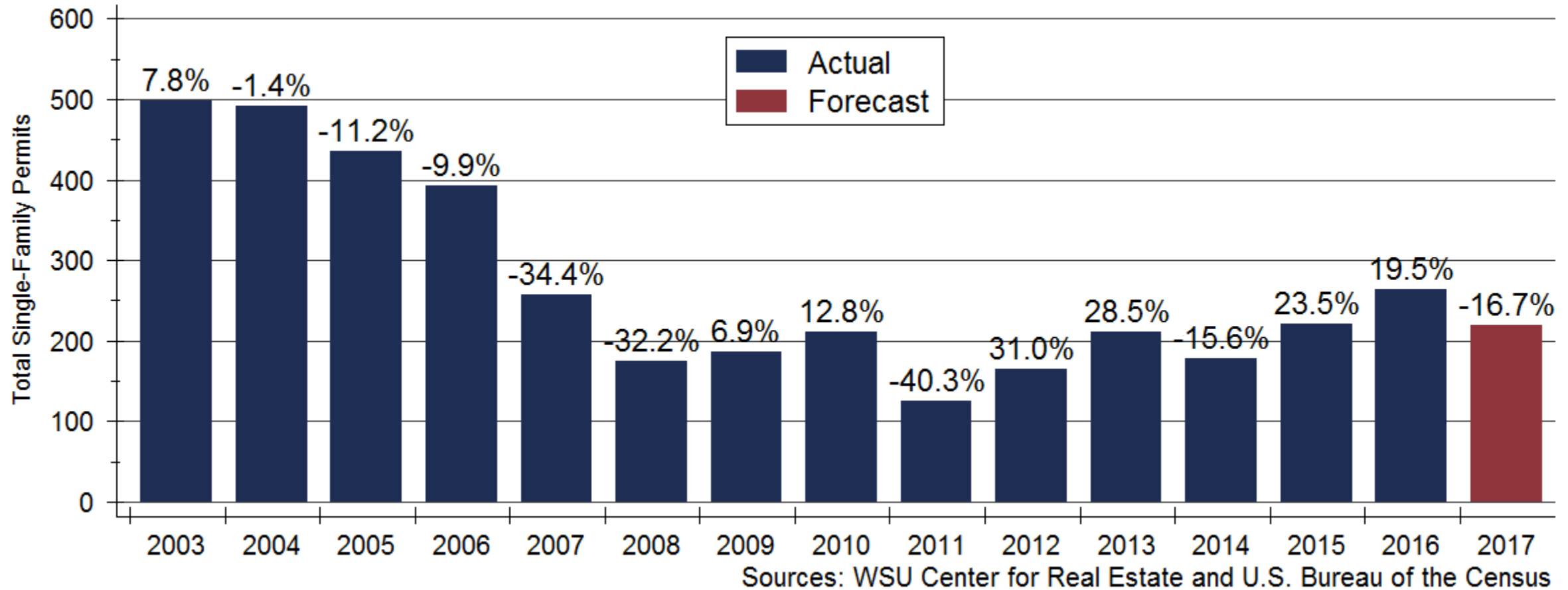
Sources: WSU Center for Real Estate and Lawrence Board of REALTORS®

Lawrence Home Price Appreciation Forecast

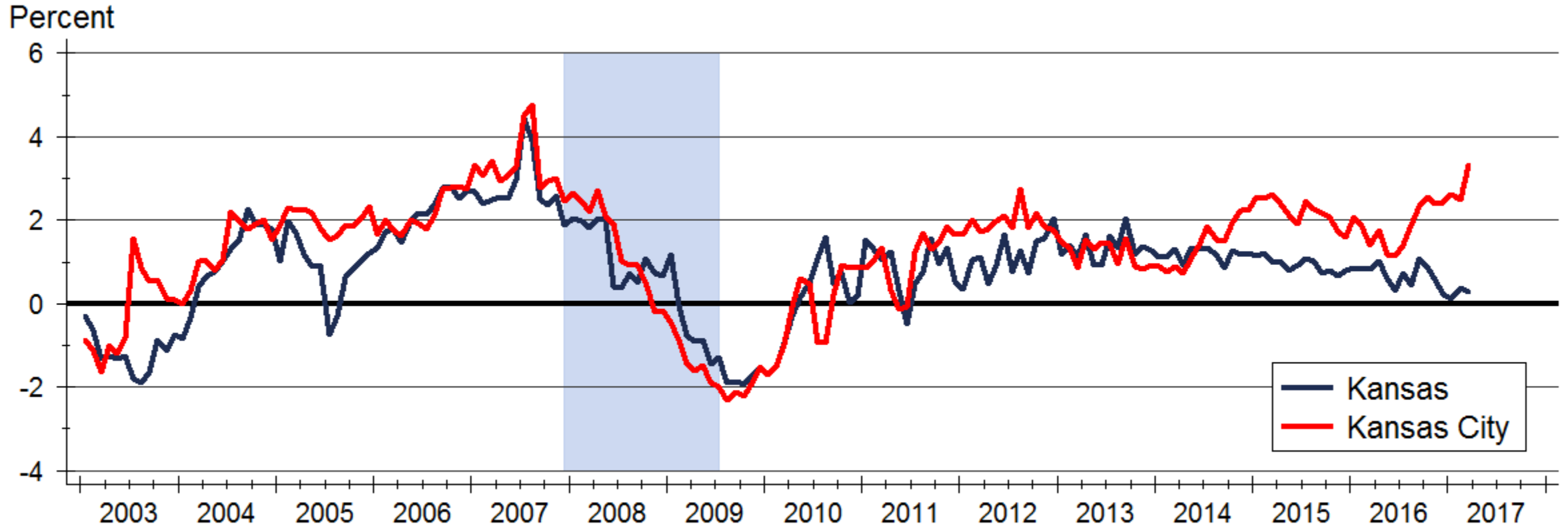


Sources: WSU Center for Real Estate and Federal Housing Finance Agency
Appreciation calculated using 4th quarter values of the FHFA all-transactions house price index

Lawrence Single-Family Permits Forecast



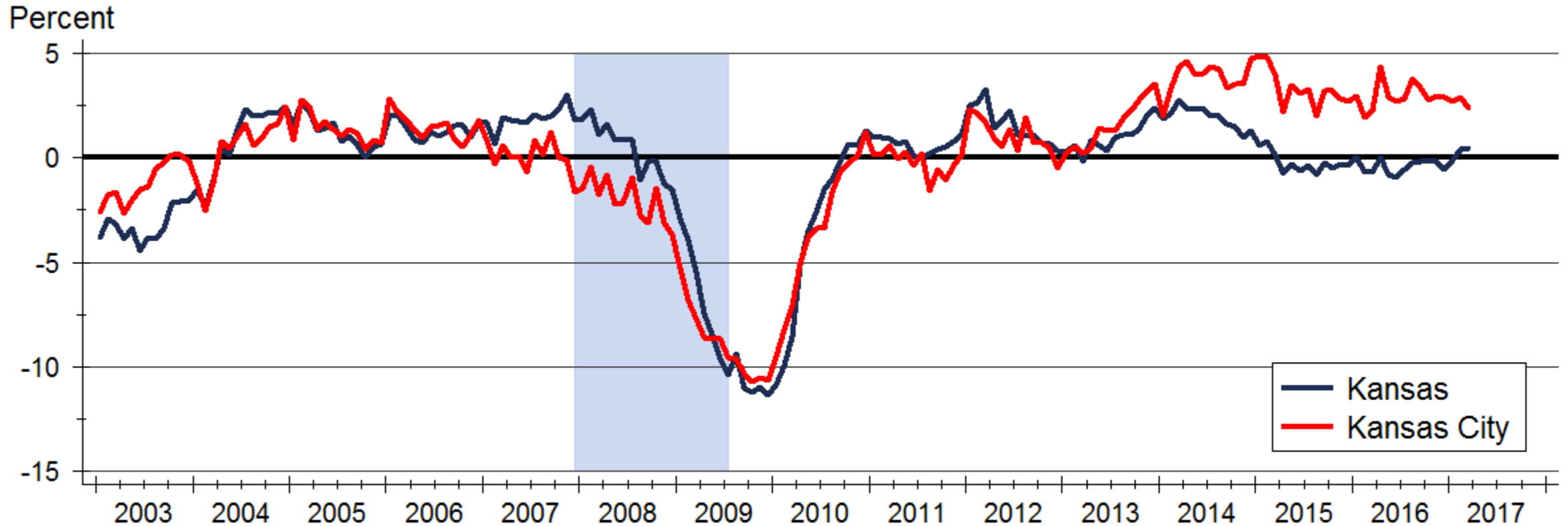
Office Employment Growth



Source: WSU Center for Real Estate using data from the U.S. Bureau of Labor Statistics

Data are not seasonally adjusted

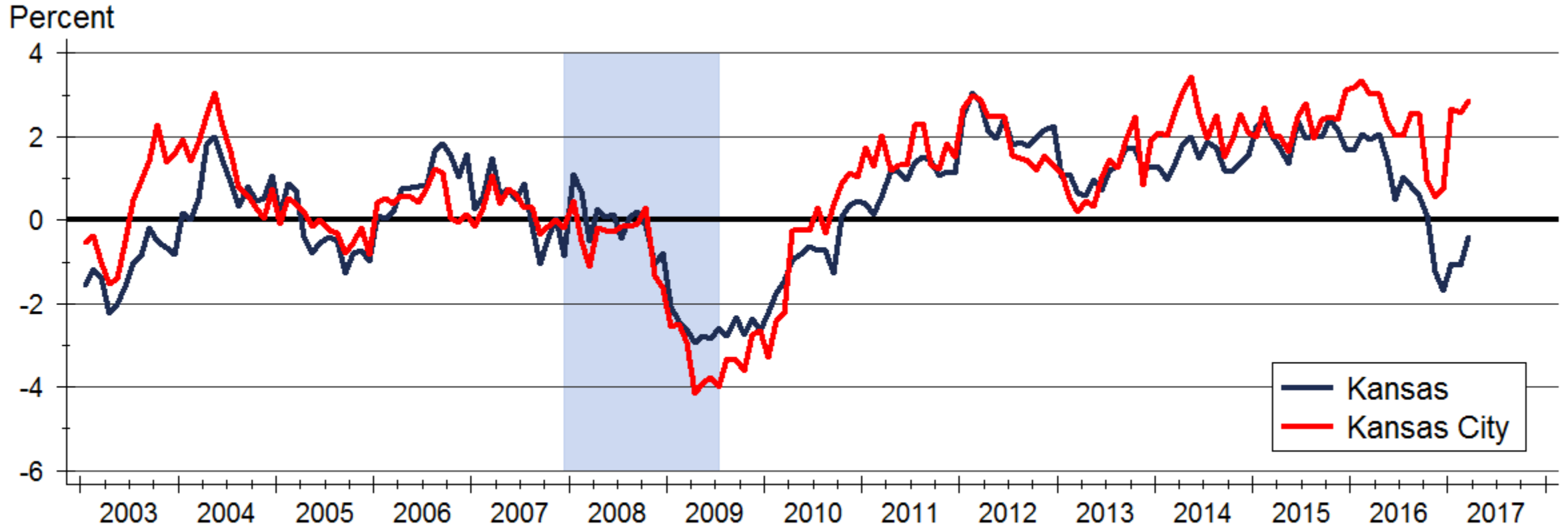
Industrial Employment Growth



Source: WSU Center for Real Estate using data from the U.S. Bureau of Labor Statistics

Data are not seasonally adjusted

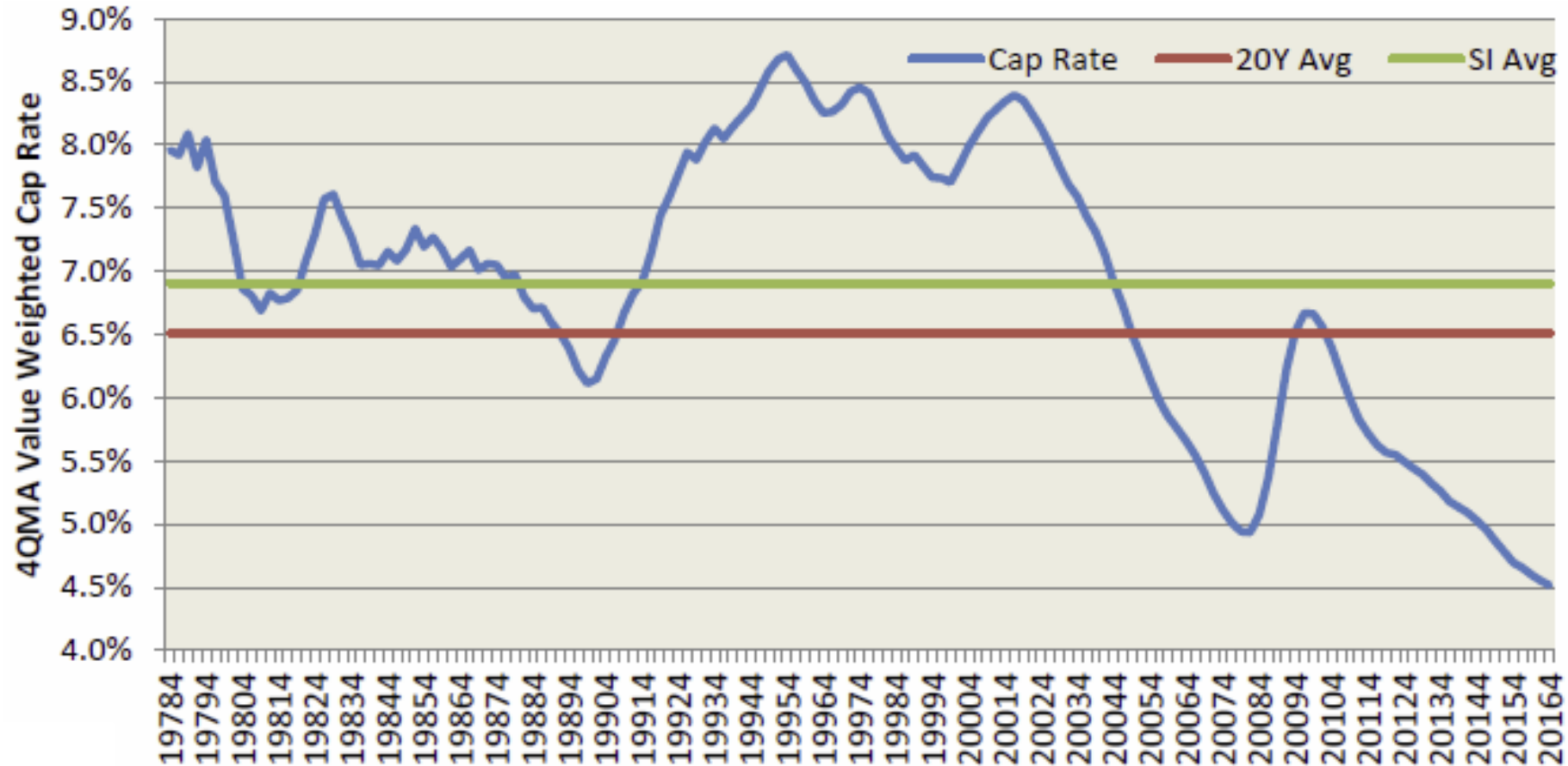
Retail Employment Growth



Source: WSU Center for Real Estate using data from the U.S. Bureau of Labor Statistics

Data are not seasonally adjusted

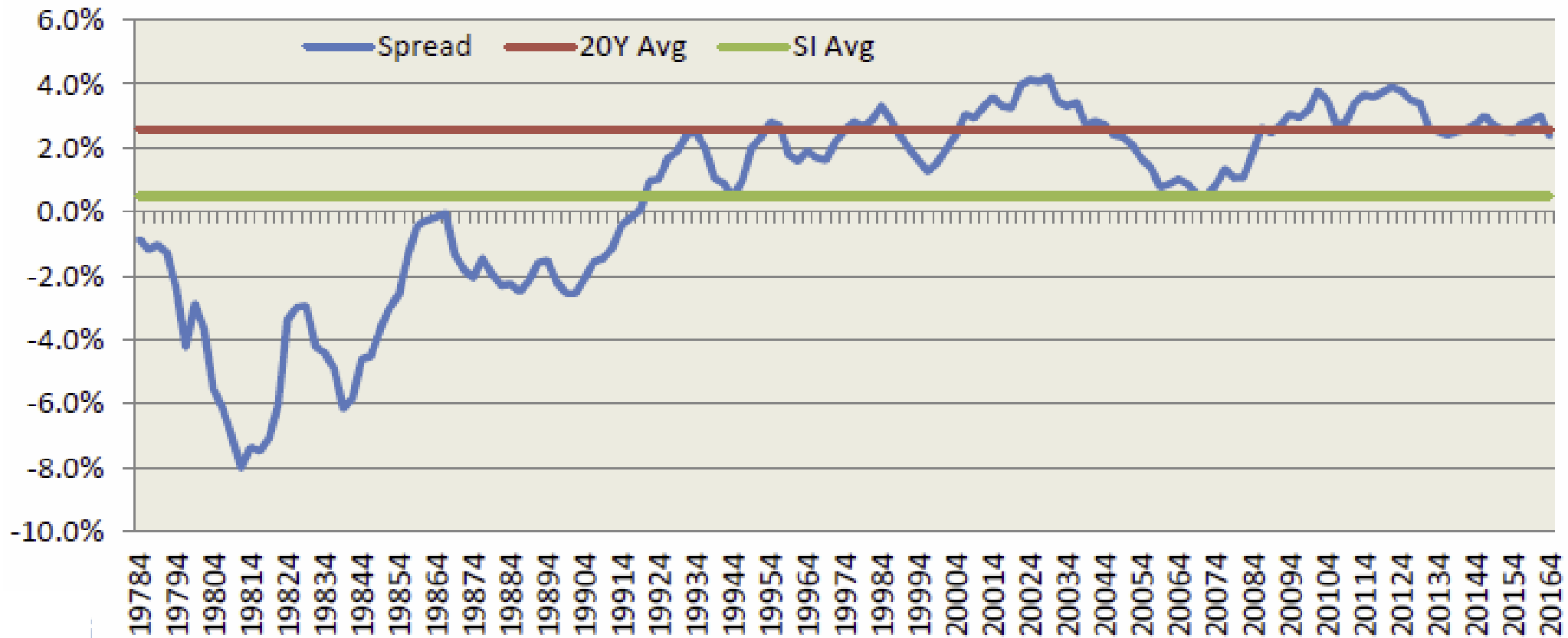
Implied Appraisal Cap Rates



Note: Implied Cap Rate equals current quarter NOI divided by market value multiplied by four

Source: 2016Q4 NCREIF Indices Review Webinar

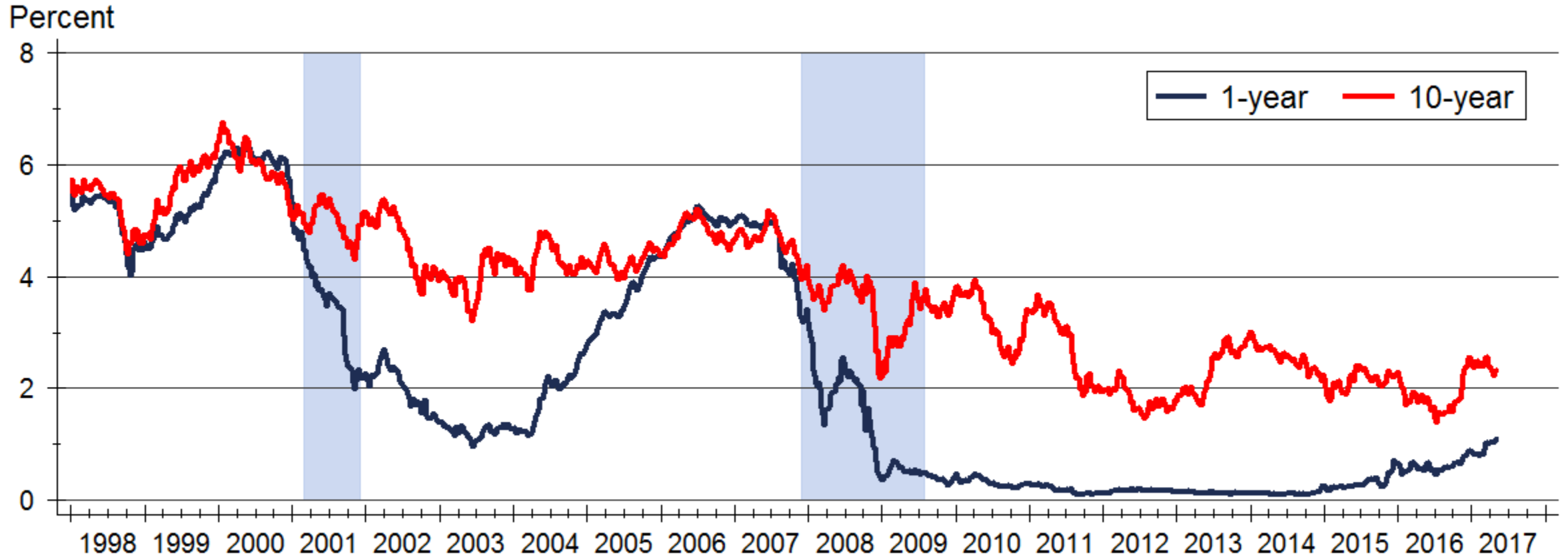
Cap Rate Spread over 10-year U.S. Treasuries



Note: Implied Cap Rate equals current quarter NOI divided by market value multiplied by four

Source: 2016Q4 NCREIF Indices Review Webinar

U.S. Treasury Constant Maturity Rates



Source: Board of Governors of the Federal Reserve System

WSU Center for Real Estate

Laying a Foundation for Real Estate in Kansas



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LOCAL SPEAKER



DONNA GINTHER

Professor & Director

Center for Science,
Technology & Economic Policy
University of Kansas

The Kansas Economy: Economic Policy, Long-Term Trends and the Role of Higher Education

For Presentation at:

CEDBR Economic Outlook Conference

Donna K. Ginther

Professor, Department of Economics

Director, Center for Science, Technology & Economic Policy

Research Associate, National Bureau of Economic Research

Acknowledgements

- Much of the information contained in this presentation is part of the *Kansas Statistical Abstract*
 - <http://ipsr.ku.edu/ksdata/ksah/>
- I want to thank the KSA team for their help with this presentation:
 - Genna Hurd
 - Xan Wedel

Overview

- Changes in Economic Policy
- Key Components of Growth in Kansas
 - Population / Immigration
 - Trade
 - Skills
- How Higher Education and KU contribute to economic growth
 - Research, Development & Innovation
 - Skilled Workers

Changes in Economic Policy

- Economic Policy Changes
 - Crackdown on undocumented immigration
 - Elimination or renegotiation of trade agreements.
- Changes in the economy:
 - Automation, robots and artificial intelligence have destroyed more jobs than trade (Acemoglu & Restrepo 2017)
- What are the implications of these changes for Kansas?

Population Trends

United States

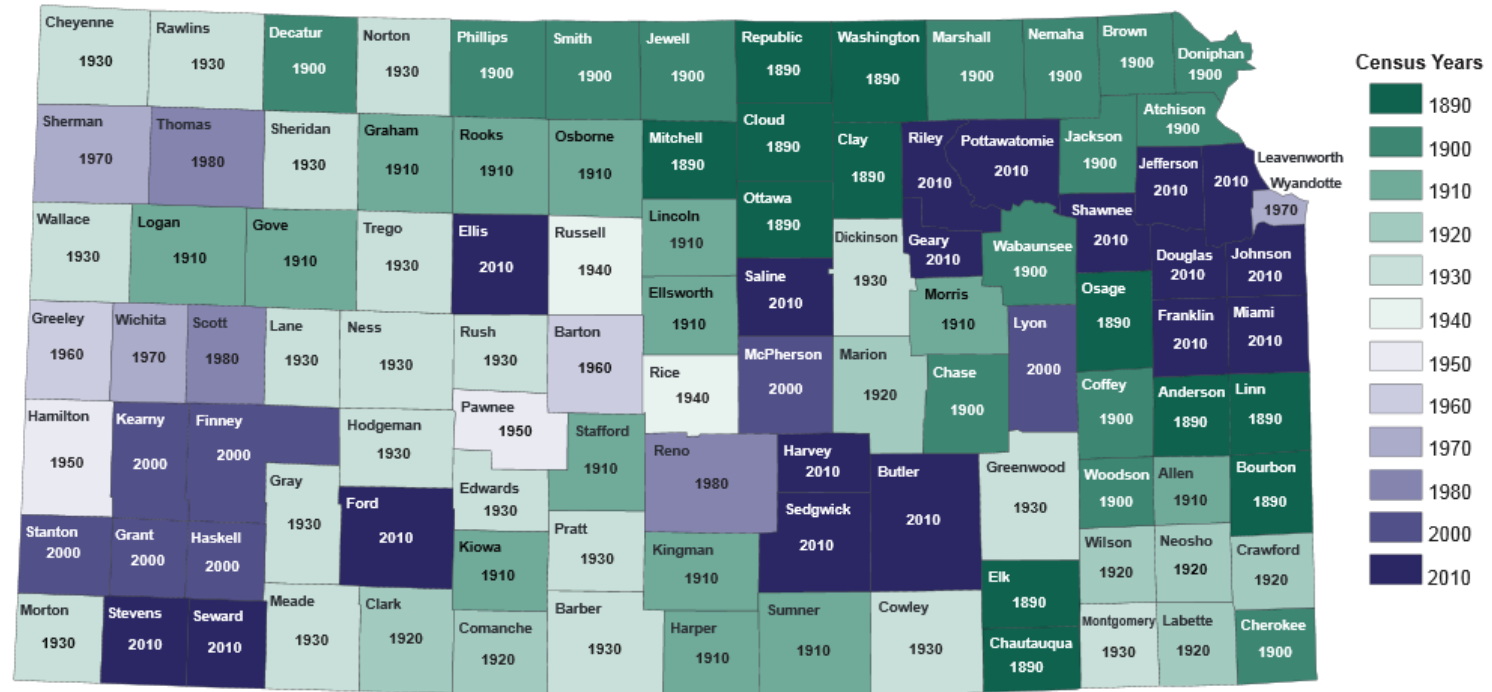
- Increased immigration
 - 4.7% in 1970
 - 13.3% in 2014
- Changes in racial composition – white, not Hispanic
 - 83.5% in 1970
 - 61.9% in 2014

Kansas

- Increased immigration
 - 1.2% in 1970
 - 7.0% in 2014
- Changes in racial composition – white, not Hispanic
 - 92.3% in 1970
 - 76.7% in 2014

Maximum Population by Year

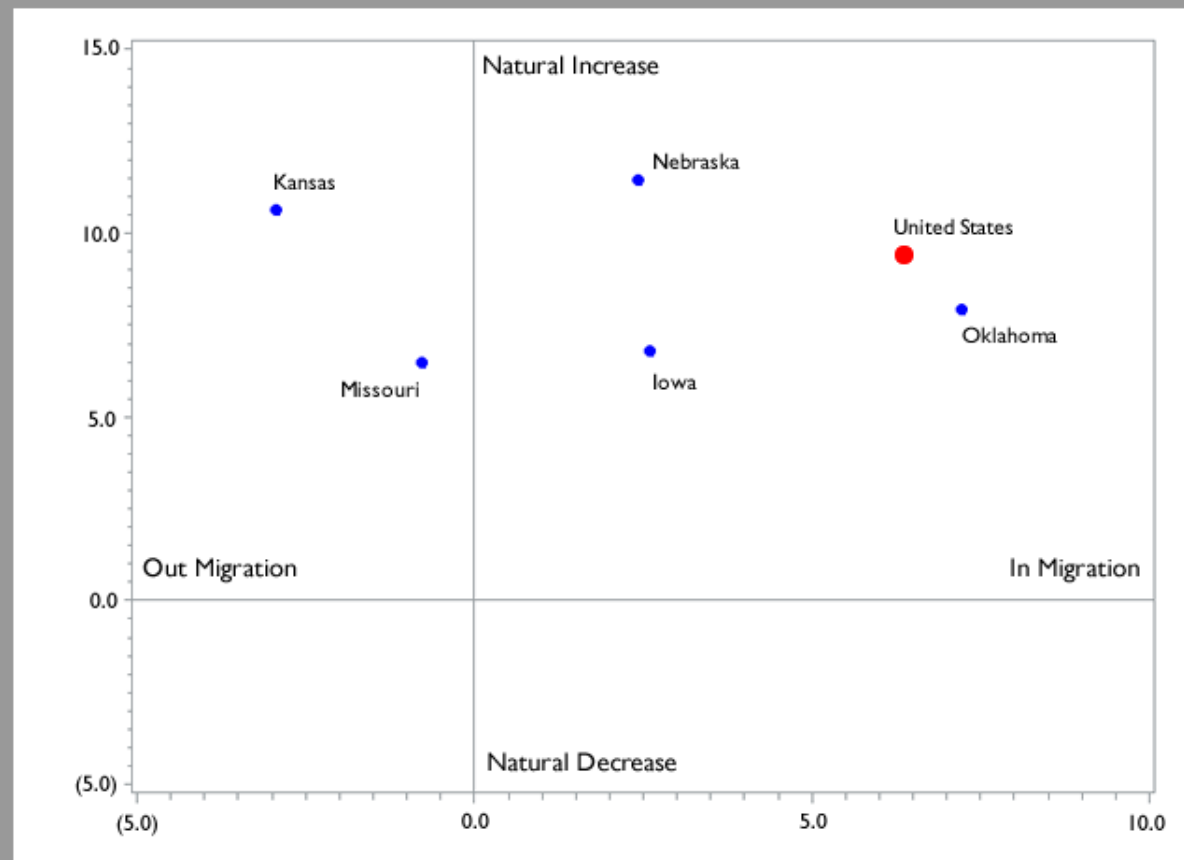
Census Year of Maximum Population by Kansas County
1890-2010



Source: Institute for Policy & Social Research, The University of Kansas; data from U.S. Census Bureau, Decennial Census.

Population Trends—Plains States

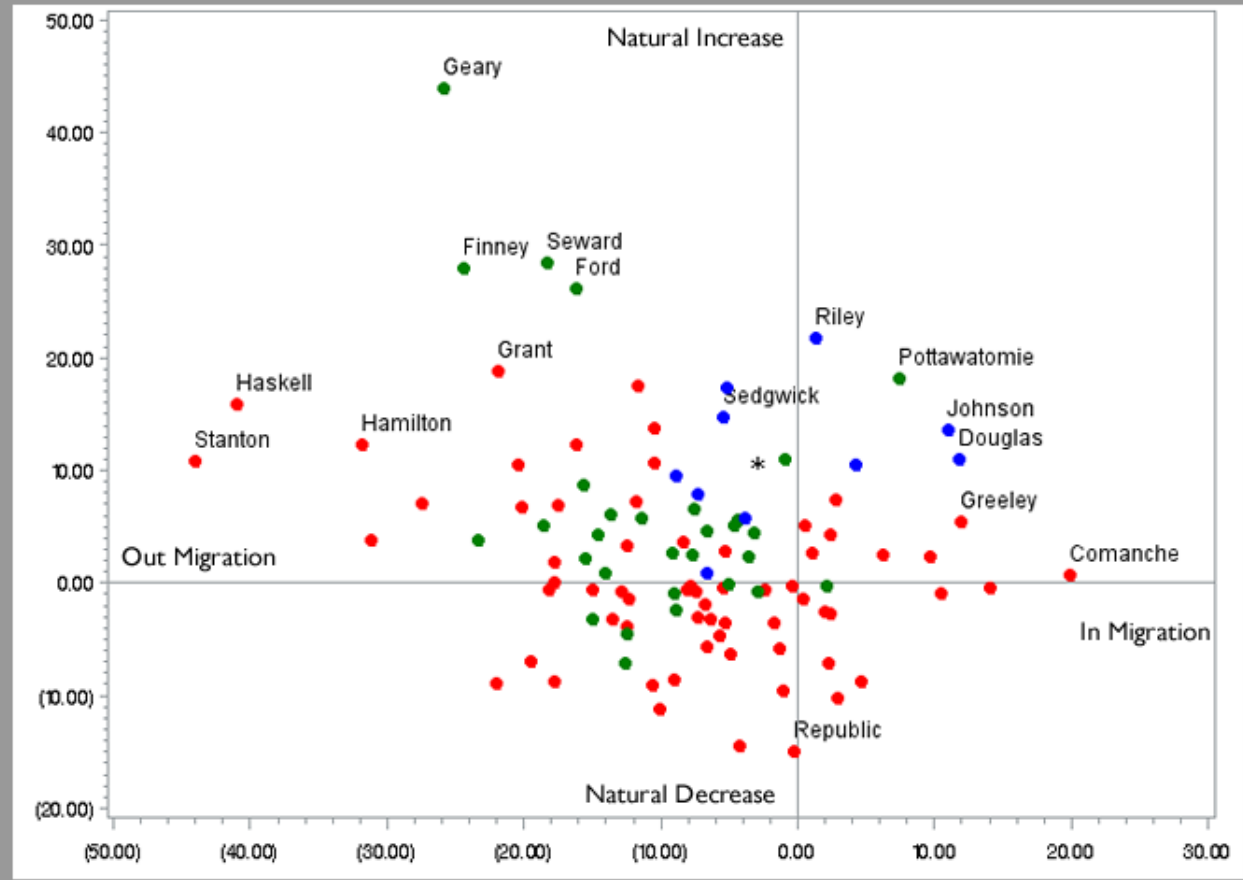
Components of Population Change, 2010-2014
Kansas, Neighboring States, and the U.S. Average



Average annualized rates per 1,000 people.
Source: U.S. Census Bureau, Vintage 2014 population estimates.

Population Trends—Kansas Counties

Components of Population Change, 2010-2014
Kansas and Kansas Counties



Average annualized rates per 1,000 people.
Source: U.S. Census Bureau, Vintage 2014 population estimates.

- Kansas Counties with Populations of 9,999 or less
- Kansas Counties with Populations of 10,000 to 49,999
- Kansas Counties with Populations of 50,000 or more
- * State of Kansas

Trump Administration Crackdown on Immigration

**Justice Department to 'sanctuary cities':
Comply on immigration or you could lose
federal grants**



U.S. Immigration and Customs Enforcement agents make an arrest during an operation in February in the Los Angeles area. (Charles Reed / Associated Press)

Source: LA Times, April 2017

DONALD TRUMP

Trump Cabinet Hopeful Accidentally Reveals Immigration Plans in Document Blunder

Maya Rhodan
Nov 21, 2016

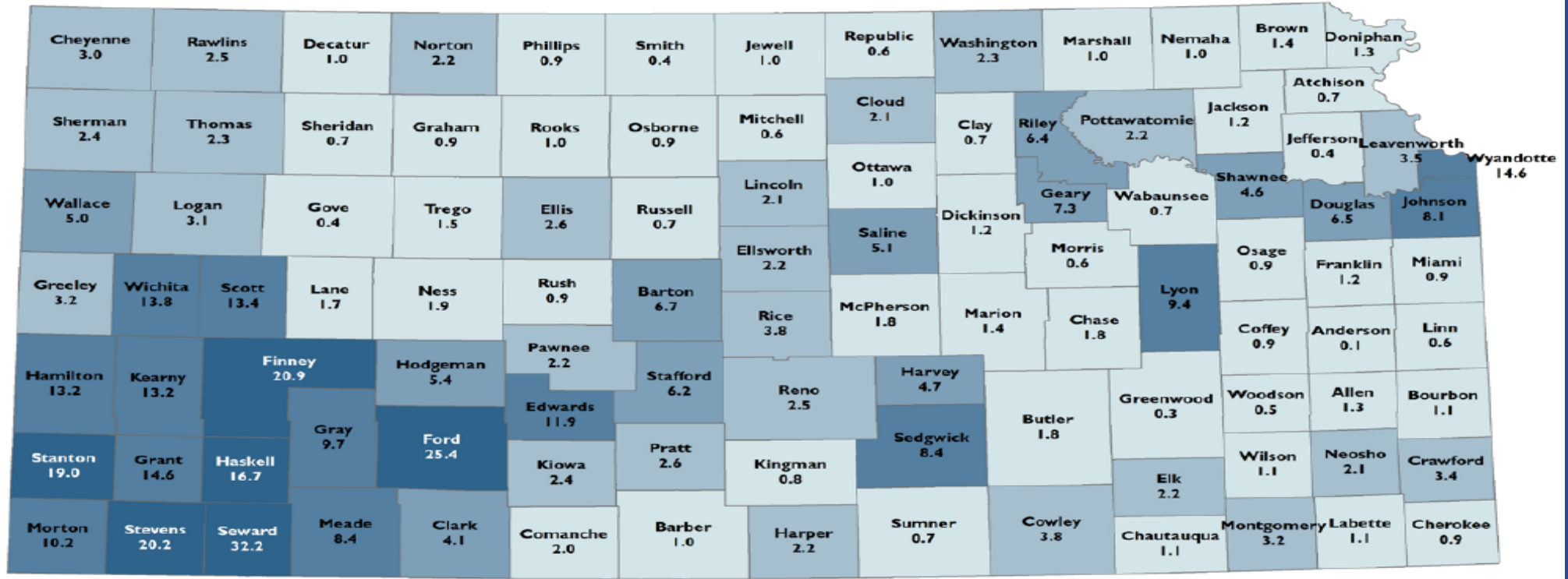


President-elect Donald Trump and Kris Kobach, Kansas Secretary of State, pose at the clubhouse of Trump International Golf Club, in Bedminster Township, N.J., on Nov. 20, 2016. Peter Foley—picture-alliance/dpa/AP

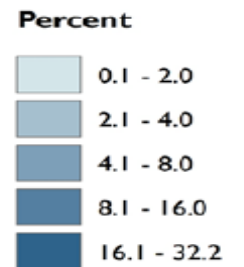
Source: Time Magazine, Nov 2016

Percentage of Immigrants by County in Kansas

Percent of Population who are Foreign Born in Kansas, by County, 2009-2013



Source: Institute for Policy & Social Research, The University of Kansas; data from U.S. Census Bureau, 2009-2013 American Community Survey.



Kansas Immigration Facts

- Economic Impact of Immigrants in Kansas and the Bi-State Region available online at:
 - <http://ipsr.ku.edu/publicat/ImmigrationKC2014.pdf>
- A much higher percentage of immigrants live in non-metro counties in Kansas compared to the US (28% vs. 4%)
- About 2.6% of the Kansas population are undocumented immigrants
- No negative effect of immigrants on wages in Midwestern metropolitan areas
- Population growth leads to economic growth

Trade Policy

Trump Administration:

- Ended involvement in Trans Pacific Partnership
- Threatening to renegotiate NAFTA

Photo Source: Getty Images



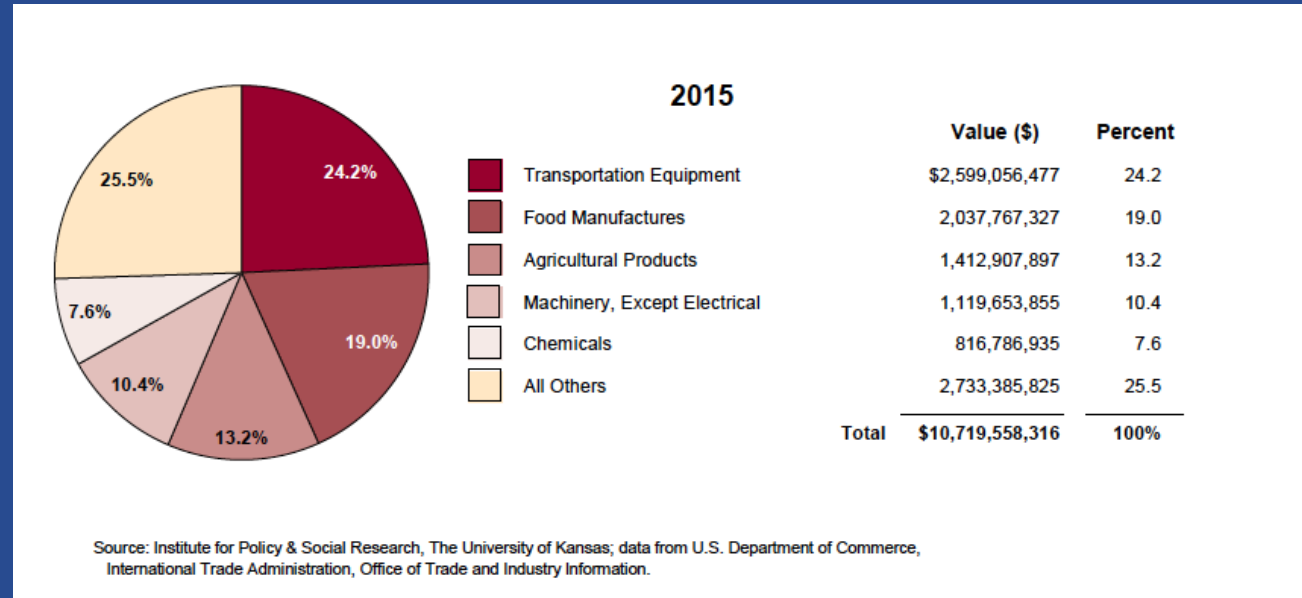
- Manufacturing is the second largest sector in the Kansas economy (~13% of GSP)
- Agriculture is the eighth largest sector (~6% of GSP)
- Kansas exports were 7.2% of state GSP in 2015

Economics of Trade



- Trade increases the size of the economic pie.
- Countries/states produce based on comparative advantage.
- Ideal economic policy would retrain/compensate workers dislocated by trade.

Trade and the Kansas Economy



■ Kansas Top Trading Partners are:

- Mexico---(\$1.9 bil)
- Canada---(\$1.8 bil)
- Japan---(\$0.8 bil)
- China—(\$0.7 bil)
- UK—(\$0.4 bil)

■ Kansas Exported \$10.7 billion in goods in 2015

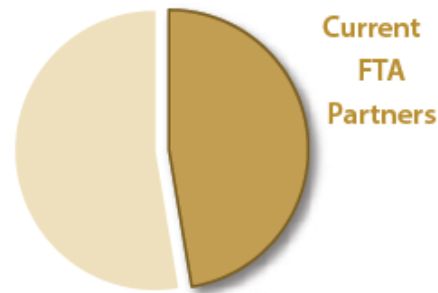
- Aircraft (\$2.6 billion)
- Beef (\$2.0 billion)
- Grains (\$1.4 billion)

Free Trade and Kansas

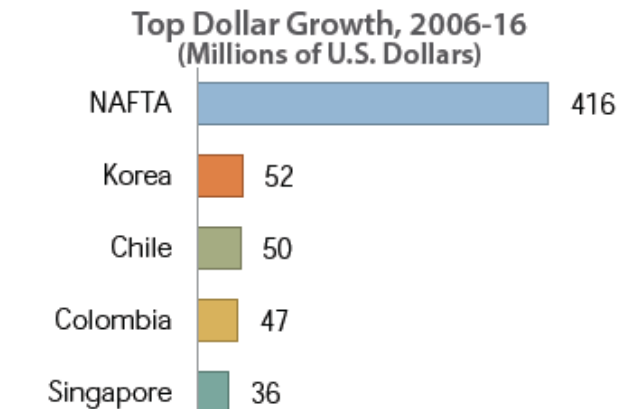
Free Trade Agreements

- The U.S. currently has 14 free trade agreements in force with 20 countries.
- Kansas's exports to U.S. FTA partners totaled \$4.8 billion in 2016.

In 2016, exports to FTA markets accounted for **47%** of Kansas exports



Since 2006, exports from Kansas have grown to several FTA markets



Source: US Department of Commerce International Trade Administration

- Free trade benefits the Kansas Economy

Education

United States

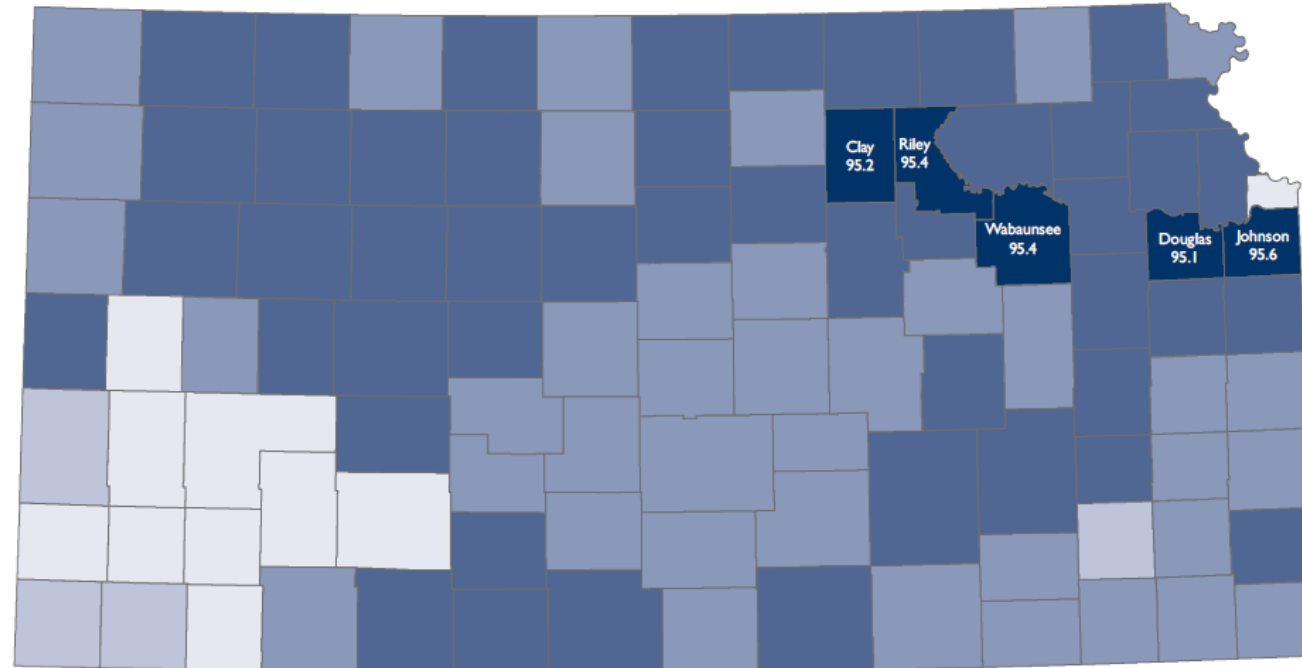
- Increased Skills
 - High School or More
 - 75.2% in 1990
 - 86.9% in 2014
 - College Grads or More
 - 20.3 % in 1990
 - 30.1 % in 2014

Kansas

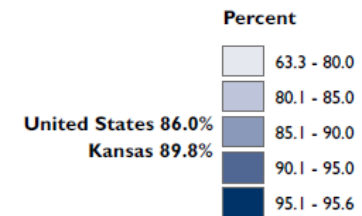
- Increased Skills
 - High School or More
 - 81.3% in 1990
 - 90.3% in 2014
 - College Grads or More
 - 21.1% in 1990
 - 31.5% in 2014

Educational Attainment

Percent of Population Age 25 and Over with a High School Diploma or Greater Level of Educational Attainment in Kansas, by County, 2009-13

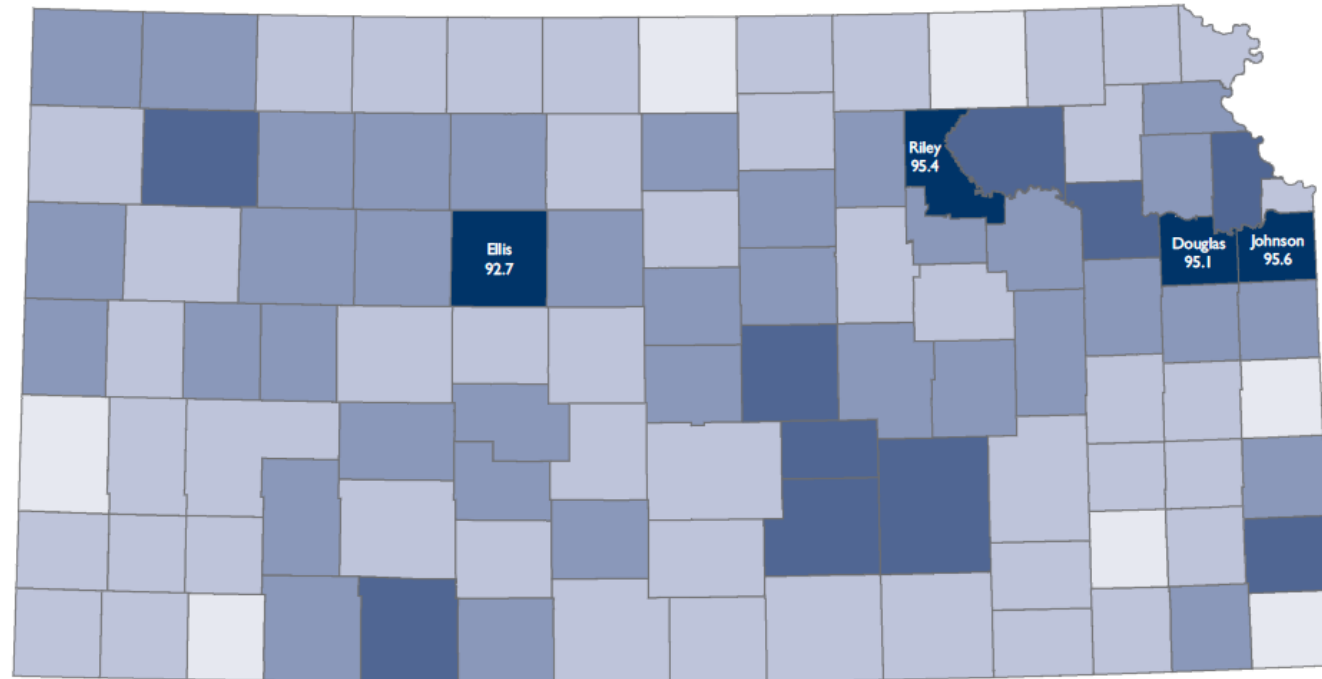


Source: Institute for Policy & Social Research, The University of Kansas;
data from U.S. Census Bureau, 2009-2013 American Community Survey.

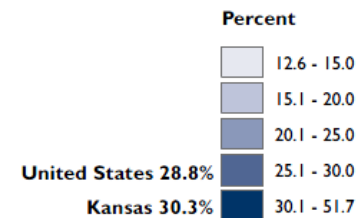


Educational Attainment

Percent of Population Age 25 and Over with a Bachelors Degree or Greater Level of Educational Attainment in Kansas, by County, 2009-13



Source: Institute for Policy & Social Research, The University of Kansas; data from U.S. Census Bureau, 2009-2013 American Community Survey.



Skills and the Rise of Technology

- Kansas has a comparative advantage in high skilled / college-educated workers
- Economists estimate that technology in the form of robots, automation and artificial intelligence have destroyed more jobs than trade.
- Trump Administration has no substantive science policy
 - No staff in the Office of Science and Technology Policy
 - This is a problem. . .

Technology as Creative Destruction

- Technology eliminates jobs and industries
 - People lose jobs—limited demand for typesetters
- Technology creates new industries
 - Publishing trades supplanted by desktop publishing
- Resources shift from declining industries to new industries
 - Typesetters have become web designers
- Individuals bear these transition costs

Technology as Creative Destruction

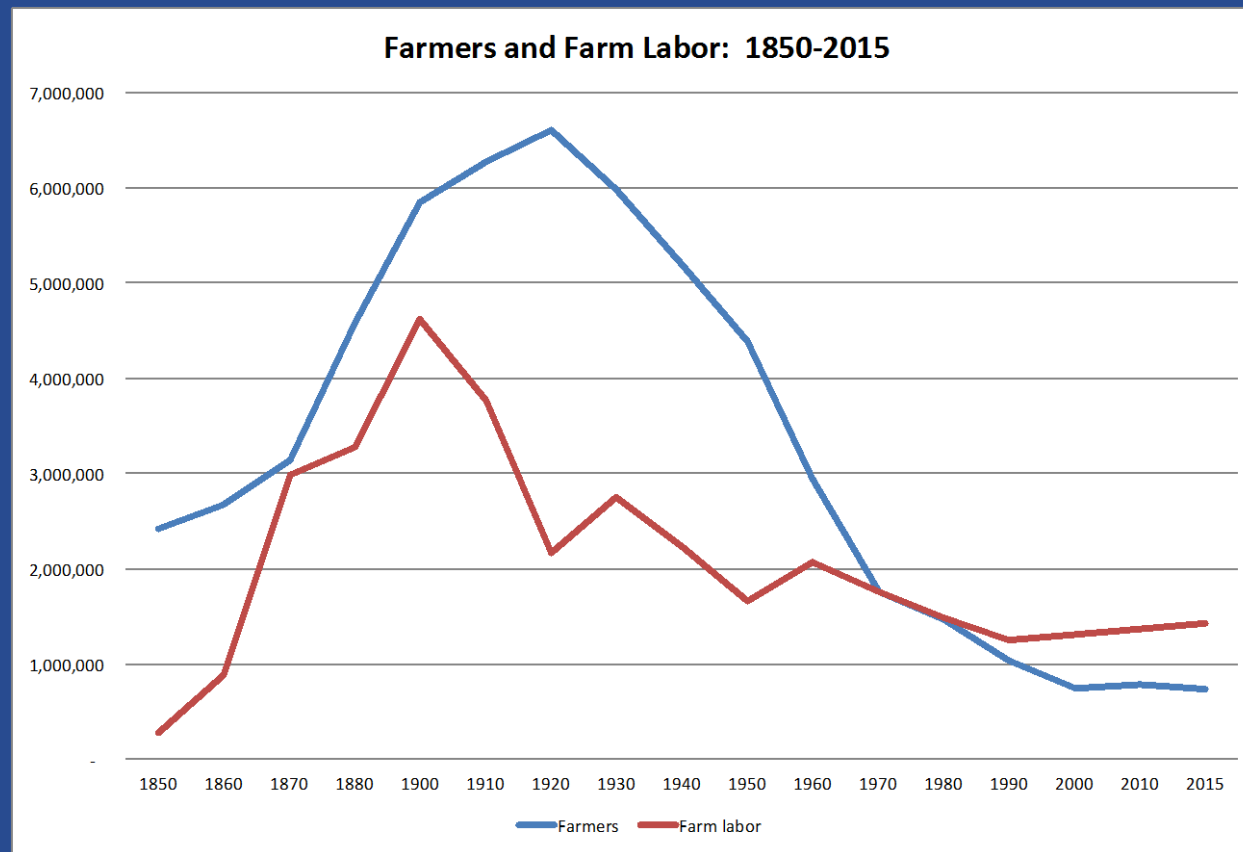
- Autor, Levy and Murnane (2003) divide labor into tasks:
 - Manual (e.g. construction)
 - Non-manual (e.g. office work)
 - Routine—do the same task over and over
 - Non-routine—varied tasks
 - Argue that computers are substitutes for routine tasks
 - Argue that computers are complements for non-routine information processing tasks

Autor, Levy & Murnane (2003)

Table 1: Predictions of Task Model on the Impact of Computerization on Four Categories of Workplace Tasks.

	Routine Tasks	Non-Routine Tasks
<u>A. Visual/Manual</u>		
Examples	<ul style="list-style-type: none"> · Picking and sorting engineered objects on an assembly line. · Reconfiguring production lines to enable short runs. 	<ul style="list-style-type: none"> · Janitorial services. · Truck driving.
Computer Impact	<ul style="list-style-type: none"> · Computer control makes capital substitution feasible. 	<ul style="list-style-type: none"> · Limited opportunities for substitution or complementarity.
<u>B. Information Processing/Cognitive</u>		
Examples	<ul style="list-style-type: none"> · Bookkeeping. · Filing/retrieving textual data. · Processing procedural interactions/ transactions (e.g., bank teller) 	<ul style="list-style-type: none"> · Medical diagnosis. · Legal writing. · Persuading/selling.
Computer Impact	<ul style="list-style-type: none"> · Substantial substitution. 	<ul style="list-style-type: none"> · Strong complementarities.

Agriculture as an Example

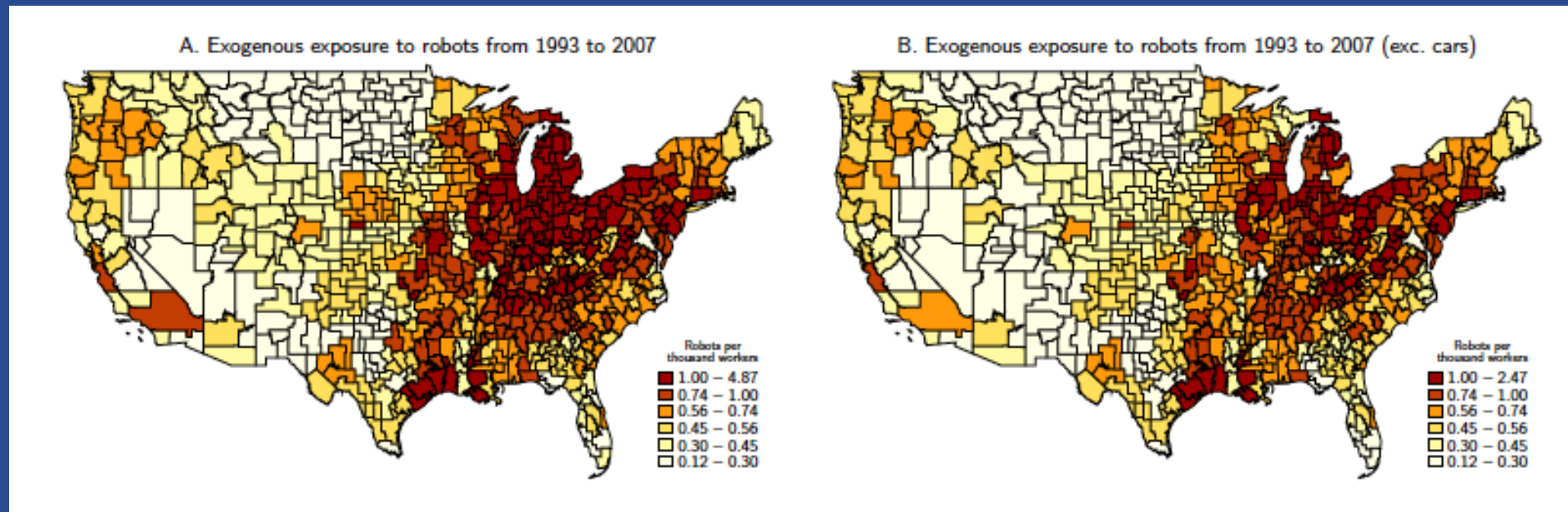


Farmers peaked at 6.5 million in 1920. Automation decreased the Number of farms and farm labor. Farms are significantly larger, and Farm employment exceeds the number of farmers. Is this the Future of the overall labor market?

Robots and Jobs in the US Labor Market

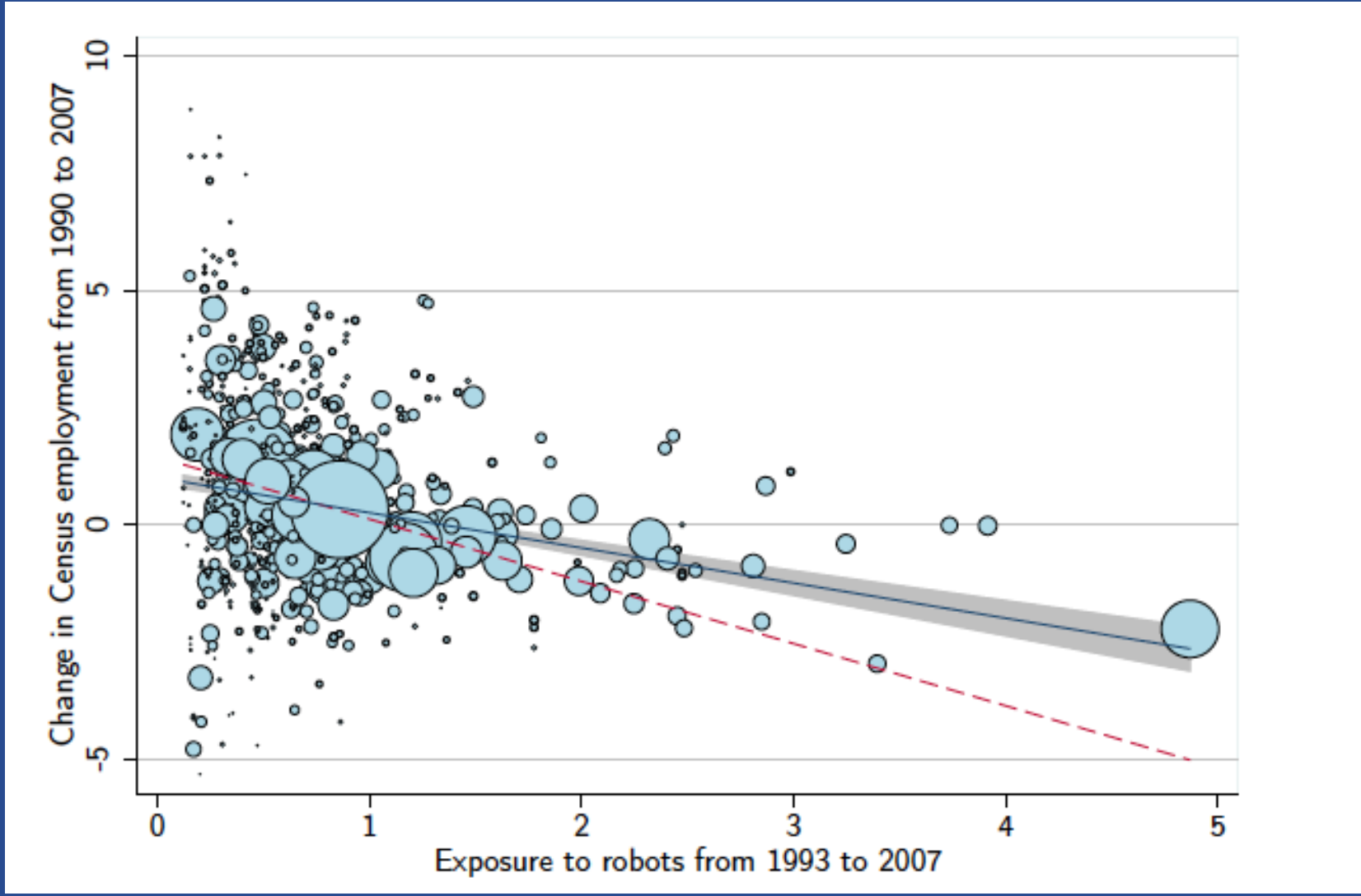
Acemoglu & Restrepo (2017)

- They examine the effect of robots on employment and wages in local labor markets.

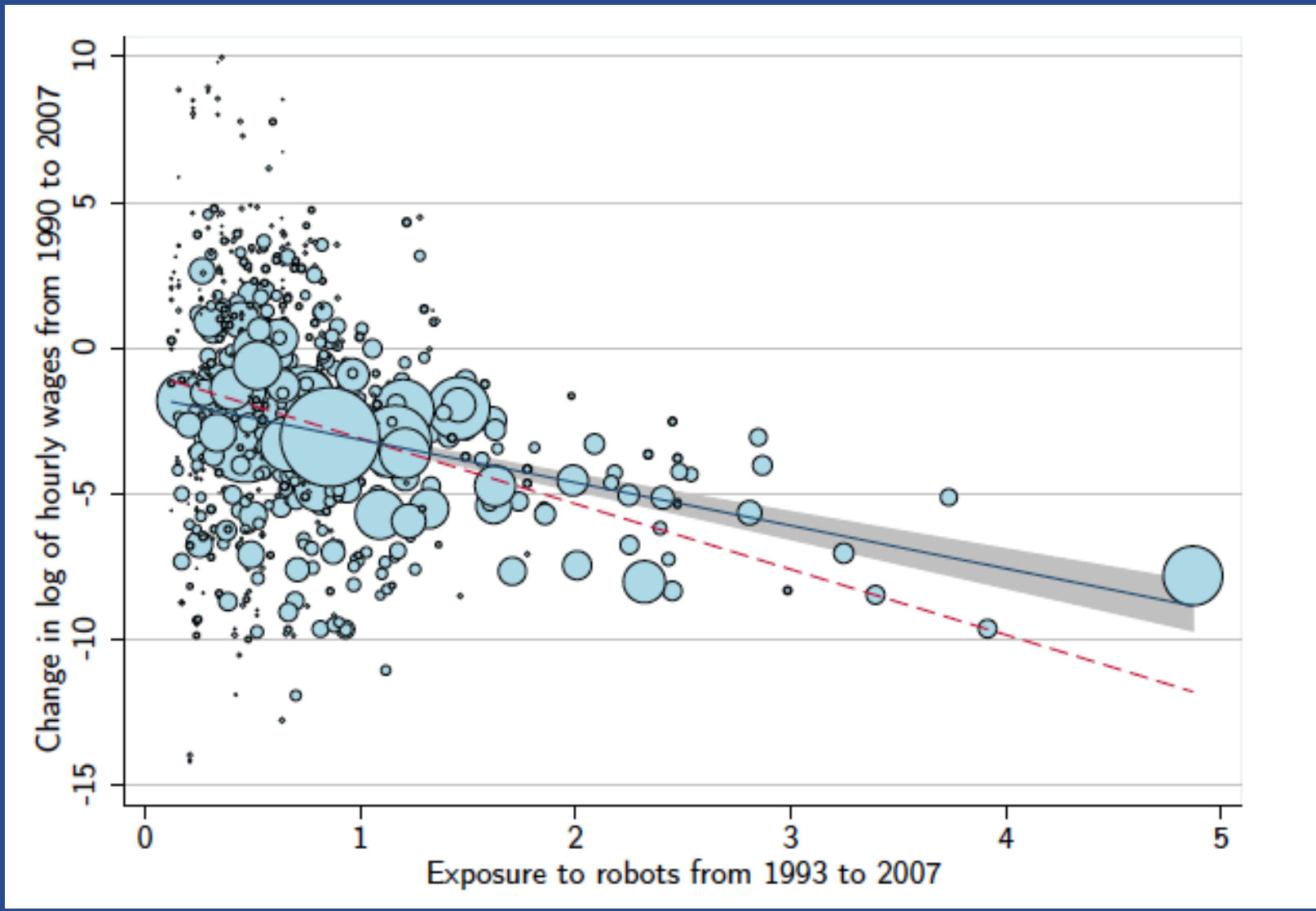


- Much of the adoption of robots is associated with the auto industry.

Acemoglu & Restrepo (2017): Robots reduce employment



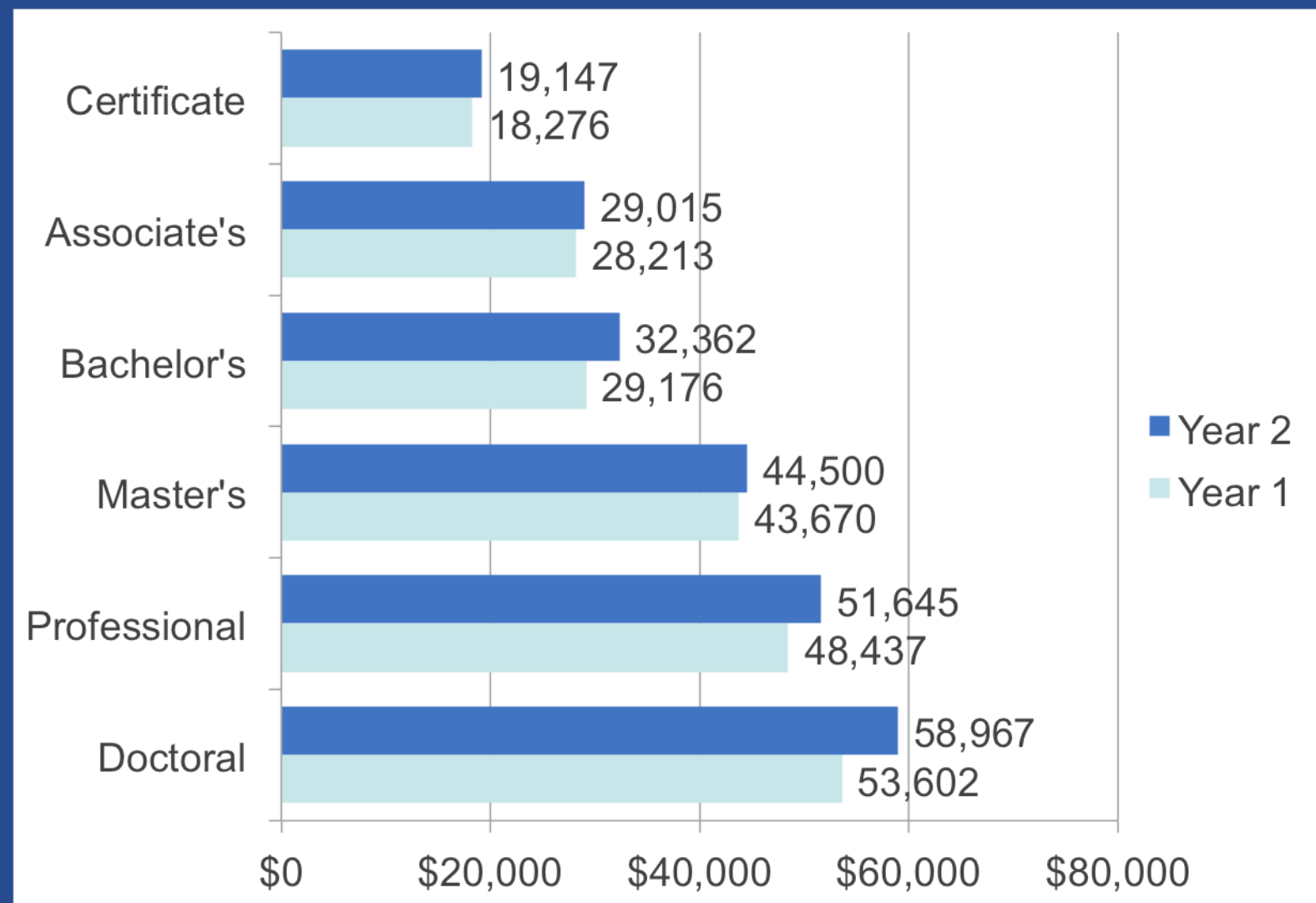
Acemoglu & Restrepo (2017): Robots reduce wages



Higher Education and Technology

- The University of Kansas generates:
 - Increased human capital for the state
 - Research, Development & Innovation
- Nearly 5,000 students graduated from KU last week
 - KU produces students in the liberal arts and high-demand professions including Pharmacy & Engineering
 - Skilled workers are complements to technology

Median Earnings by Degree Type 2008-2010 KBOR Graduates Employed in Kansas



KU Research & Innovation

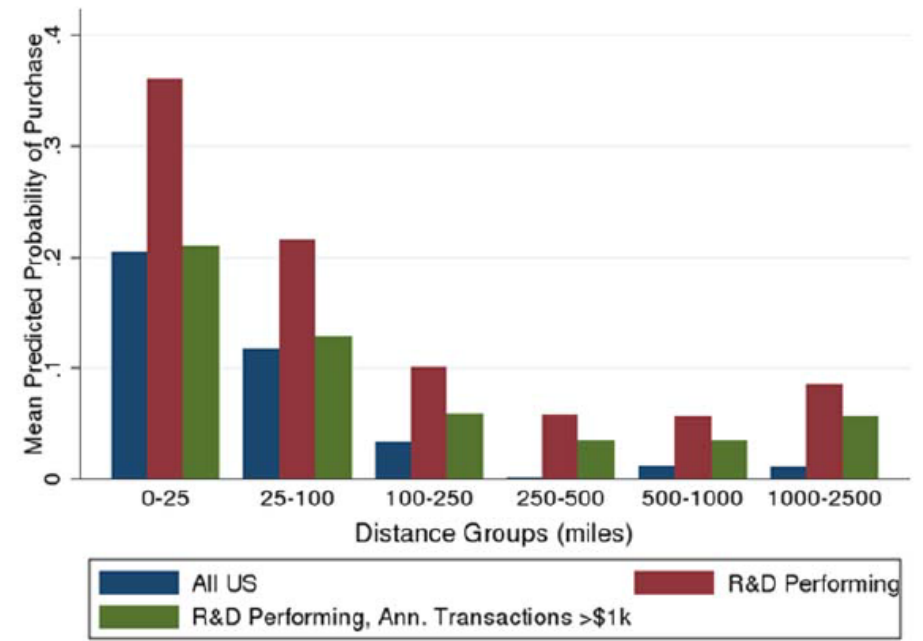
- KU researchers have created 38 start-up companies
 - Savara, Inc. First KU-origin company listed on NASDAQ
- KU Research attracts new companies
 - Since 2010, over 20 companies have located near Lawrence to partner with KU researchers
 - Archer Daniels Midland
 - Sun Life Financial

KU Research & Innovation

- KU Research funding \$238.8 million in 2015. This funding:
 - Creates jobs--employs graduate students, postdocs and research scientists
- Economists have studied regional impact of research funding (Goldschlag et al 2017)
 - Grant funds are spent at local firms
 - Vendors become repeat suppliers to research universities
 - Firms locate close to university to increase business

Universities Spend Research Funds Close to Home

Figure 2: Vendor purchases related to distance from the university. The figure shows the probability of purchase from establishments as a function of distance.



Source: UMETRICS and LBD, author's calculations.
 Note: Mean predicted probability calculated as the estimated probability from a regression of whether an establishment is a vendor in for a given university as a function of distance, distance to the 2nd, 3rd, 4th, 5th, and 6th power, 2010 population within the establishment's zip code and population squared, year, and university fixed effects with robust standard errors.

Source: Goldschlag et al (2017)

Conclusions

- Population growth, immigration and trade are critically important for Kansas economic growth
- Current Federal policies (or lack thereof) work against economic growth in Kansas
 - Increased immigration and trade are good for the Kansas economy
 - Investments in human capital key for the jobs of the future.
- KU contributes human capital, innovation and significant expenditures to the Kansas economy.

Conclusions



Agenda

- 11:00 Registration / Networking
- 11:30 Lunch Served
- 11:55 Welcome
- 12:00 State Economic Outlook
- 12:30 Real Estate Outlook
- 1:00 KU's Effect on the Regional Economy
- 1:20 Local Economic Outlook**
- 1:30 Panel Discussion
- 2:00 Closing Remarks / Adjourn

LOCAL OUTLOOK



JEREMY HILL

Director

CEDBR

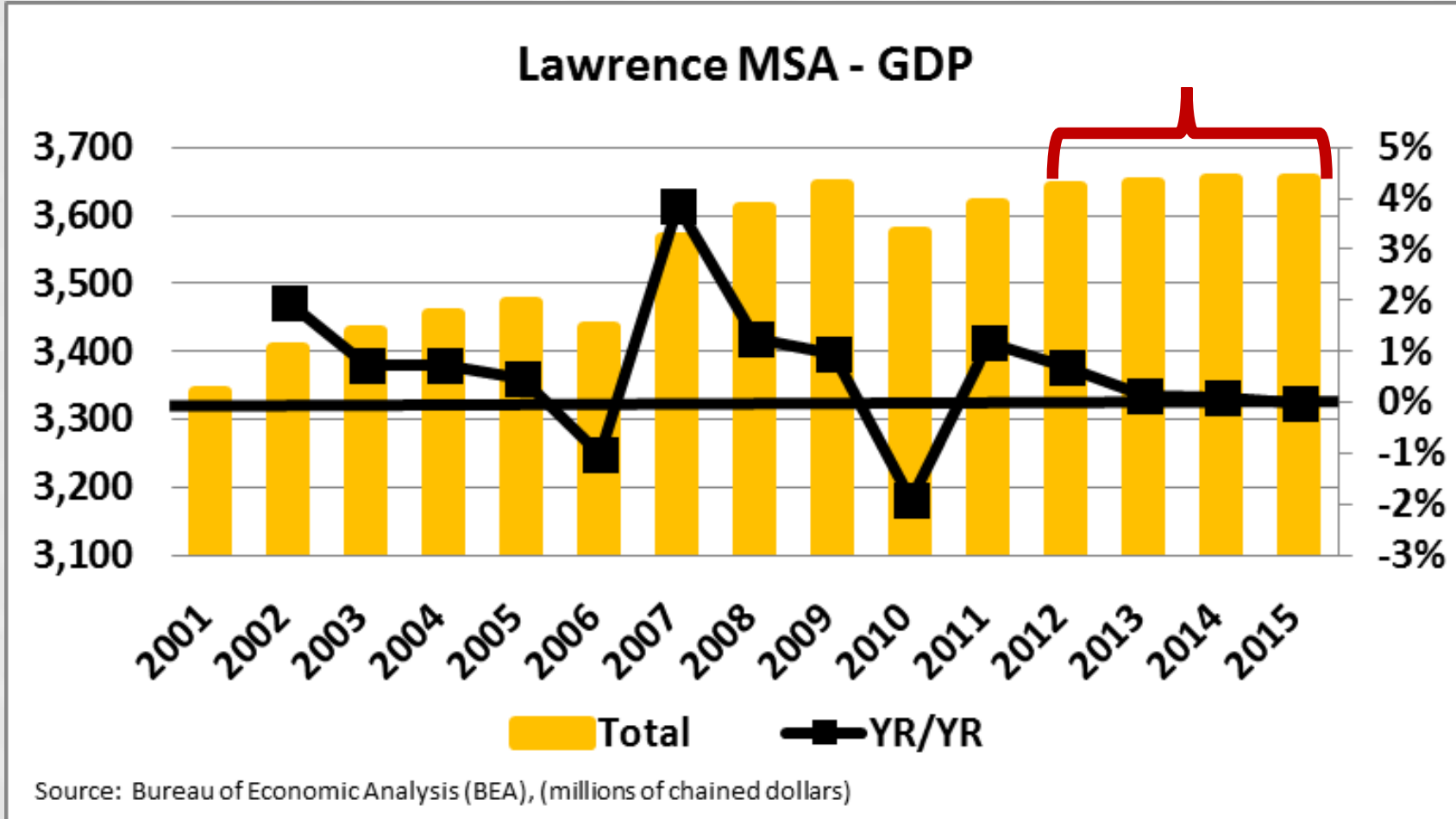
Wichita State University



Economic Outlook - Lawrence

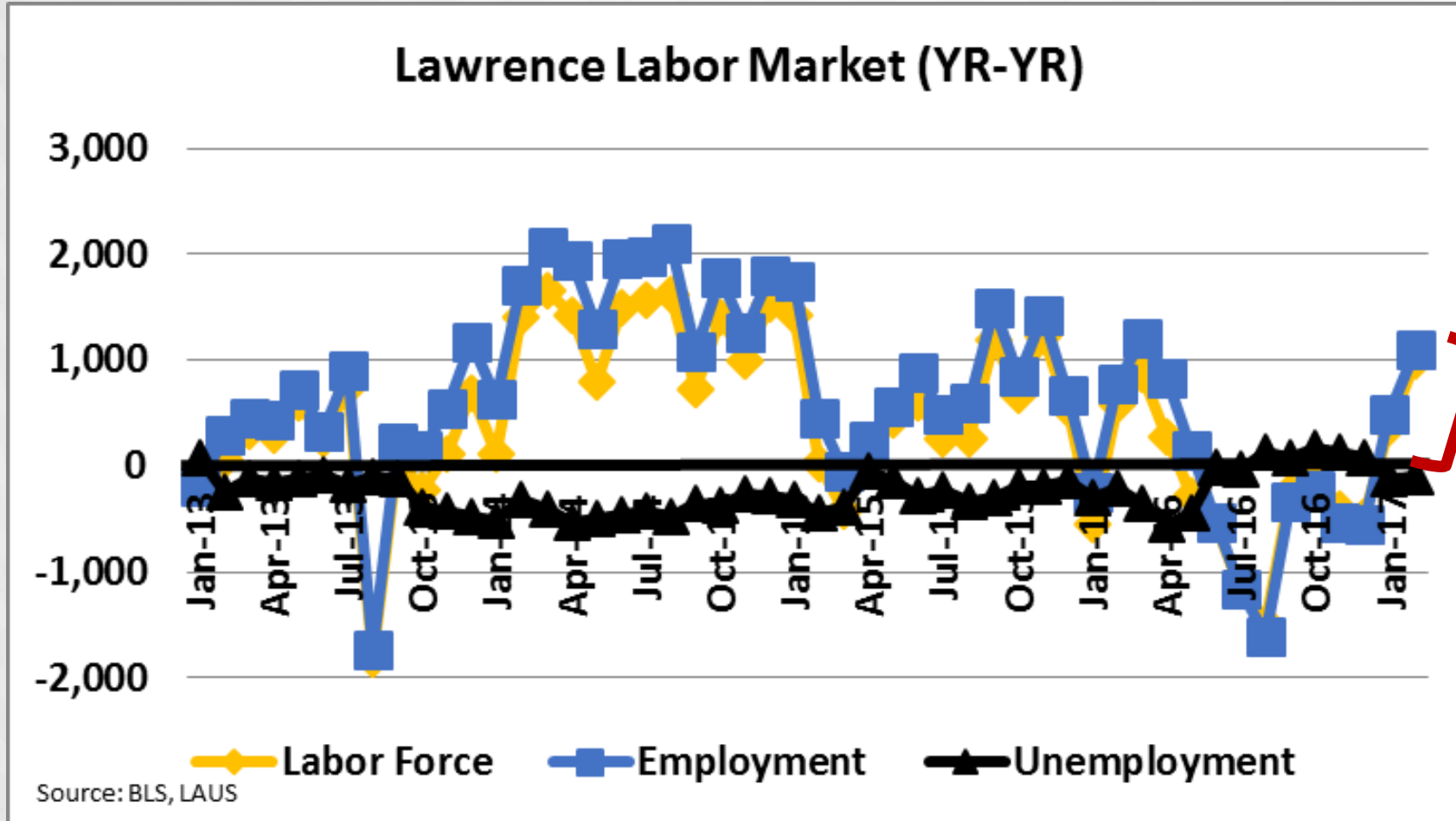
Jeremy Hill

Economic Conditions



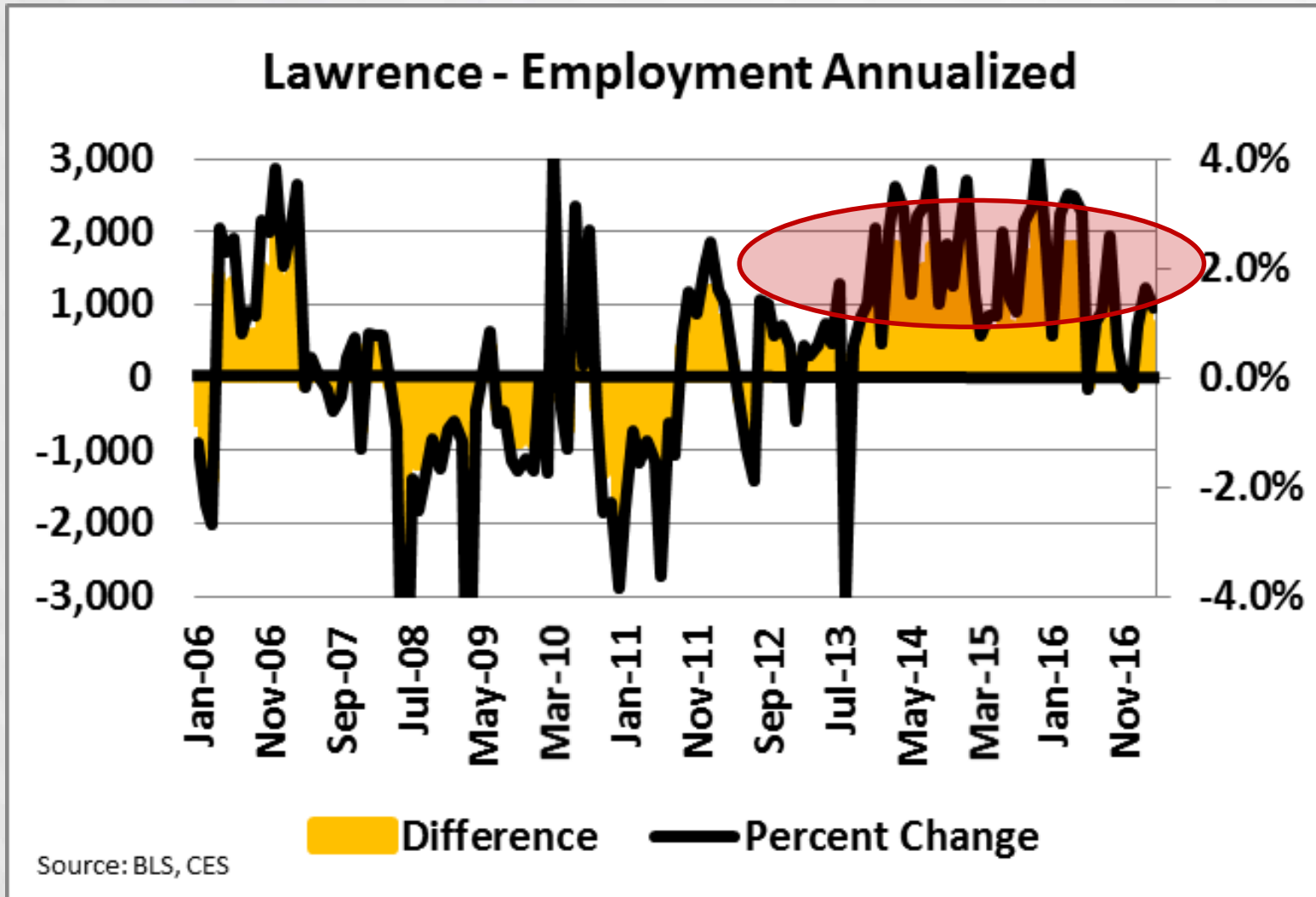
- **Economic growth has stalled**
- **Growth sectors**
 - Durable Manufacturing
 - Professional Services
 - Real Estate
- **Declining sectors**
 - Nondurable Manufacturing
 - Government

Labor Conditions



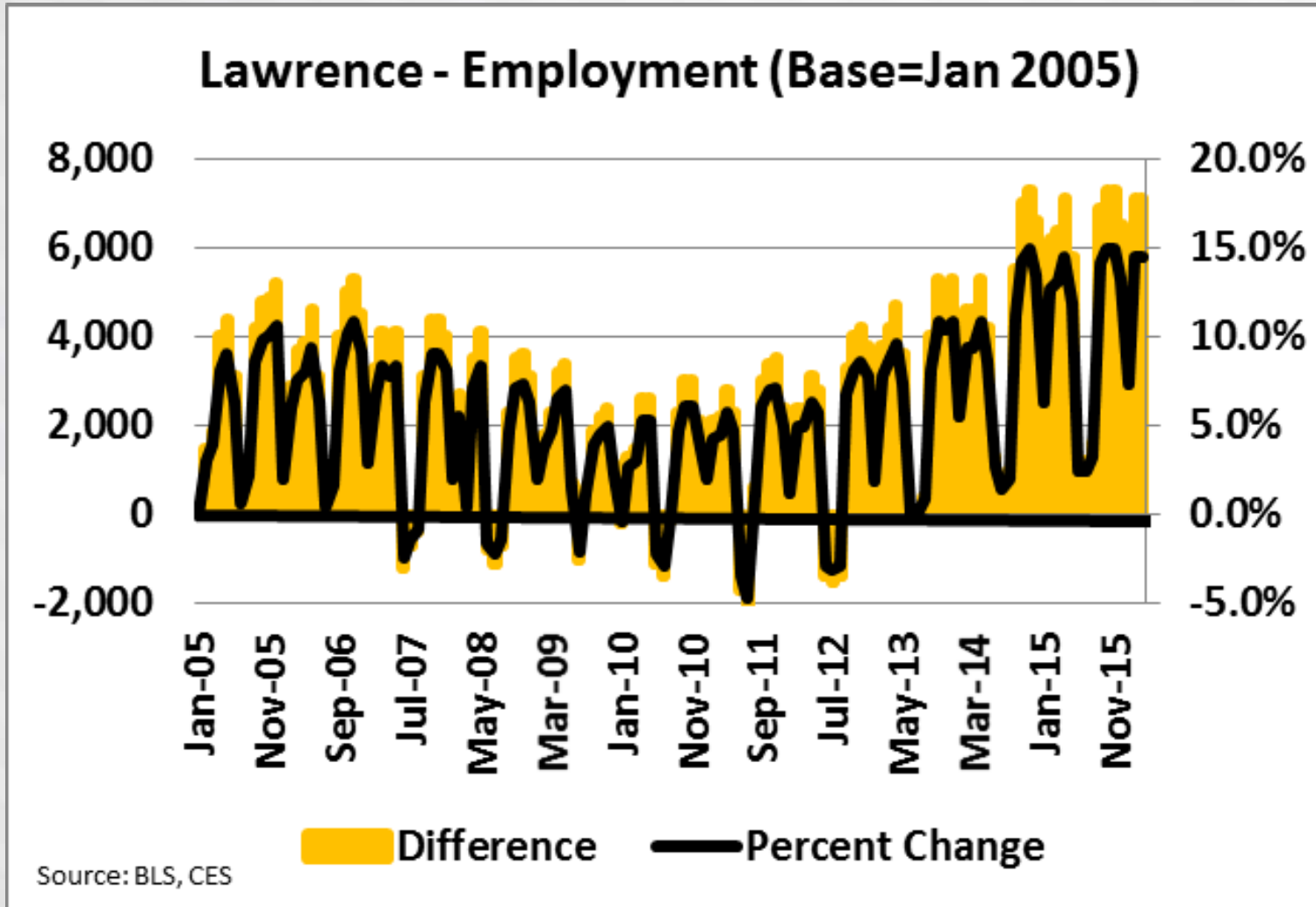
- **Tight regional labor market**
 - Growth in employment does not absorb unemployed workers
 - Labor supplies broader region
- **The labor market has completely recovered from 2016 dip**
 - Recent loss in jobs affected the local labor pool

Labor Market



- **Continued expansion**
 - Faster than Kansas at about 2% per year
- **Completely recovered from 2016 dip**
 - 68% was from government, but not KU

Labor Market



- **Expanding economy**
 - Lawrence is one of the few expanding economies within Kansas

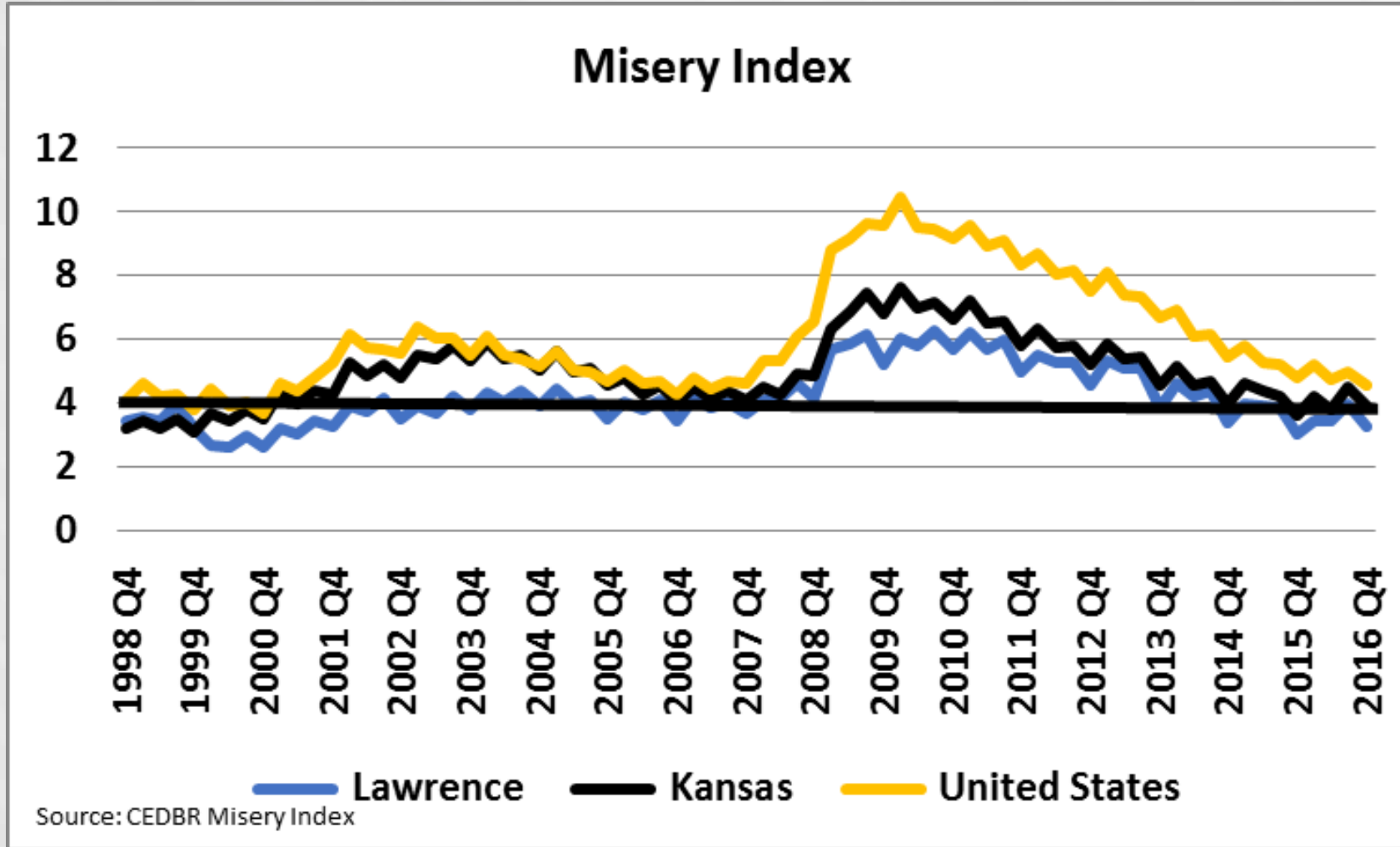
Summary

- Output has stalled.
- Employment growth is highly concentrated into two segments: government and consumption-related sectors.
- As a bedroom community, Lawrence continues to attract the broader regional labor market.

Expectations

- The Kansas City positive expectations will continue to support regional growth.
- Upward pressures on the skilled labor force will likely spill over to Lawrence.

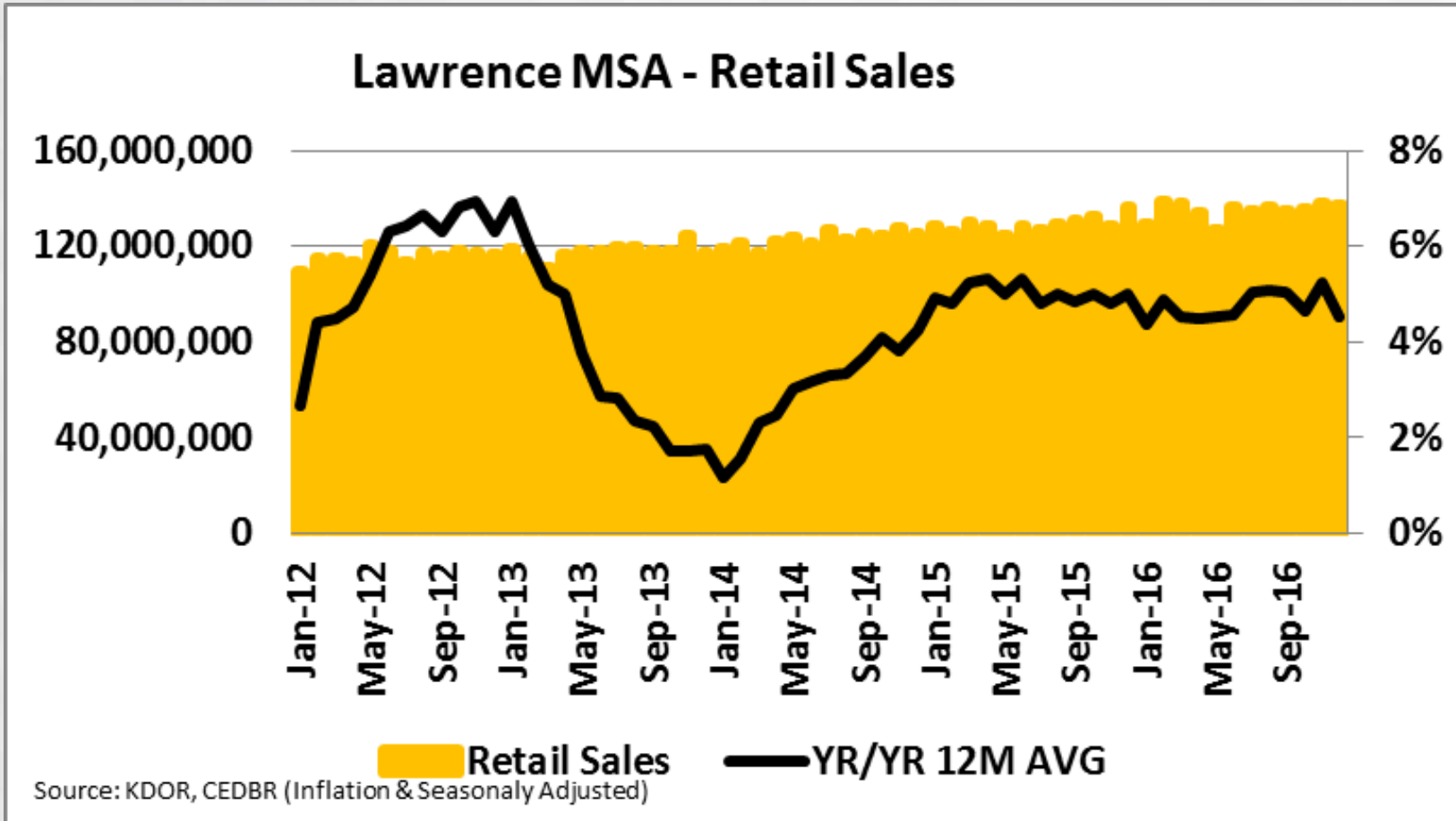
Households



- **Misery is now back to record lows**

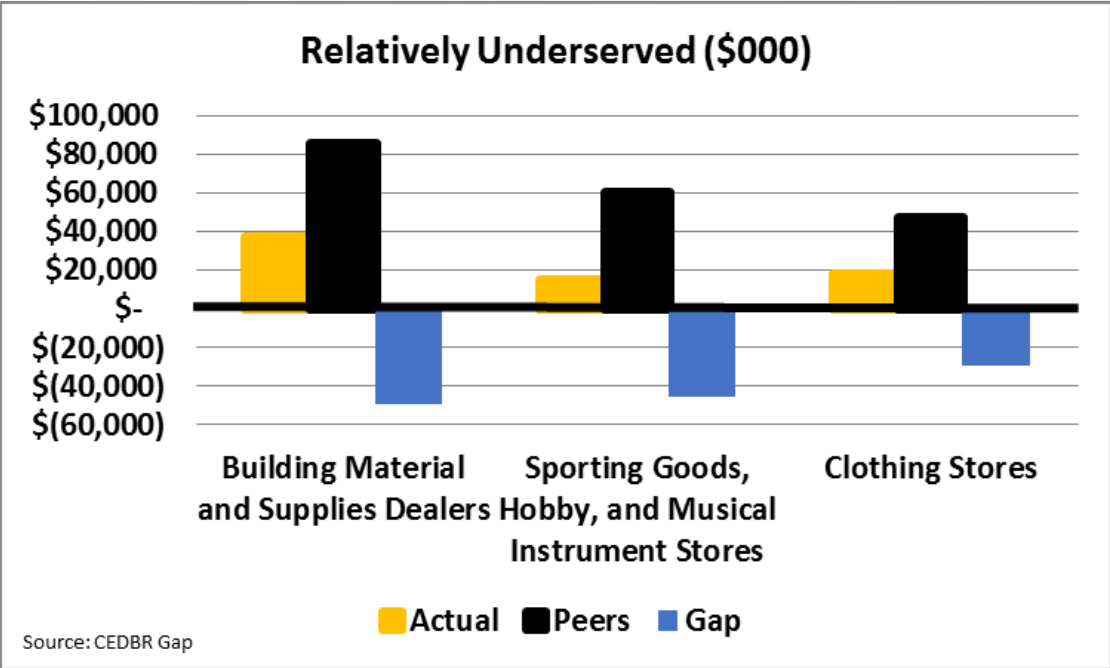
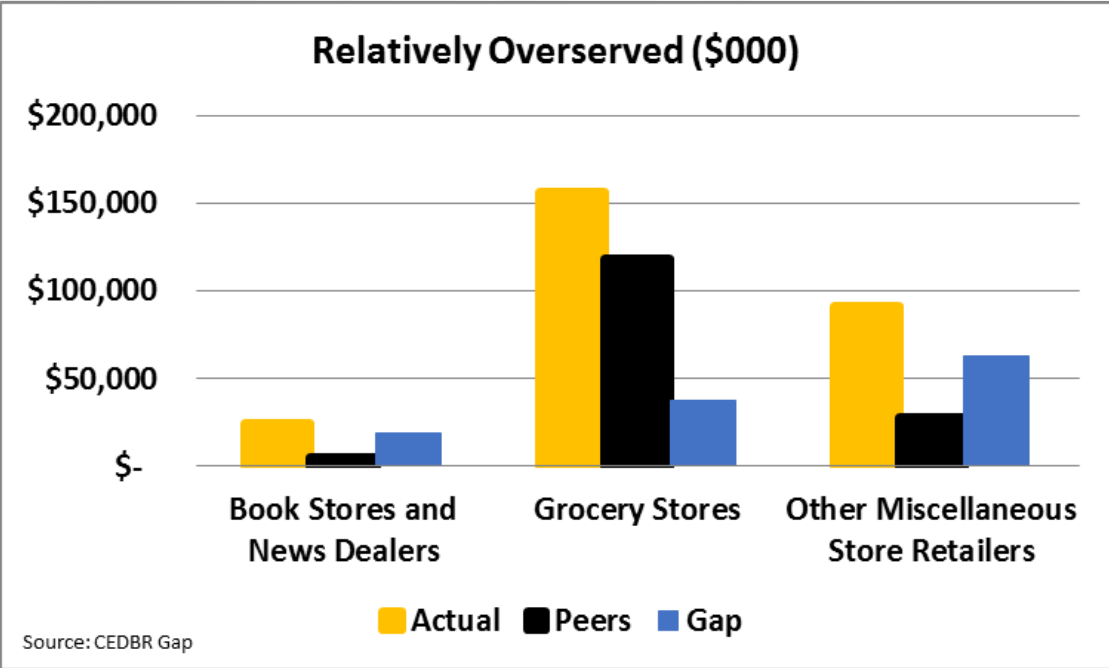
- Jobs are plentiful
- Home prices continue to increase
- Consumers are feeling great

Retail



- **Consistent positive growth**
 - Stronger growth than the state
 - High-income consumers are not phased by negative news
 - Misery is very low

Retail Market



Summary

- The economic climate is very different for households in Lawrence versus the rest of the state.
- High end consumers are somewhat sheltered from recent trends and are willing/wanting to consume.
- Competition for retail dollars is preventing local consumption.

Expectations

- Unlike the rest of the state, misery is likely to remain low.
- Consumption will remain high; however, the regional leakage will likely continue.



Population Forecast

www.Population.CEDBR.org

What will the state look like in 50 years?

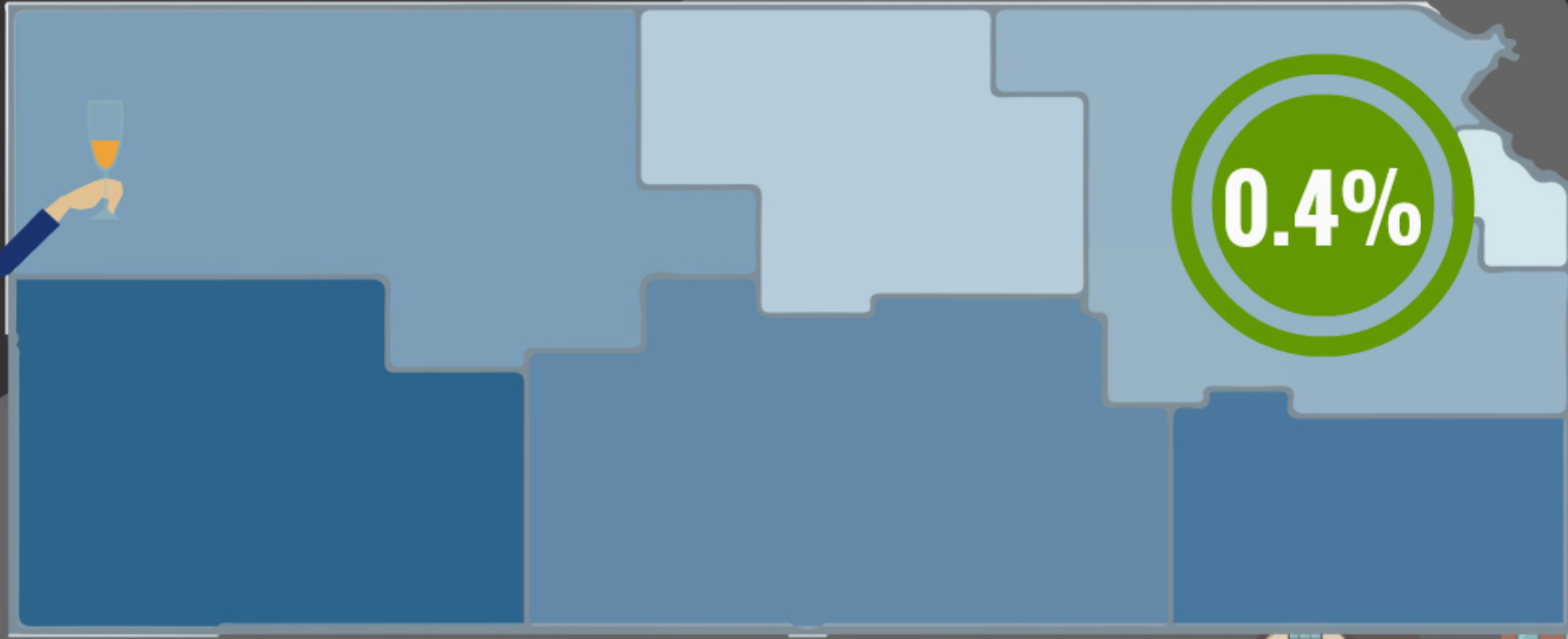


Zoltar gave Tom Hanks a peek into a potential future.

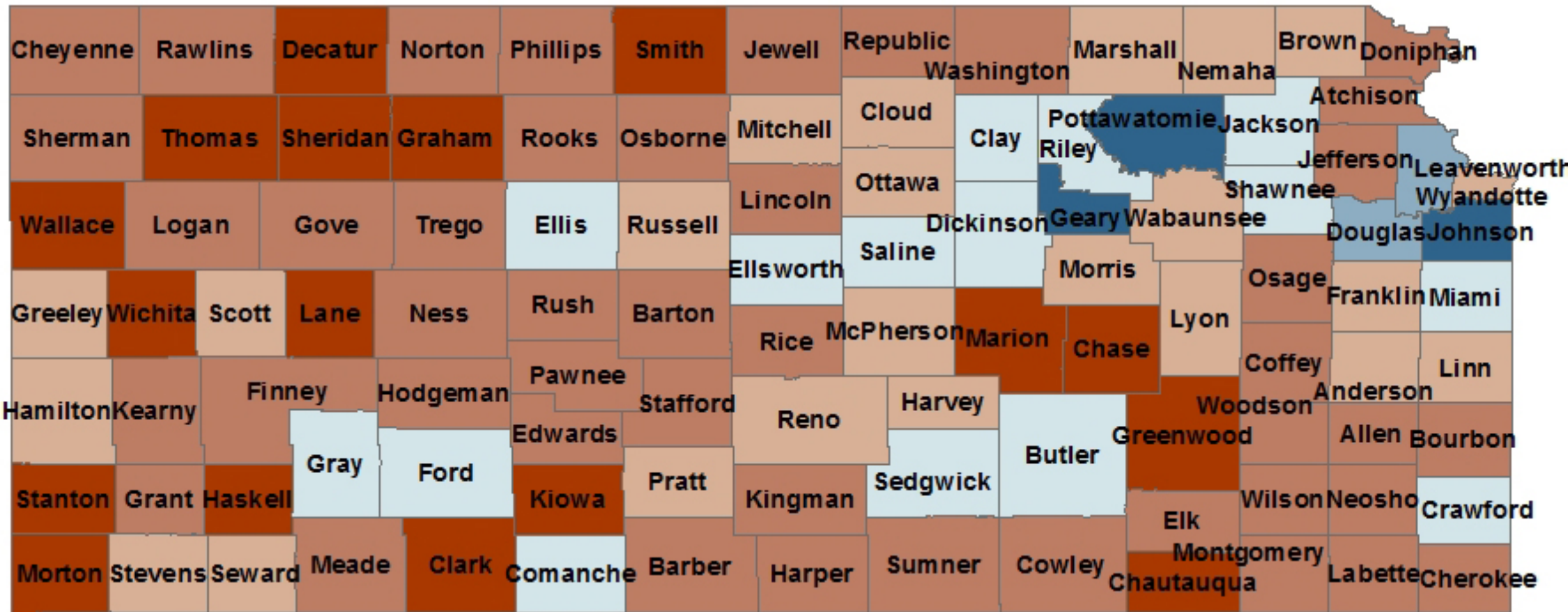
A stylized map of the United States is shown in light gray against a dark gray background. A yellow callout box with a torn-edge effect is positioned over the state of Kansas. Inside this box, the text '+ 0.4%' is written in white, bold, sans-serif font.

+ 0.4%

The Kansas population will see an annual increase of 0.4% over the next 50 years.

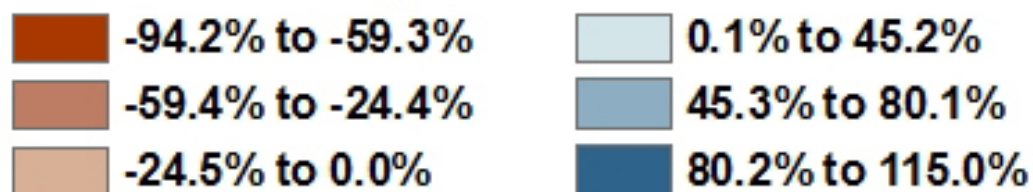


Though at a slower pace, the Northeast region will also show consistent population growth.



Population Forecast

Total Percent Change 2014-2064



CEDBR

Center for Economic Development
and Business Research



Of the Kansas MSAs, Topeka is the only one to notice a decrease in their working age population.

Thank you for joining us!

Lawrence Area
ECONOMIC
OUTLOOK
CONFERENCE