

# Plunging Crude Prices: Impact on U.S. and State Economies

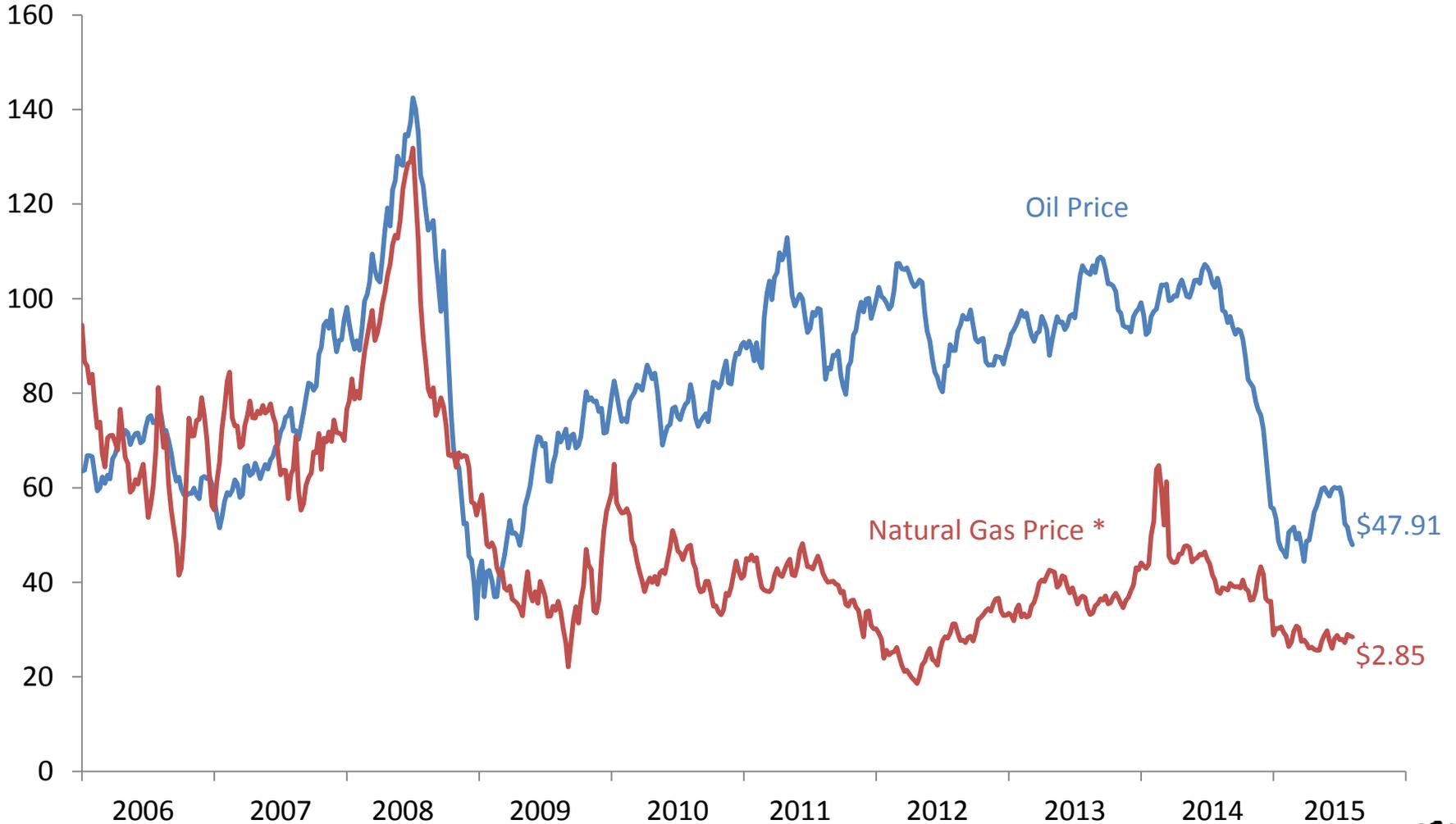


**Mine Yücel**  
**Senior Vice President and**  
**Director of Research**  
**Federal Reserve Bank of Dallas**  
**August 7, 2015**



# Oil and gas prices plunge

Nominal price, \$,  
weekly



# Outline

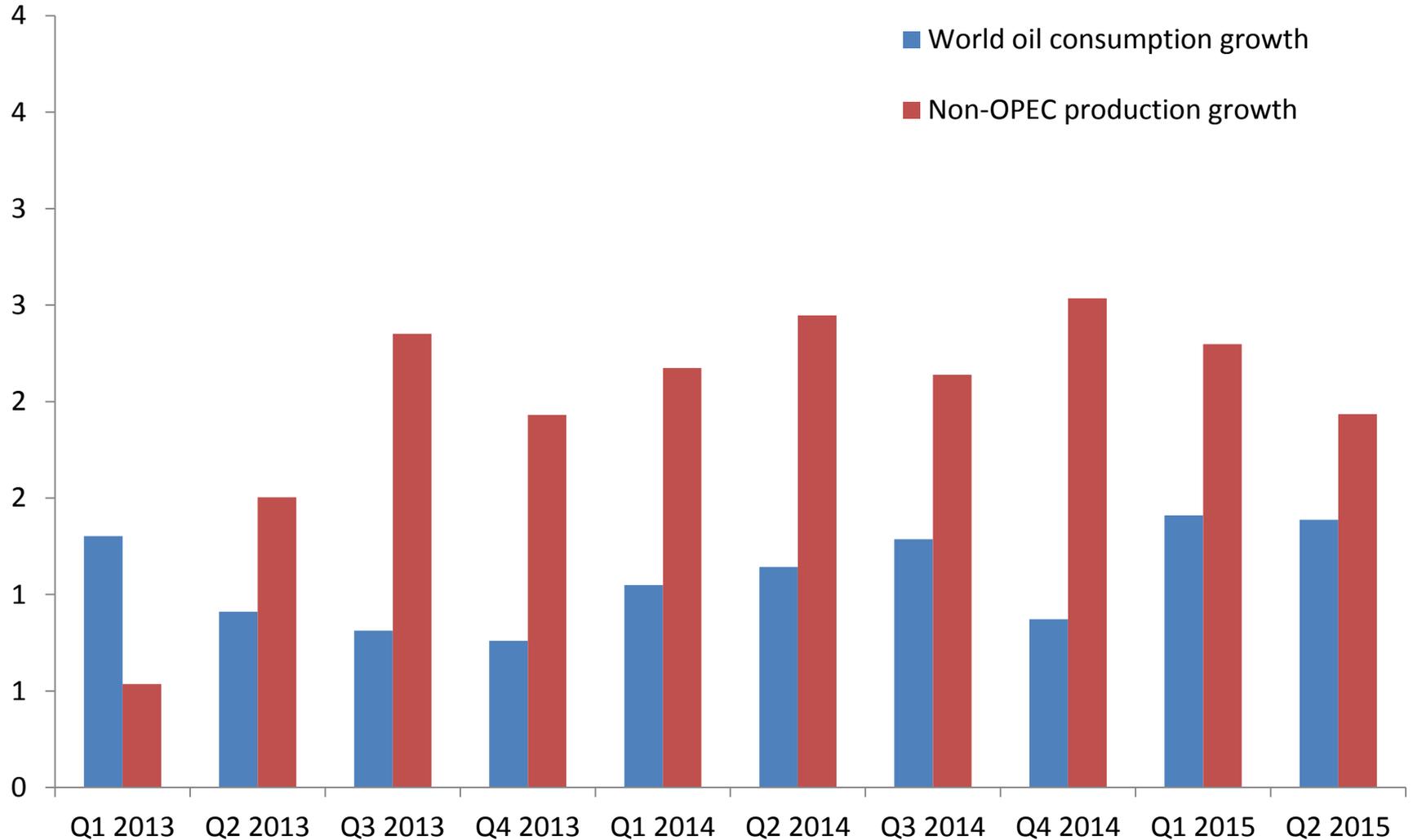
- How did we get here?
  - World oil supply/demand balance
- Impact on U.S. economy
- Impact on state economies
- Where do we go from here?



# World Consumption and Non-OPEC Production Growth

(Year-over-year)

Million barrels per day



Source: Energy Information Administration.

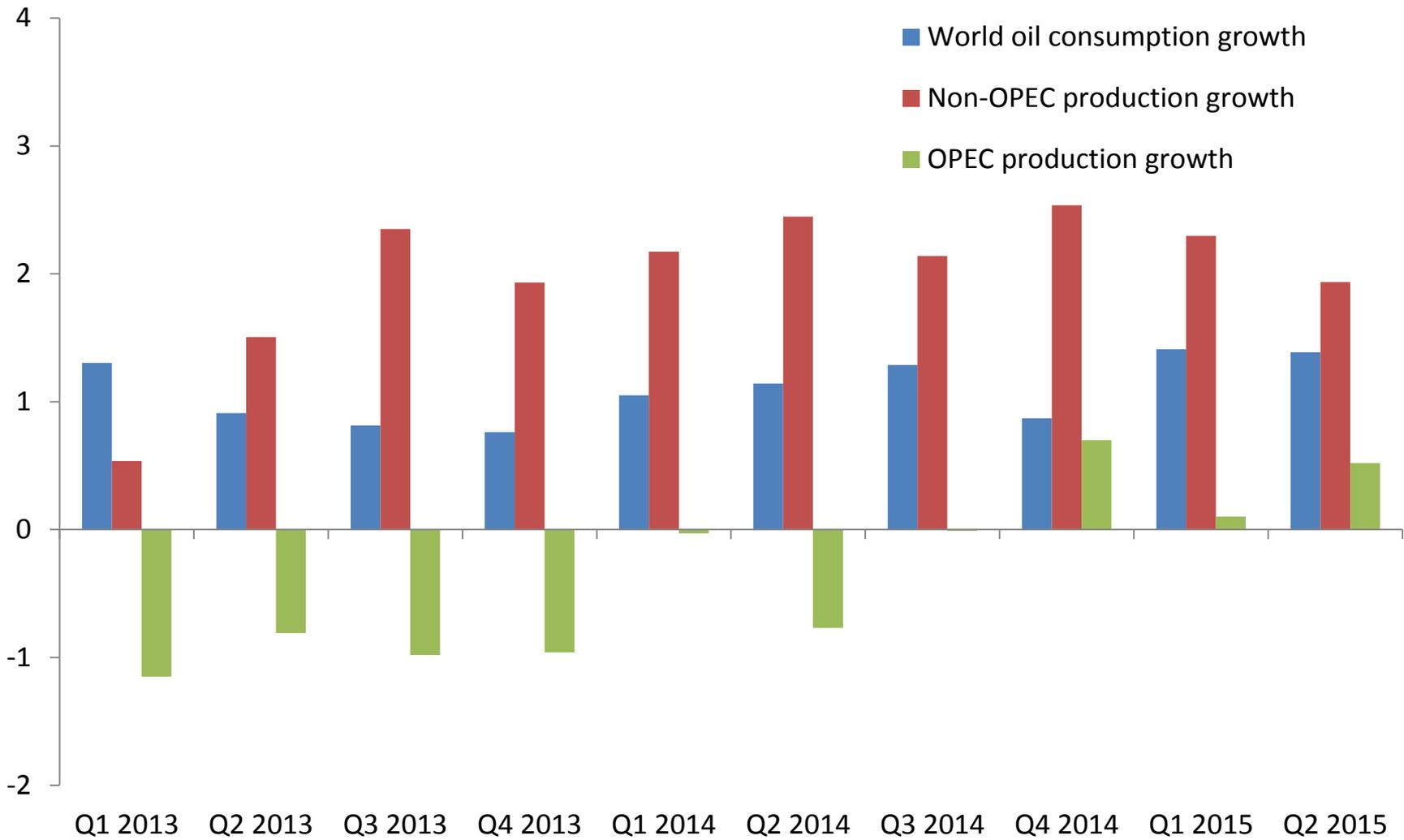
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# World Oil Consumption and Production Growth

(Year-over-year)

Million barrels per day



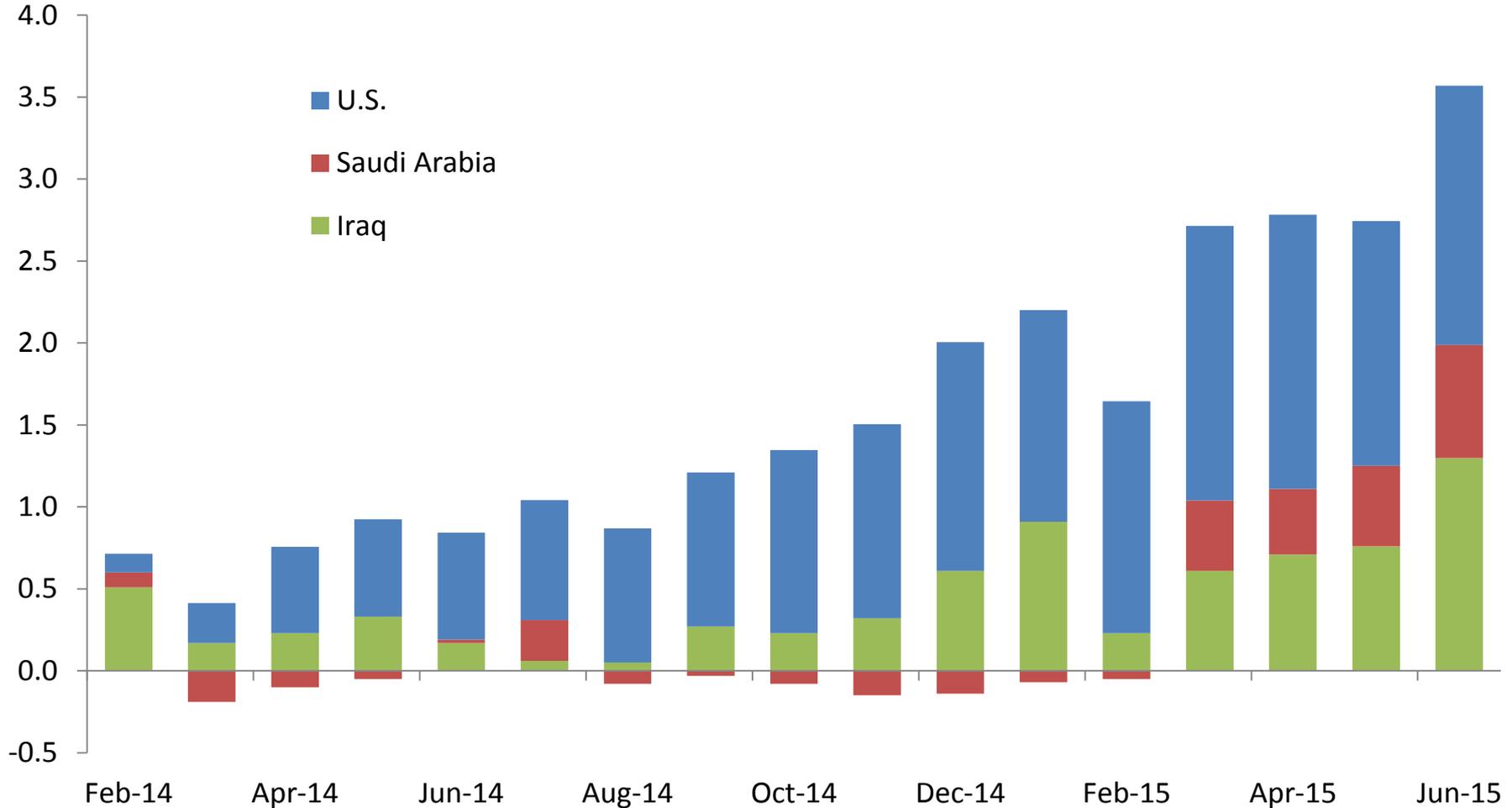
Source: Energy Information Administration.

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# Production of crude up since January 2014

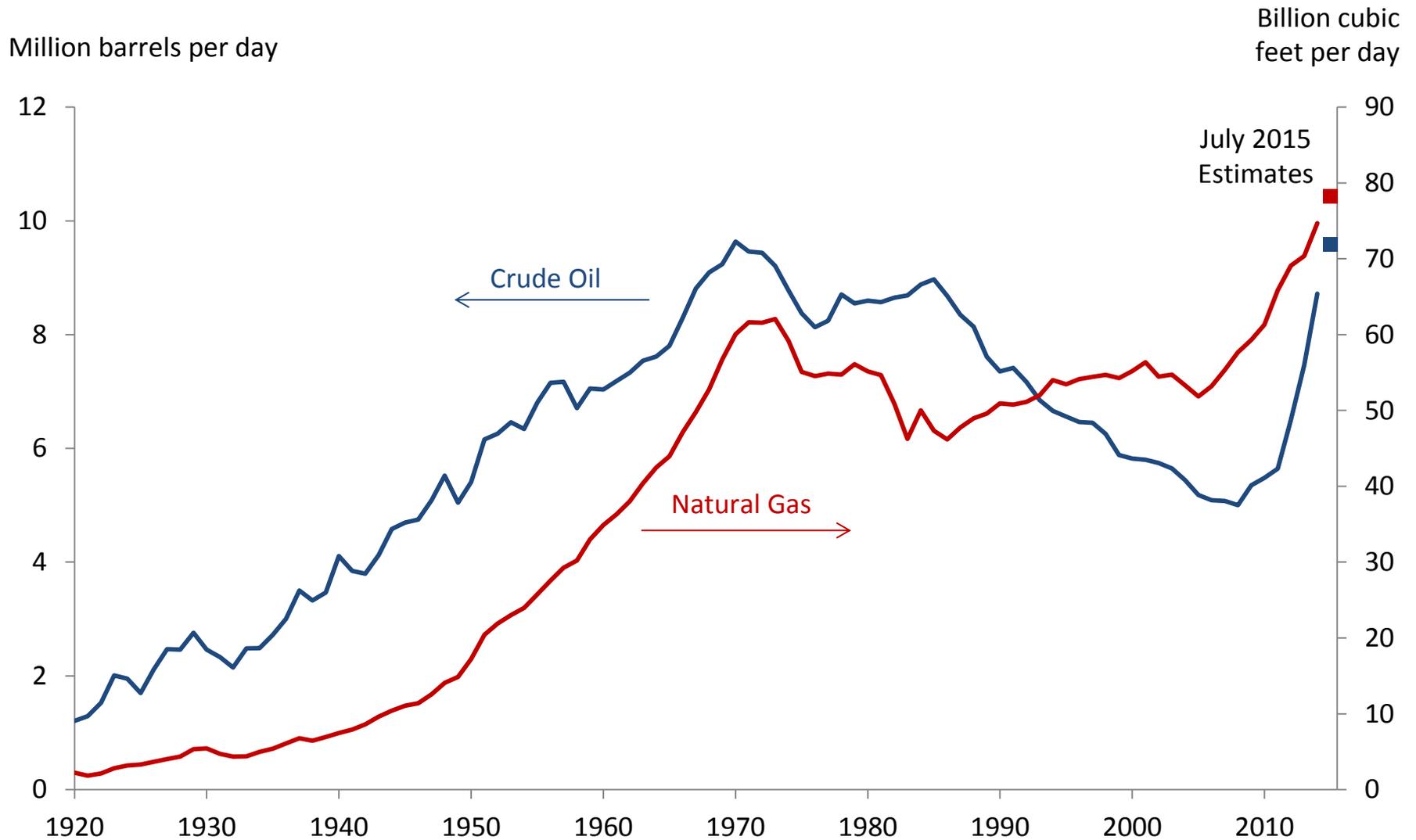
Million barrels per day  
change since January 2014



# IMPACT ON U.S. ECONOMY



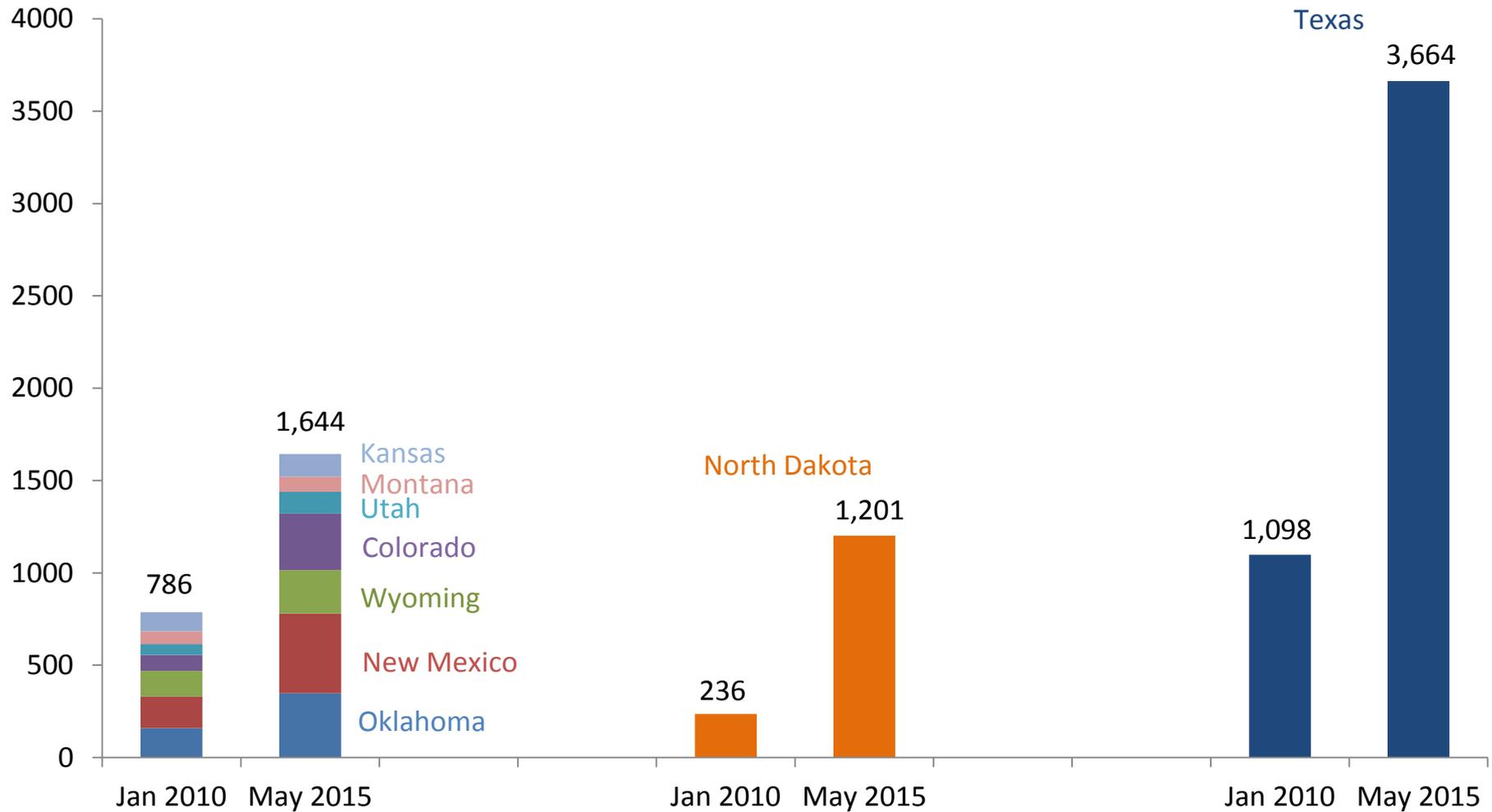
# U.S. Oil and Gas Production



Source: Energy Information Administration.

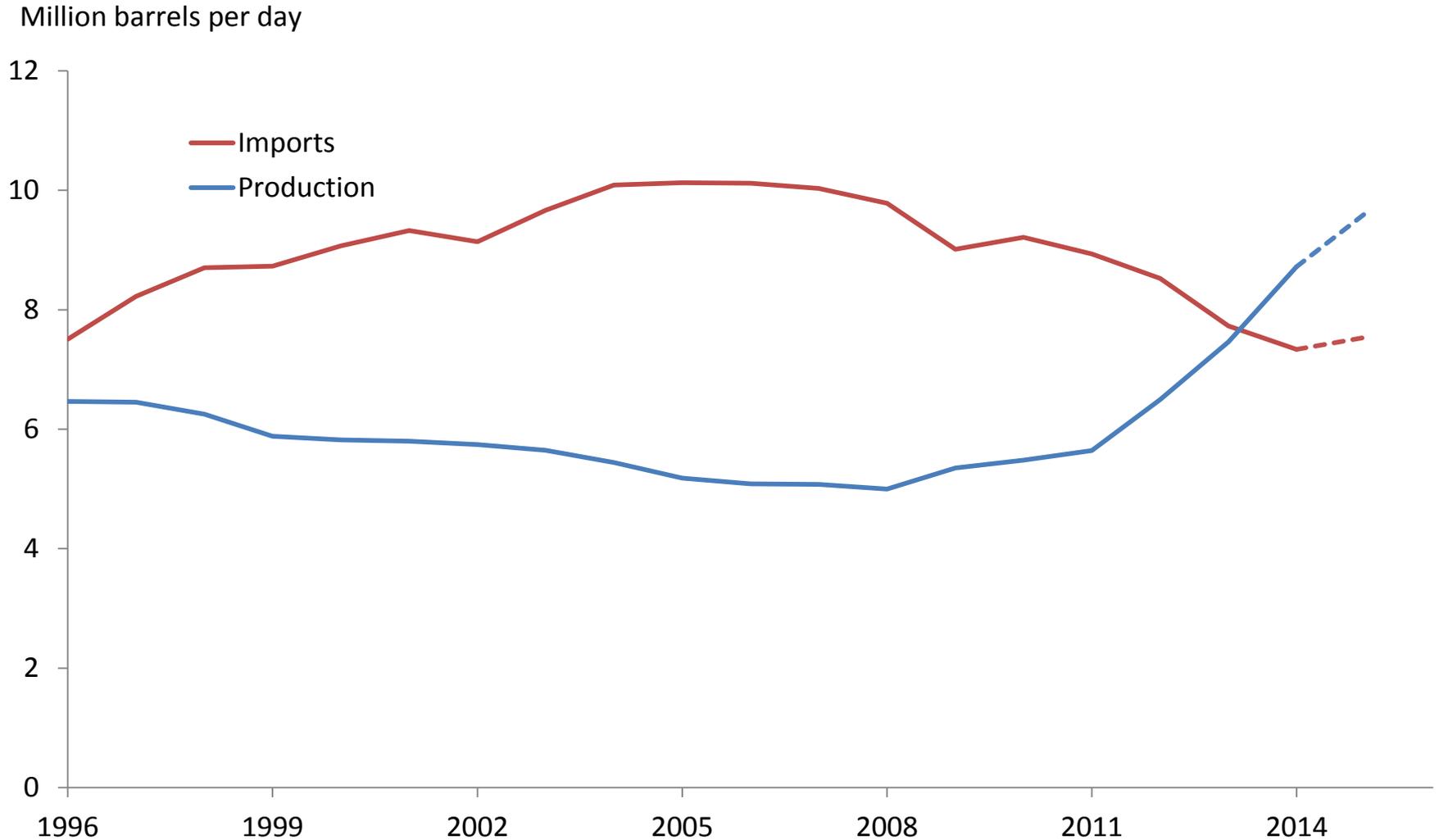
# U.S. Crude Oil Production From Shale

Thousand barrels per day



Source: Energy Information Administration

# U.S. imports of crude oil have fallen below production

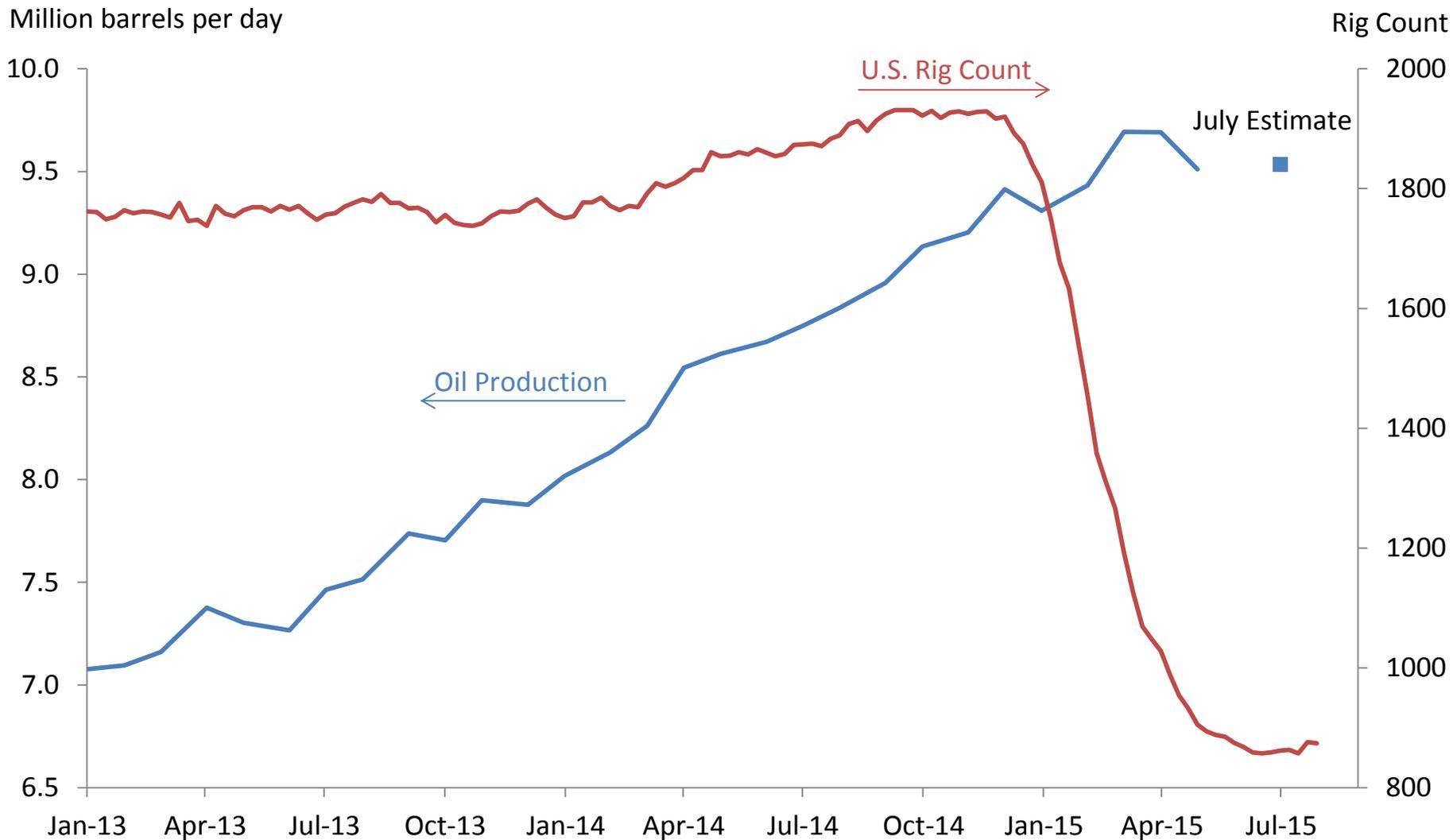


Source: Energy Information Administration

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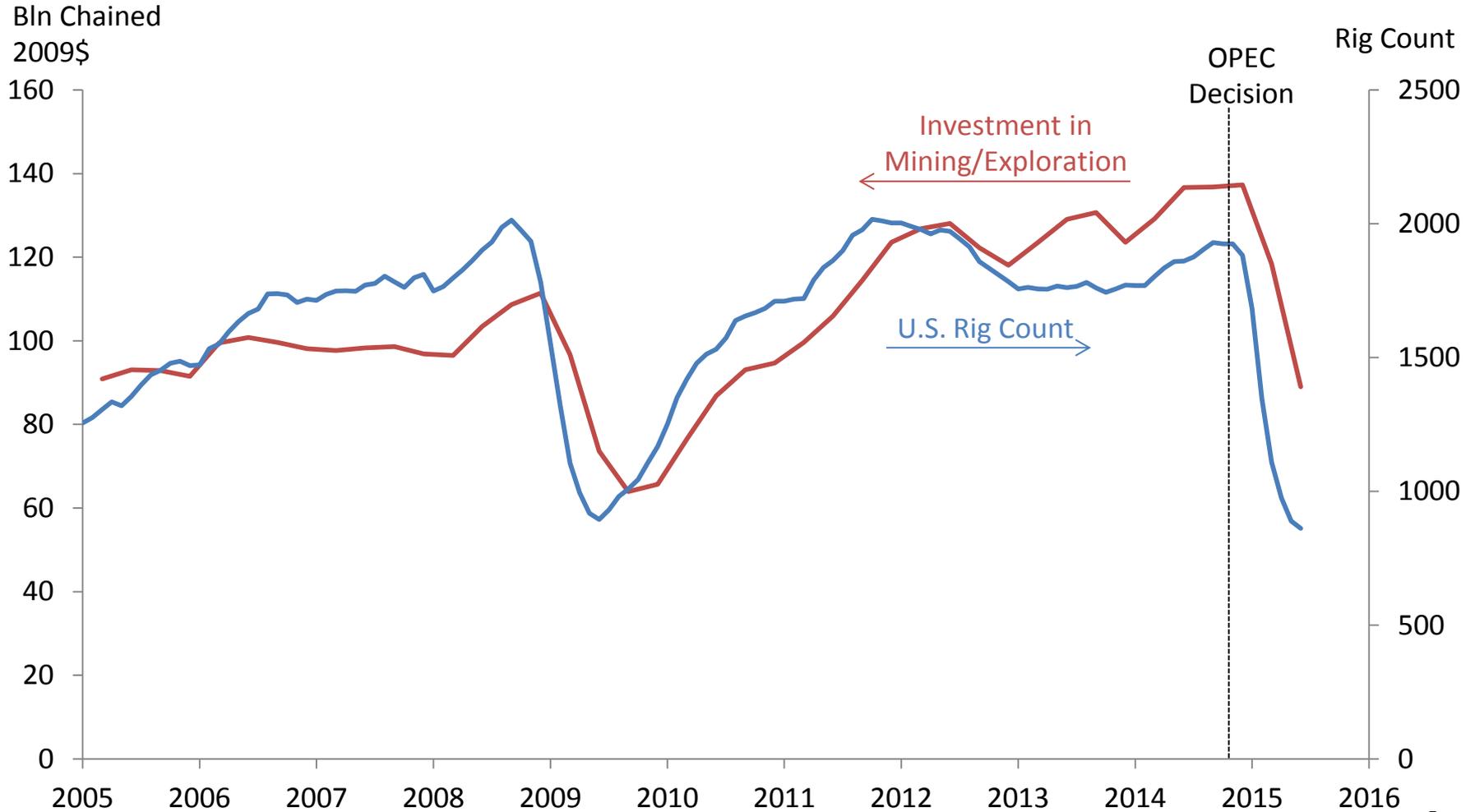
# Rig count plunges, oil production levels



Source: Oil and Gas Journal; Baker Hughes.

# Drilling investment falls with rig count

## Private Fixed Investment in Mining/Exploration



SOURCES: Bureau of Economic Analysis; Baker Hughes.

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# Impact on U.S. Economy

- The U.S. benefits from lower oil prices
- Boosts consumer disposable income
  - The decline in gasoline prices adds \$675 to household budgets in 2015
- Reduces the cost of energy to firms
- Reduces profitability of producing oil
  - Layoffs and Capex declines in energy firms
- A 50% fall in oil prices may lead to a 0.3% to 1.0% increase in GDP (depending on the model)
- Headline inflation falls



# IMPACT ON STATE ECONOMIES



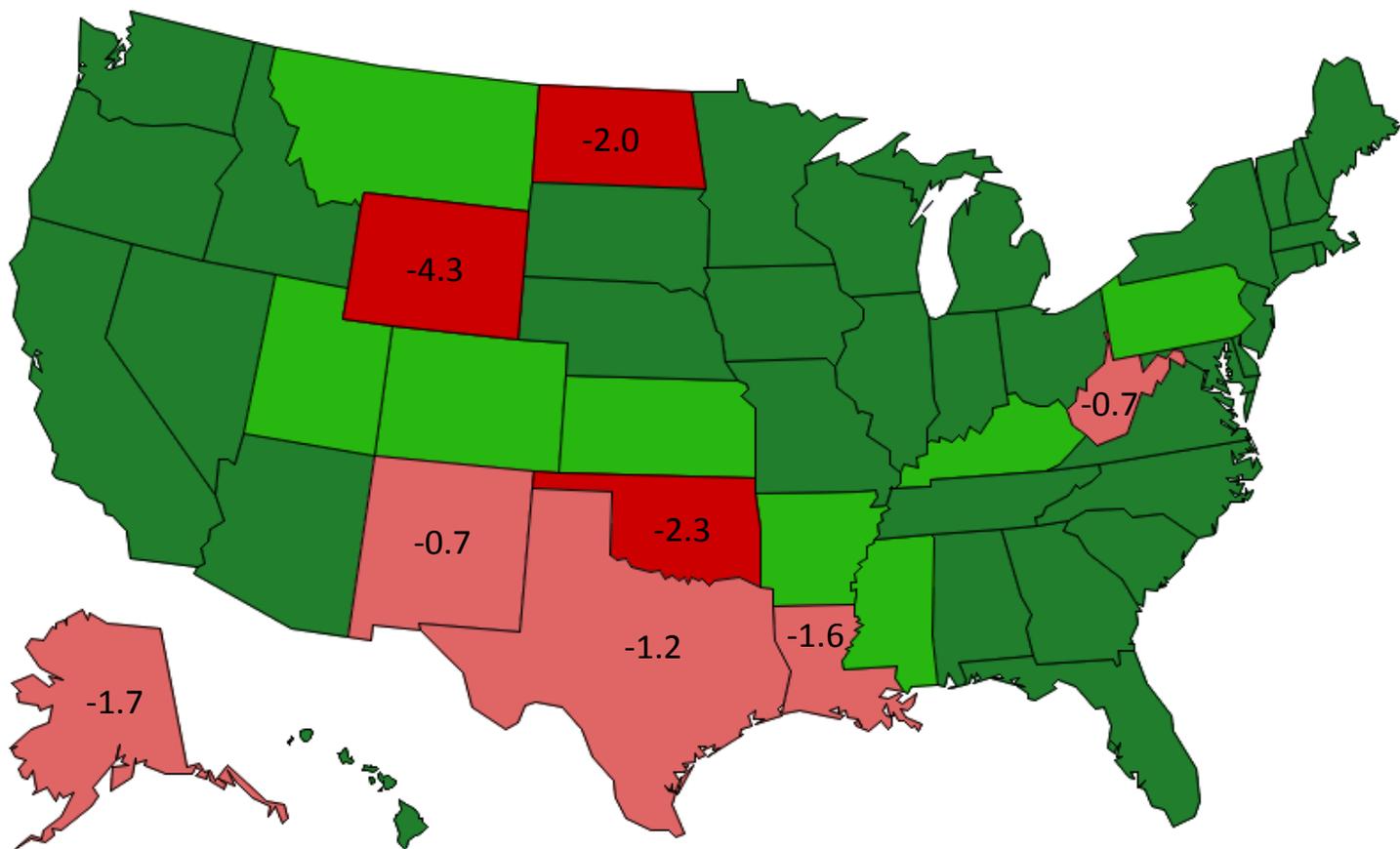
# Regional Effects

- Increased energy activity brings oil and gas extraction and oil-field support jobs
- Local areas:
  - lease and royalty payments,
  - infrastructure construction and
  - increased spending on retail, leisure and hospitality, and health services.
- Local governments: greater sales taxes
- State governments: increased severance tax revenues



# Low oil prices benefit most states

(Effect of a 50% decline in oil prices on employment)

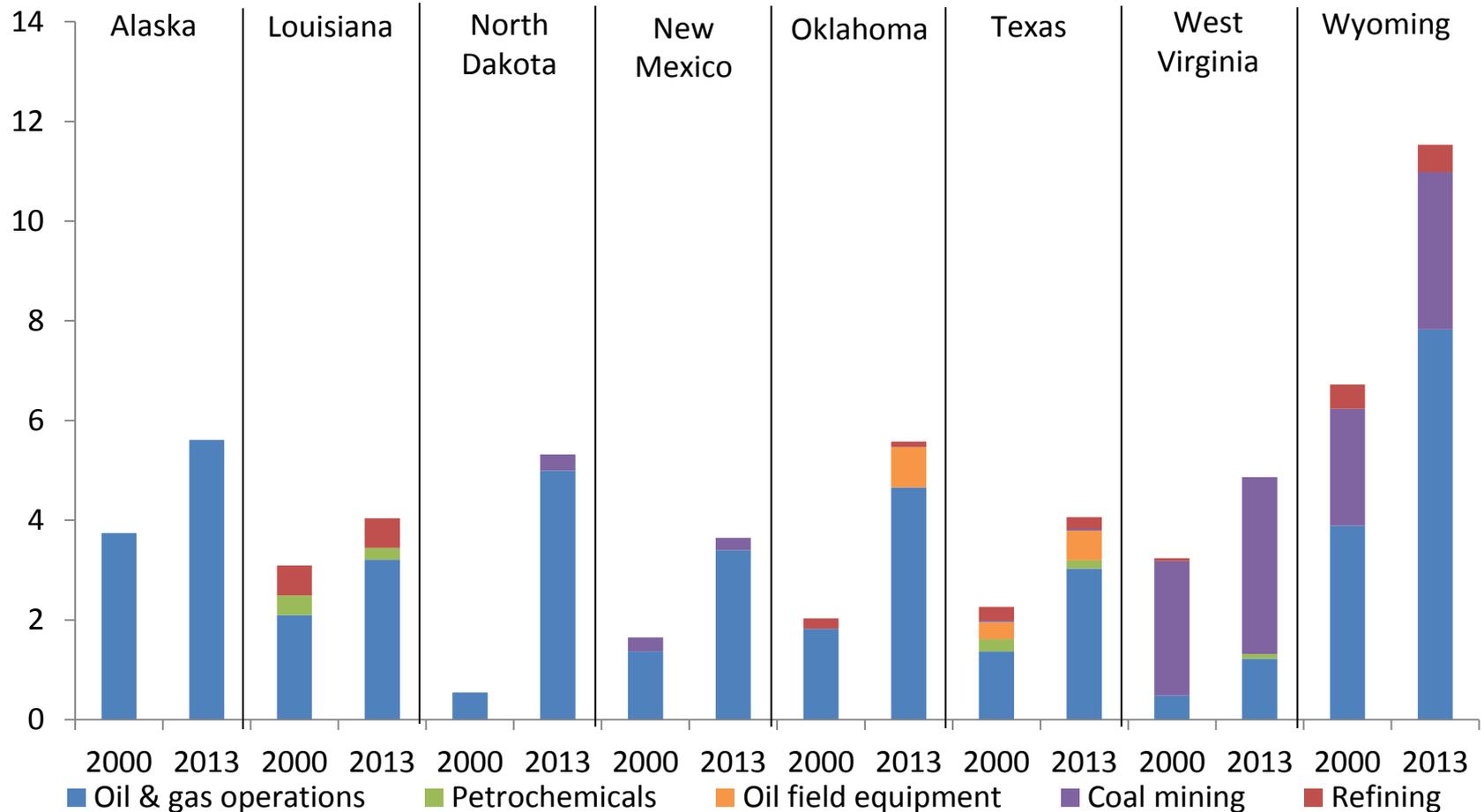


Percent change in total employment   **Red**   <-2   **Light Red**   -2 to 0   **Light Green**   0 to 1   **Dark Green**   >1



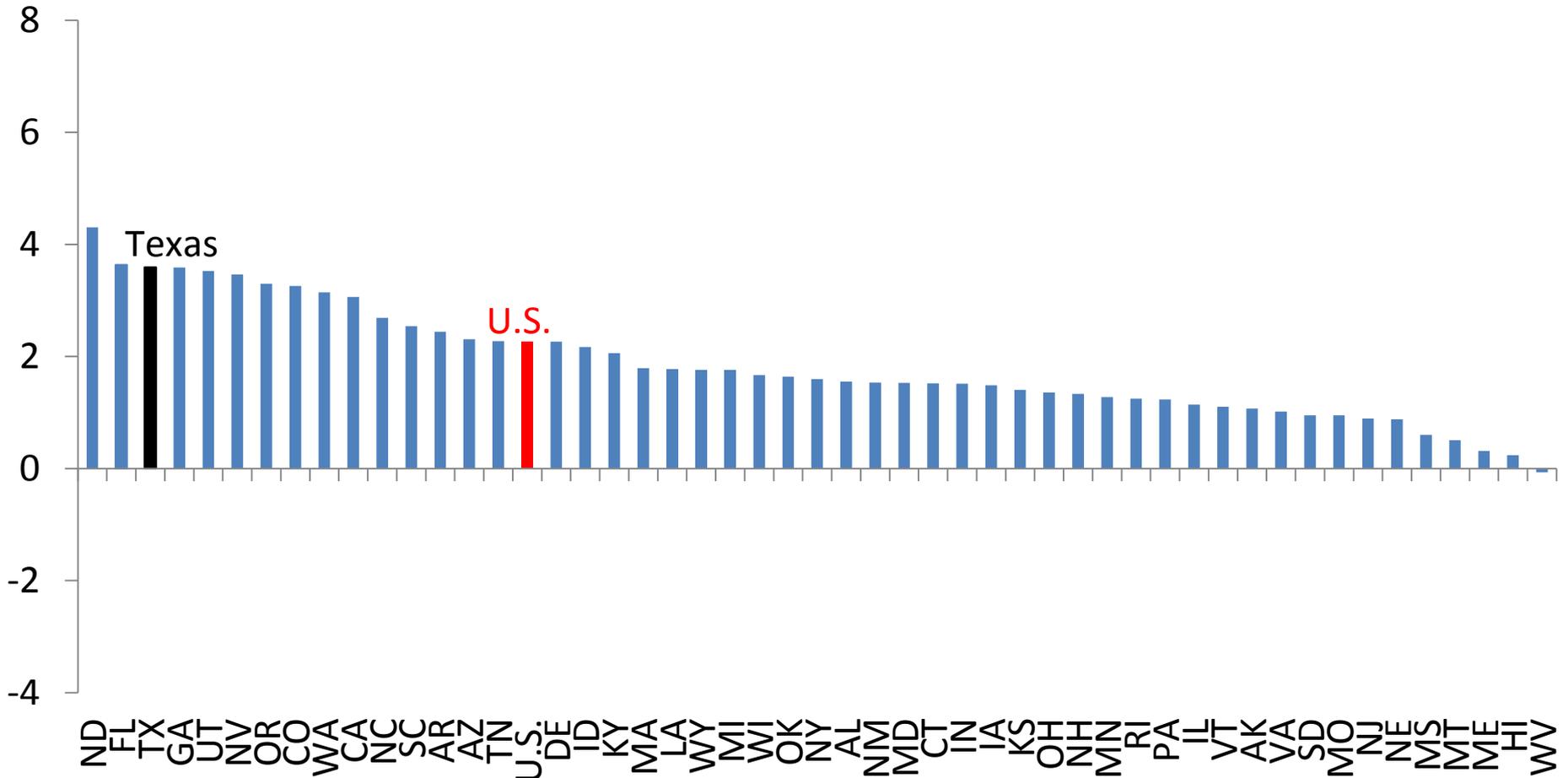
# Energy Related Employment

Percentage of nonagricultural



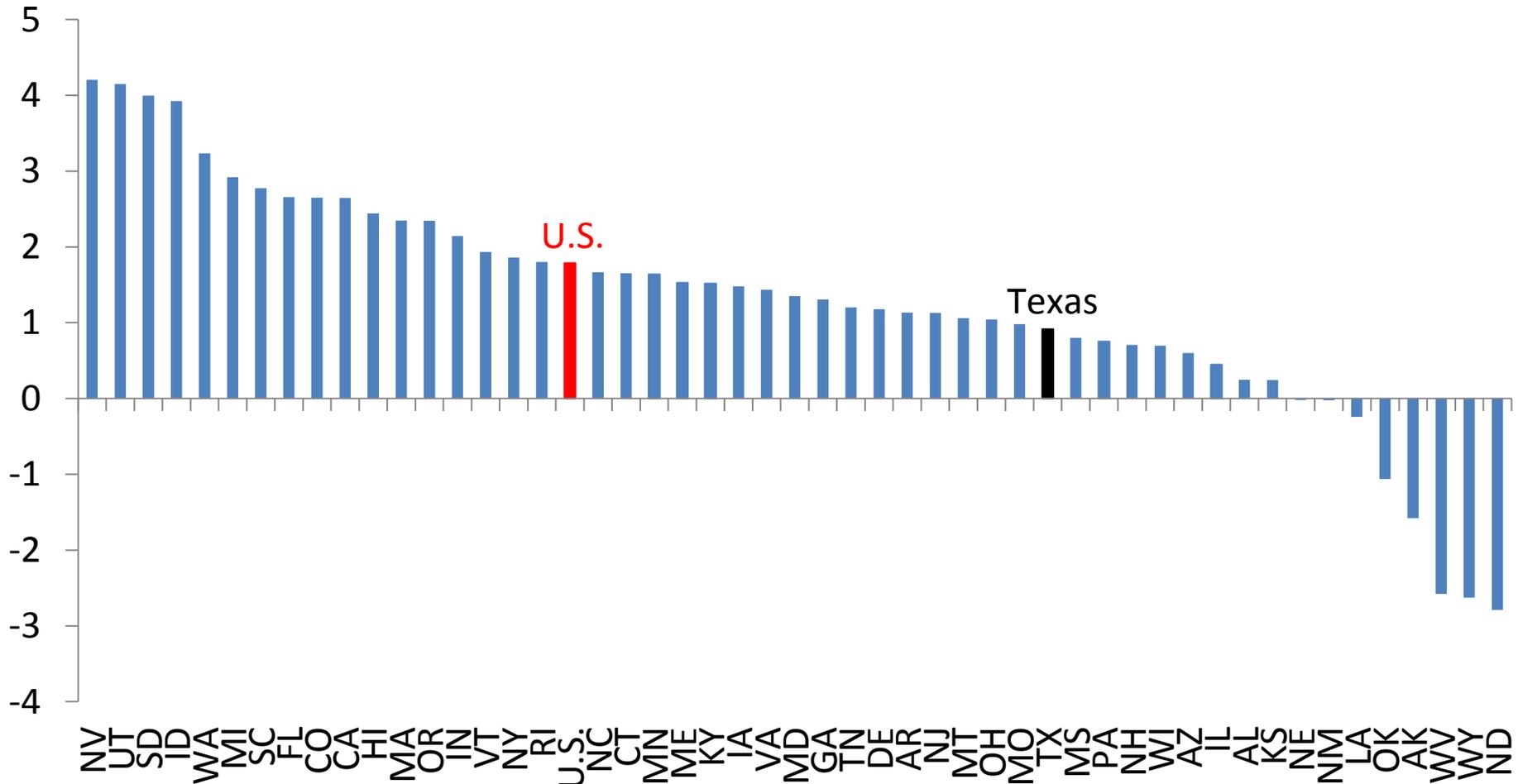
# Texas posted third-fastest job growth among states in 2014

Percent Change (Dec/Dec)



# In 2015, Texas ranks a distant 34<sup>th</sup> in job growth so far

Percent Change (year-to-date)



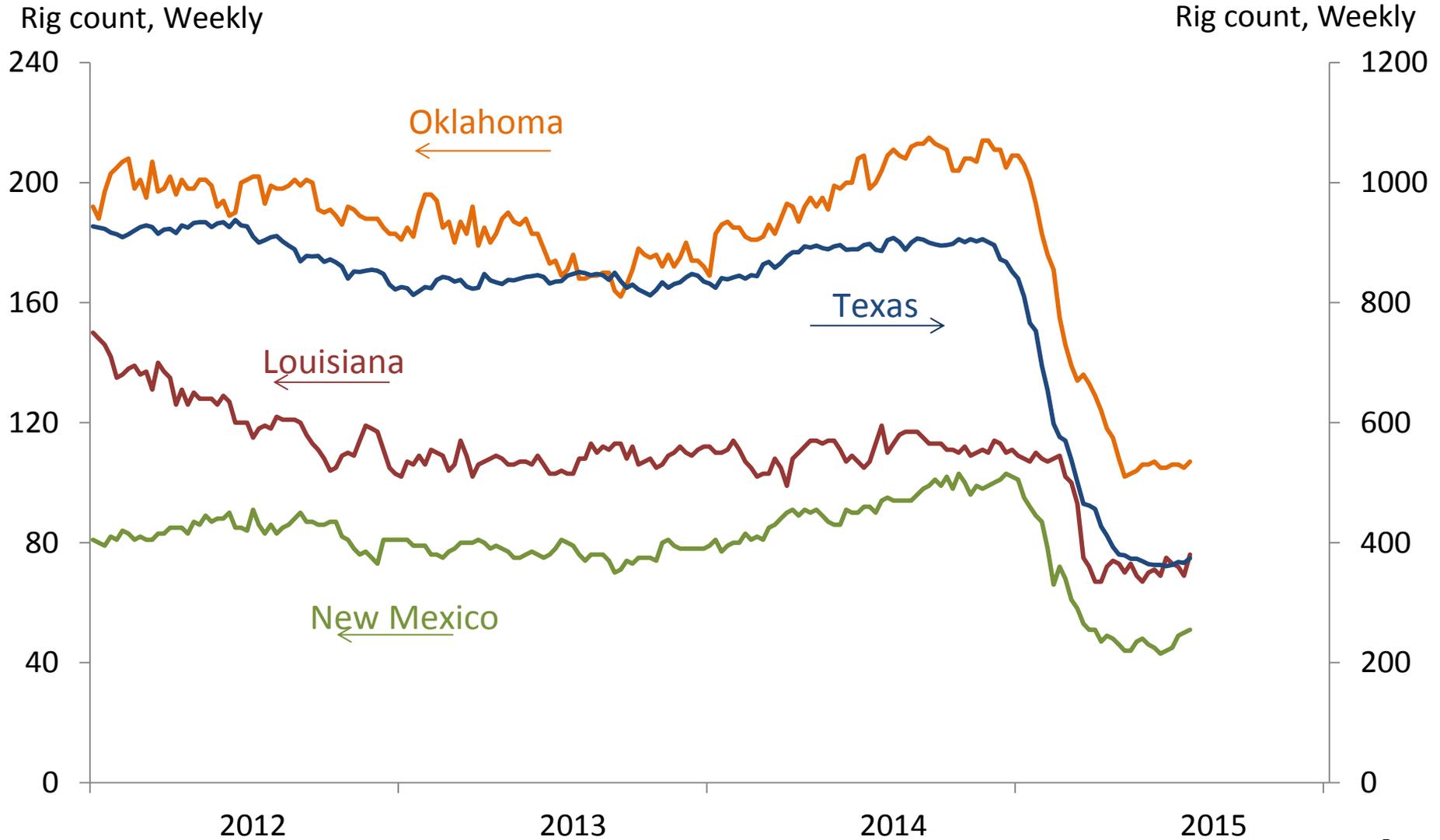
NOTE: Year-to-date is through June and rate is annualized.

SOURCES: Bureau of Labor Statistics; FRB Dallas.

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# Rig count bottoming out?



NOTE: Last data point is June 5th.

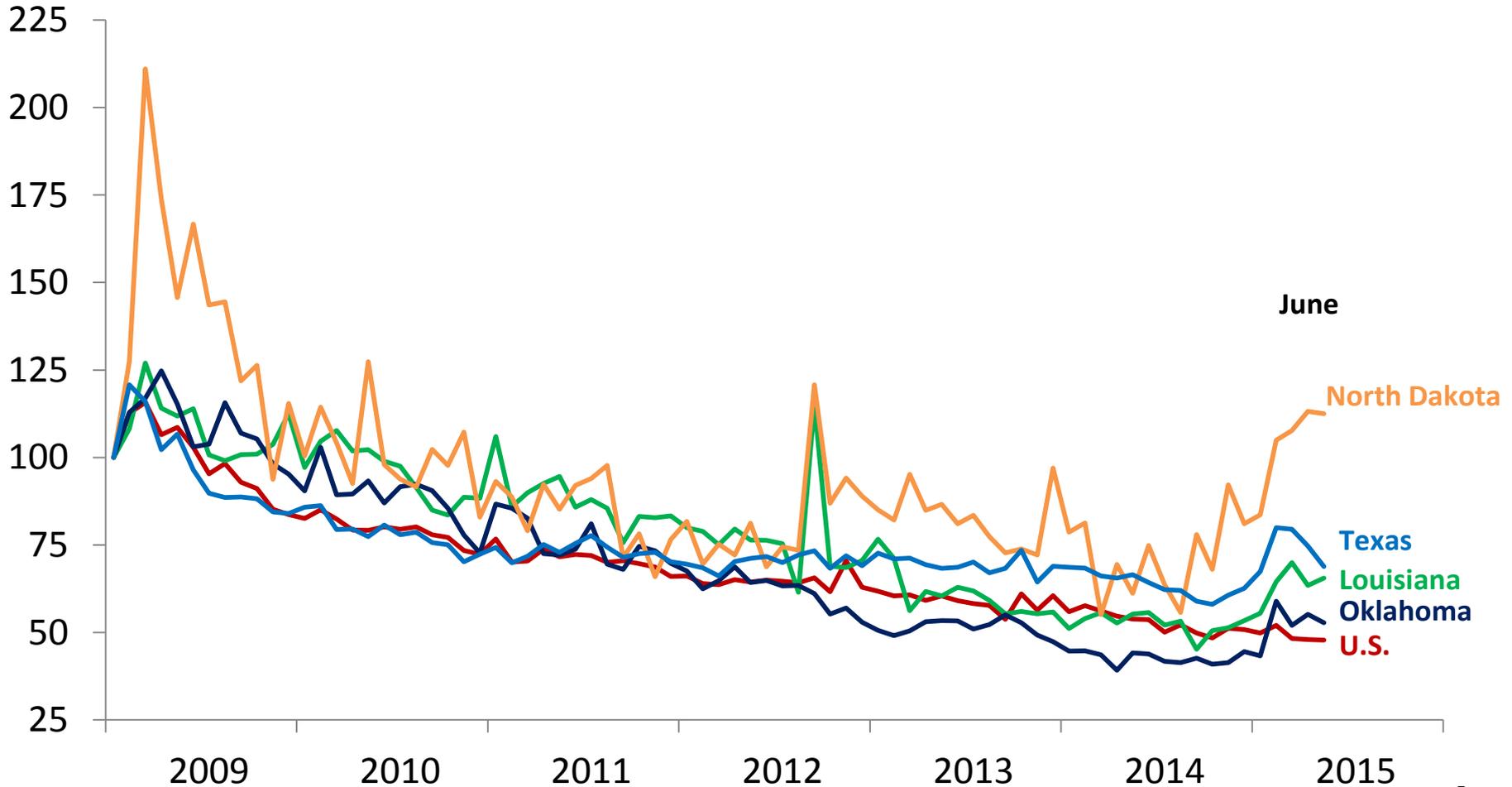
SOURCE: Baker Hughes.

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# Initial jobless claims may be peaking

Index,  
Jan.'06=100, SA



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# Some states rely heavily on oil and gas severance taxes

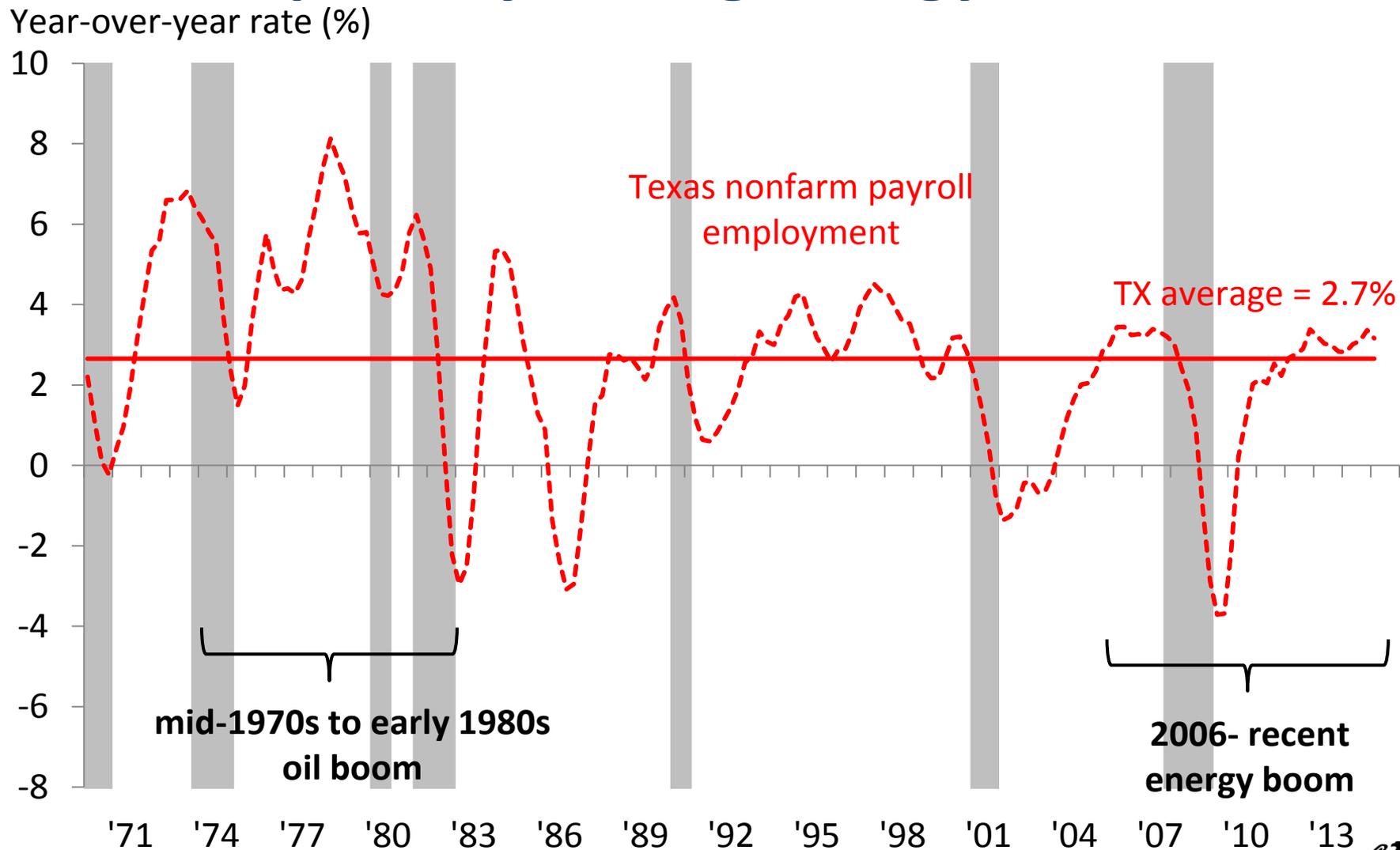
(Share of state tax revenues)



Sources: U.S. Census Bureau, 2013 annual survey of state government tax collections; EIA.



# Texas job growth outpaces the U.S., especially during energy booms



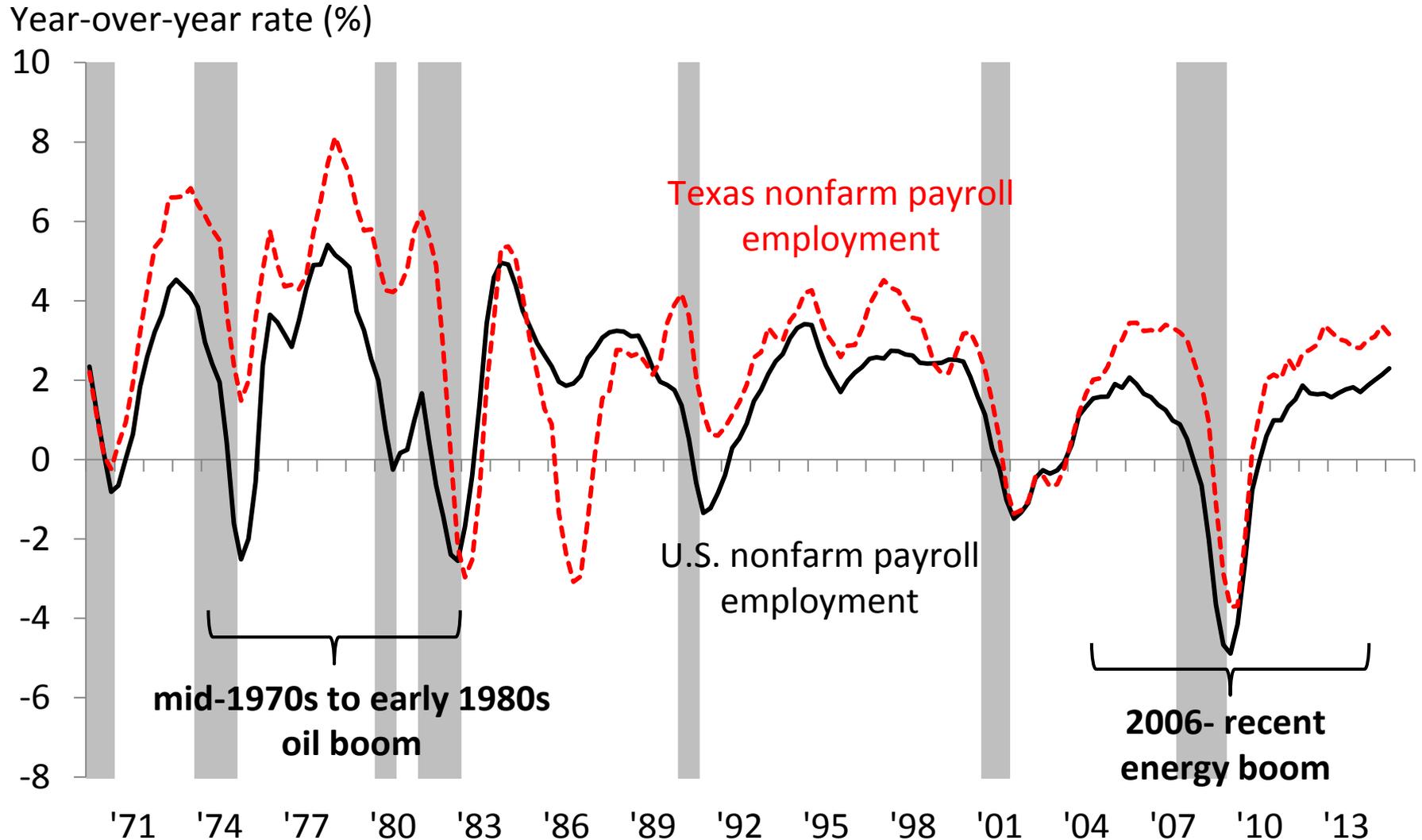
NOTE: Shaded bars indicate U.S. recessions.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; authors' calculations.

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# Texas job growth outpaces the U.S., especially during energy booms



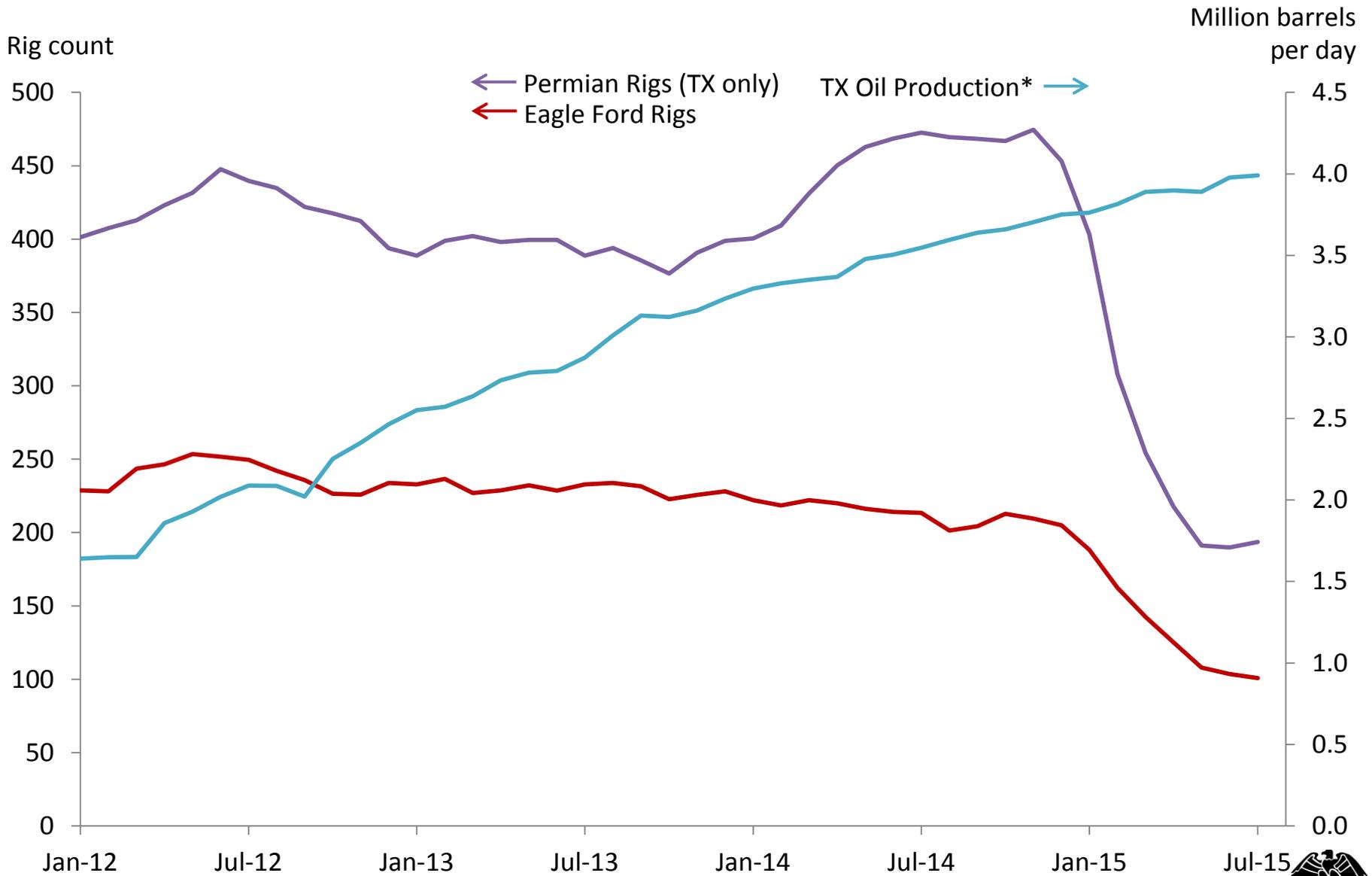
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# Texas rig counts bottoming out



# Oil price impact on the Texas economy

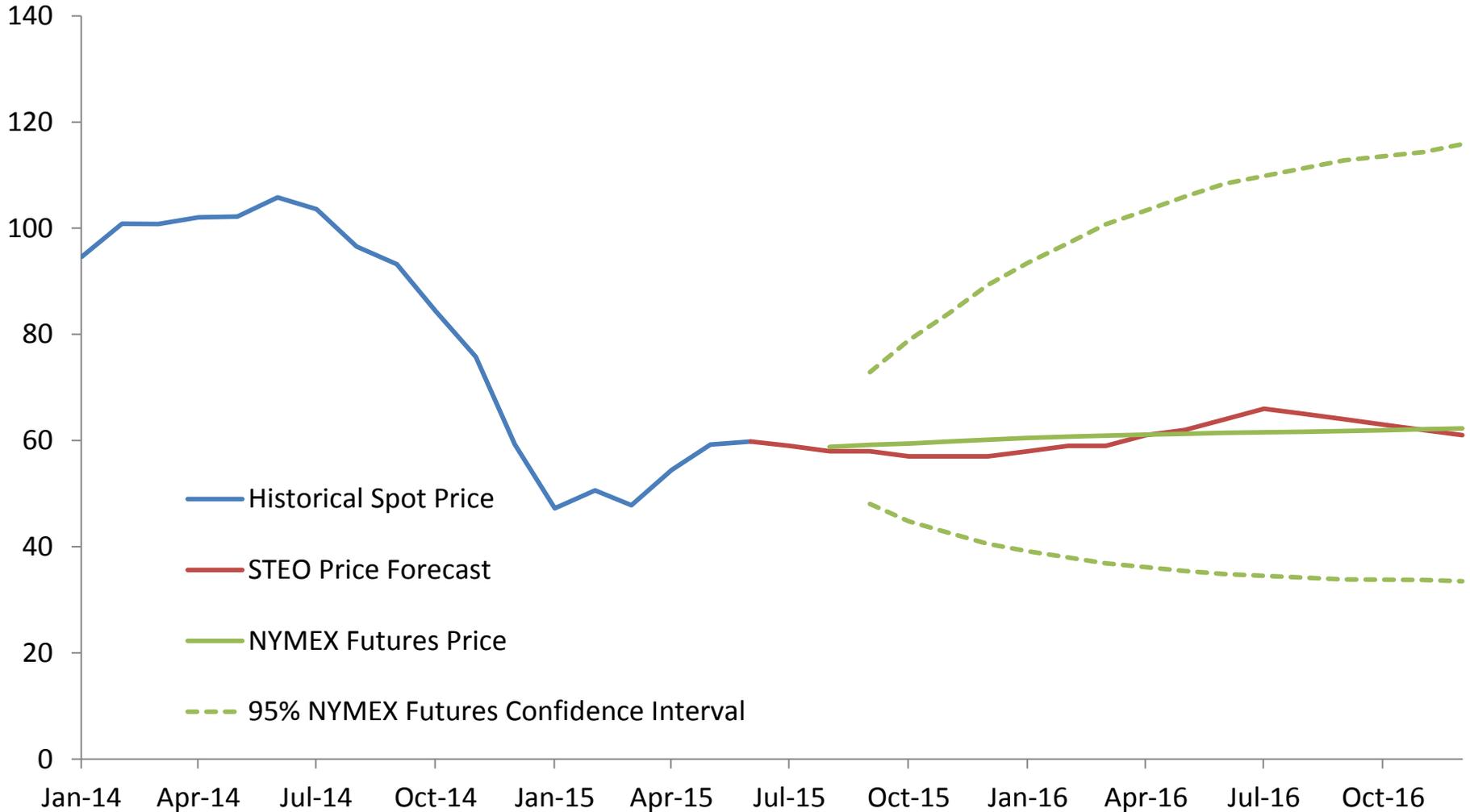
- Oil price declines hurt Texas
  - In Texas, oil price decline benefits:
    - consumers, refiners
  - Oil price decline hurts:
    - oil producers and all industries that benefitted from the oil boom
  - 50% sustained oil price decline leads to a 1.2 % decline in Texas employment=> 140,000 jobs
- State severance taxes will decline



**WHERE DO WE GO FROM HERE?**

# Crude Price Forecast

Dollars per barrel



Source: Energy Information Administration.

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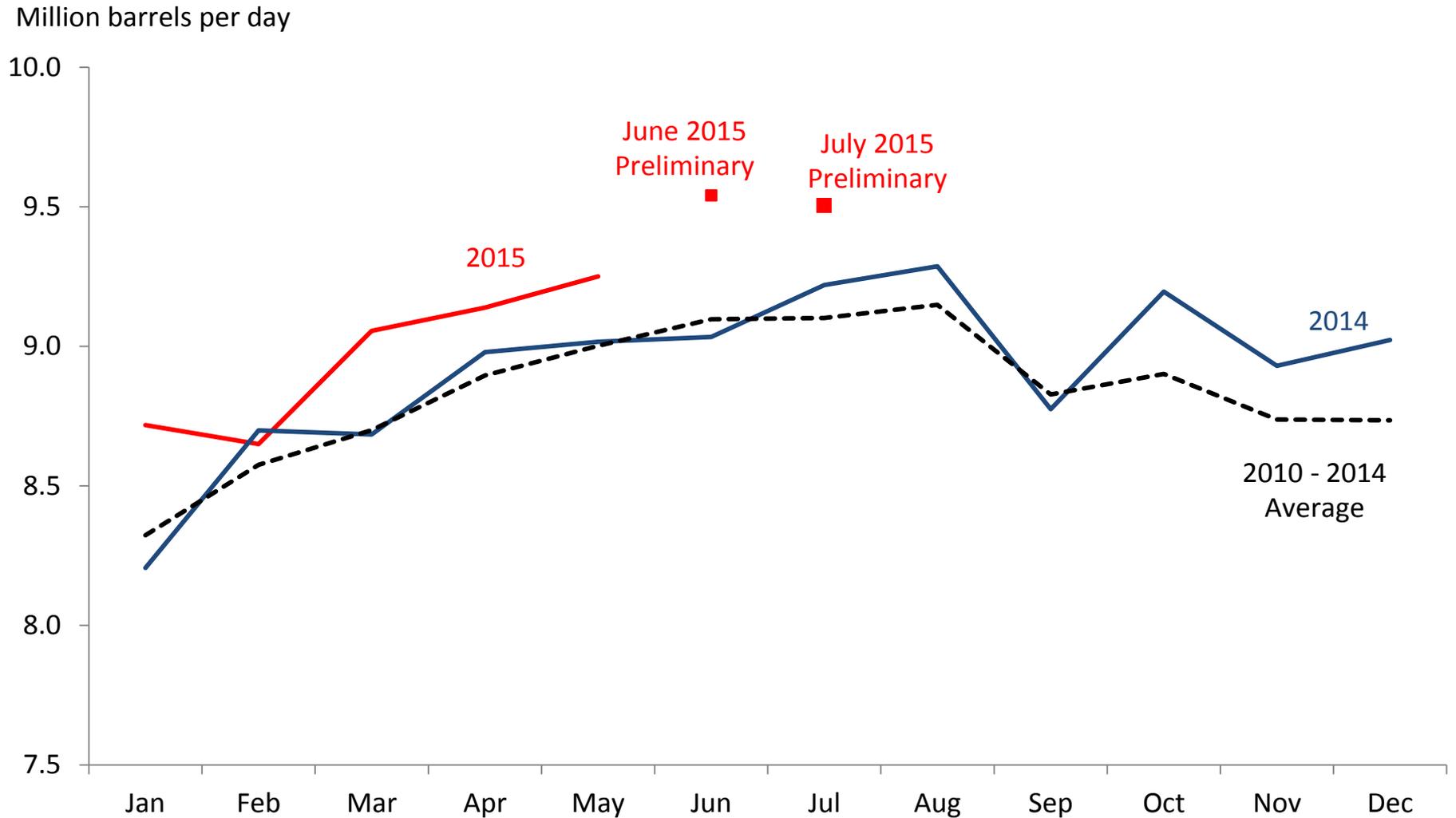


# Outlook

- Market is adjusting
  - Lower prices are leading to a contraction of supply and increase in demand
- Global GDP growth is expected to rise over time
- U.S. supply response will be swifter than in the past
- Uncertainties abound
- Oil price risks more on the downside in the short run
- Overall U.S. economy should continue to benefit from lower oil prices.



# Gasoline consumption strong



SOURCE: Energy Information Administration.



# Outlook

- Market is adjusting
  - Lower prices have led to a contraction of supply and increase in demand
- Global GDP growth expected to rise over time
- Uncertainties abound
- Oil price risks more on the downside in the short run



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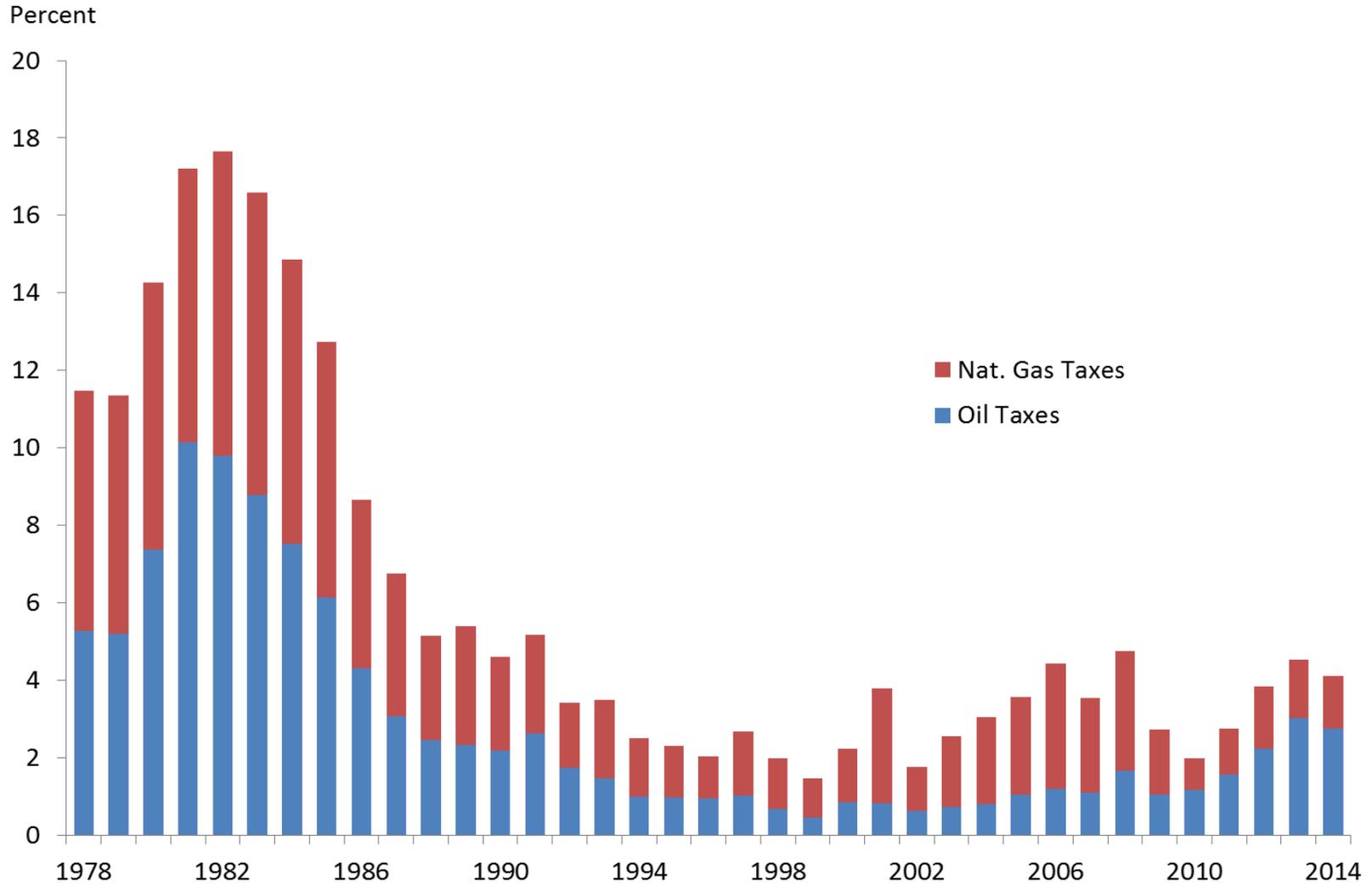


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# Oil and Gas Share of Tax Revenue



Source: Texas Comptroller

