

**Texas Senate Natural Resources Subcommittee  
Hearing  
Studying Impacts of Mexico's  
Energy Reforms on Texas**

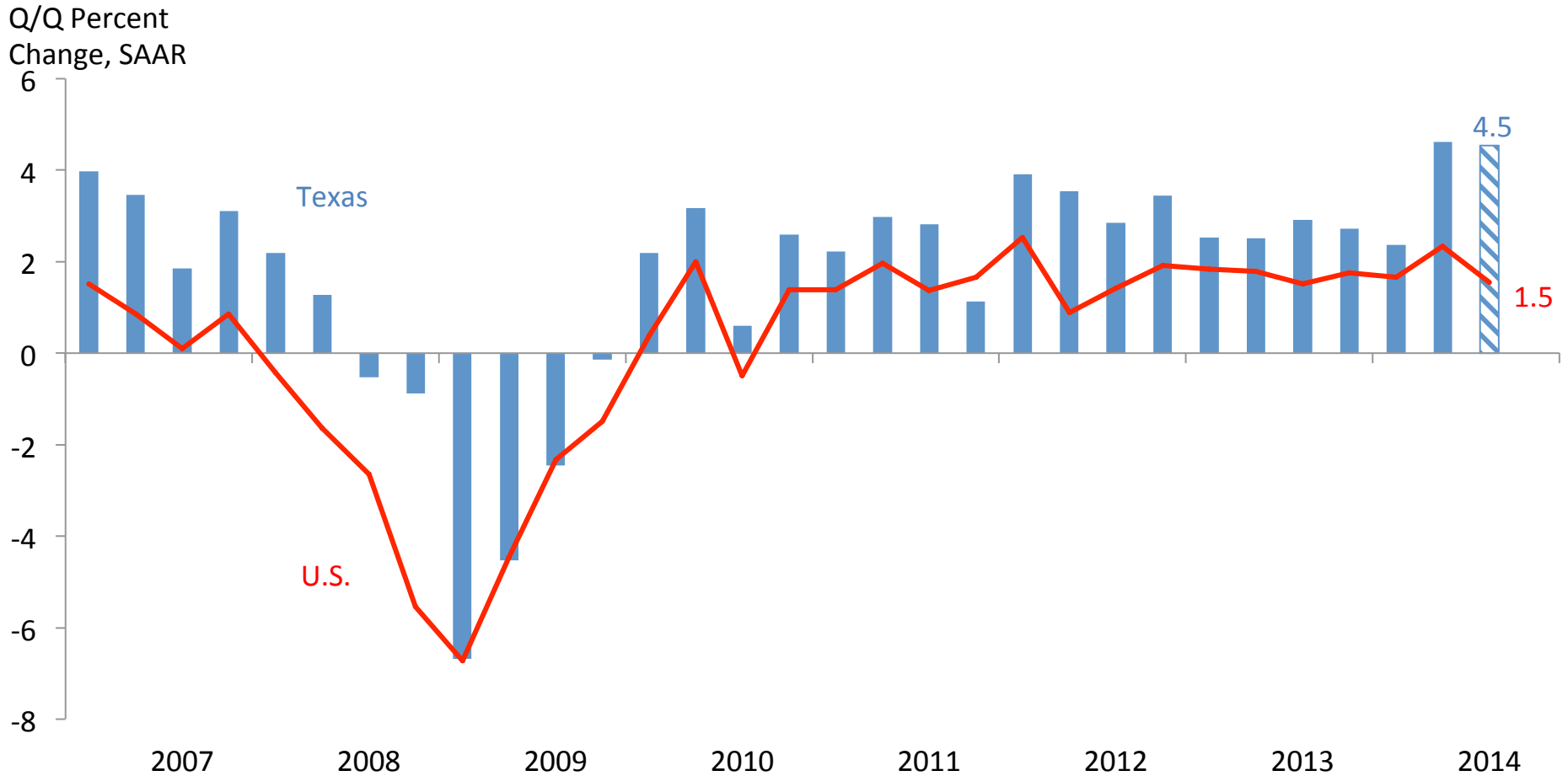
Jesus Cañas  
Business Economist  
Federal Reserve Bank of Dallas  
September, 19 2014

*The views expressed in this presentation are strictly those of the author and do not necessarily reflect the positions of the Federal Reserve Bank of Dallas or of the Federal Reserve System. Any secondary distribution of this material is strictly prohibited. May be quoted with appropriate attribution to the author*

# Outline

- Texas employment, oil & gas production
- Eagle Ford
  - Benefits (Employment , wages, sales, prod.)
- Aspirations for the valley, too optimistic?
  - Fracking and Pemex, “ejido” problem, insecurity
- Structural problems
  - Infrastructure, wage pressures, inflation
- Summary

# Texas' employment growth bests nation's



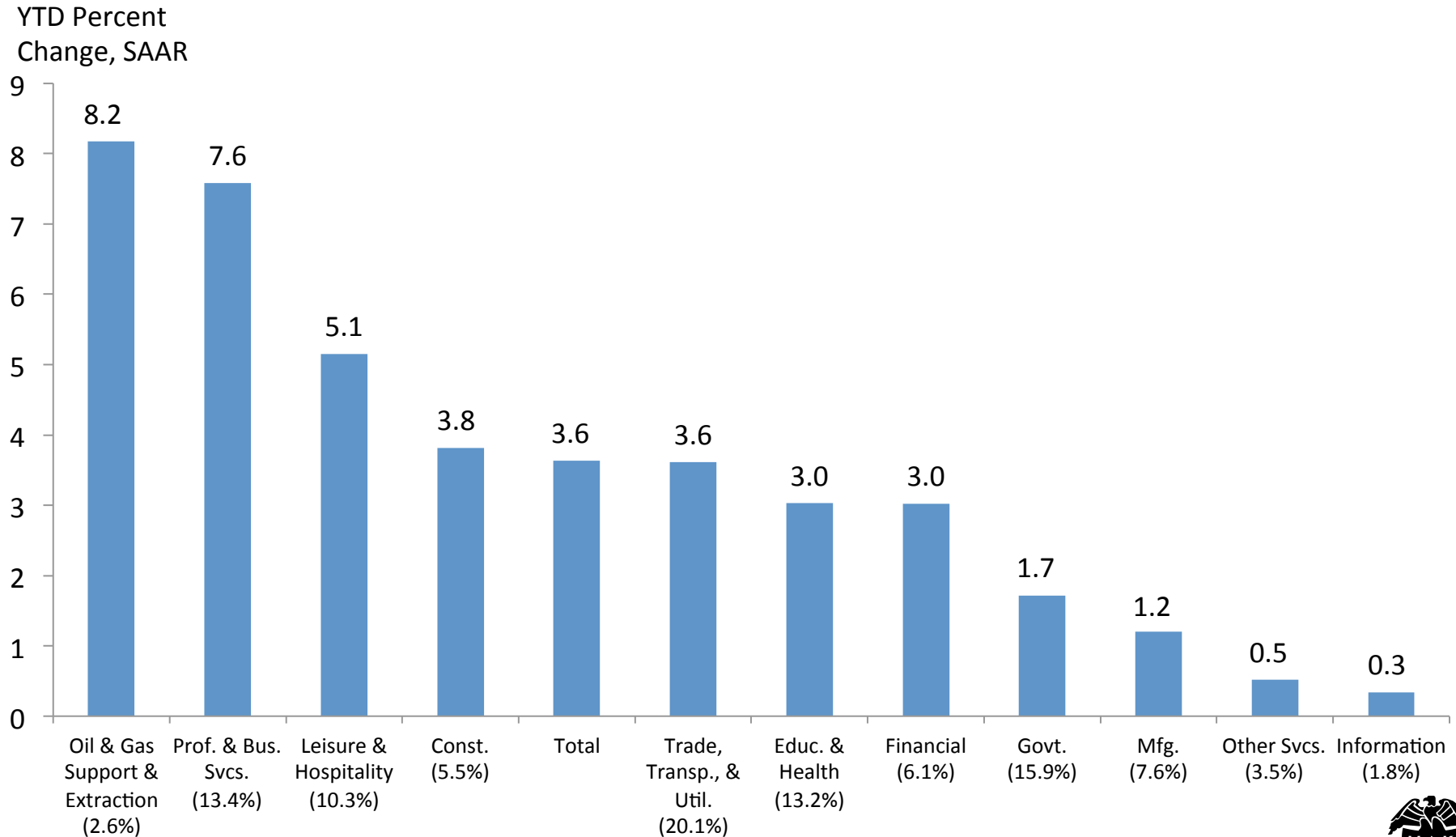
NOTES: Shaded region is August/June for U.S. and July/June for Texas. Quarterly employment is last month of a quarter.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal adjustments by FRB Dallas.

Federal Reserve Bank of Dallas



# Job Growth Broad-Based in Texas but Energy Related Employment Growing the Most



NOTE: Texas and U.S. reference month is July.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal adjustments by FRB Dallas.

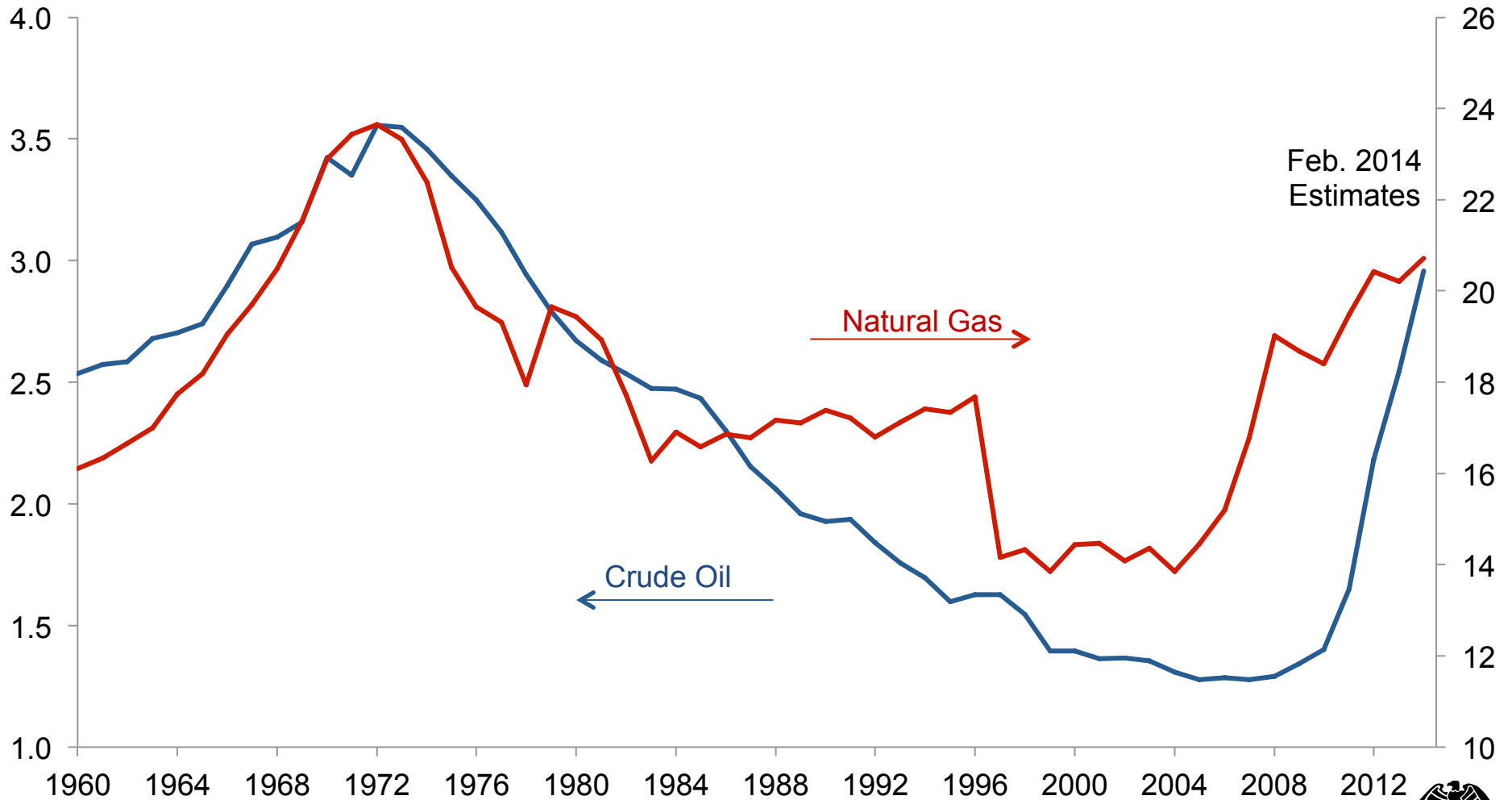
Federal Reserve Bank of Dallas



# Texas energy production up strongly

Million barrels per day

Billion cubic feet per day



Federal Reserve Bank of Dallas



# Texas in Perspective

## Oil and gas production in Selected Countries

### Crude Oil (mb/d) 2013

- World 75.6
- Russia 10.0
- Saudi Arabia 9.7
- **U.S. 8.4 (April 2014)**
- Canada 3.4
- **Texas 2.9 (Feb 2014)**
- Mexico 2.6
- Kuwait 2.6
- Venezuela 2.3
- Qatar 1.6
- Norway 1.5

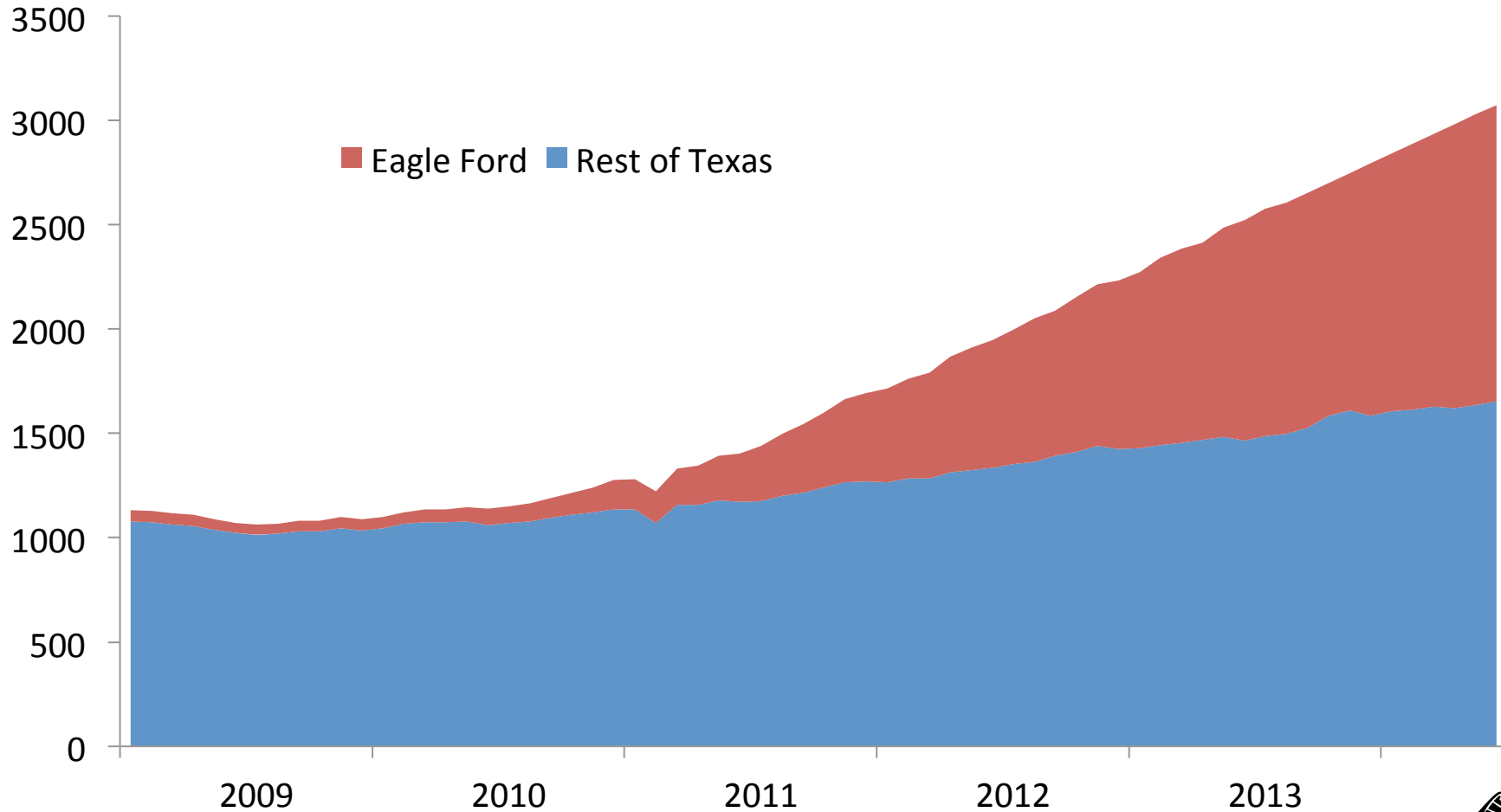
### Natural Gas (tcf) 2013

- World 122.8
- **U.S. 25.6**
- Russia 23.8
- **Texas 7.4**
- Iran 6.1
- Canada 5.7
- Qatar 4.9
- Norway 3.7
- Saudi Arabia 3.6
- Algeria 3.5
- Mexico 1.8



# Monthly Oil Production Eagle Ford and Rest of Texas

Thousands of barrels per day



SOURCES: Energy Information Administration.

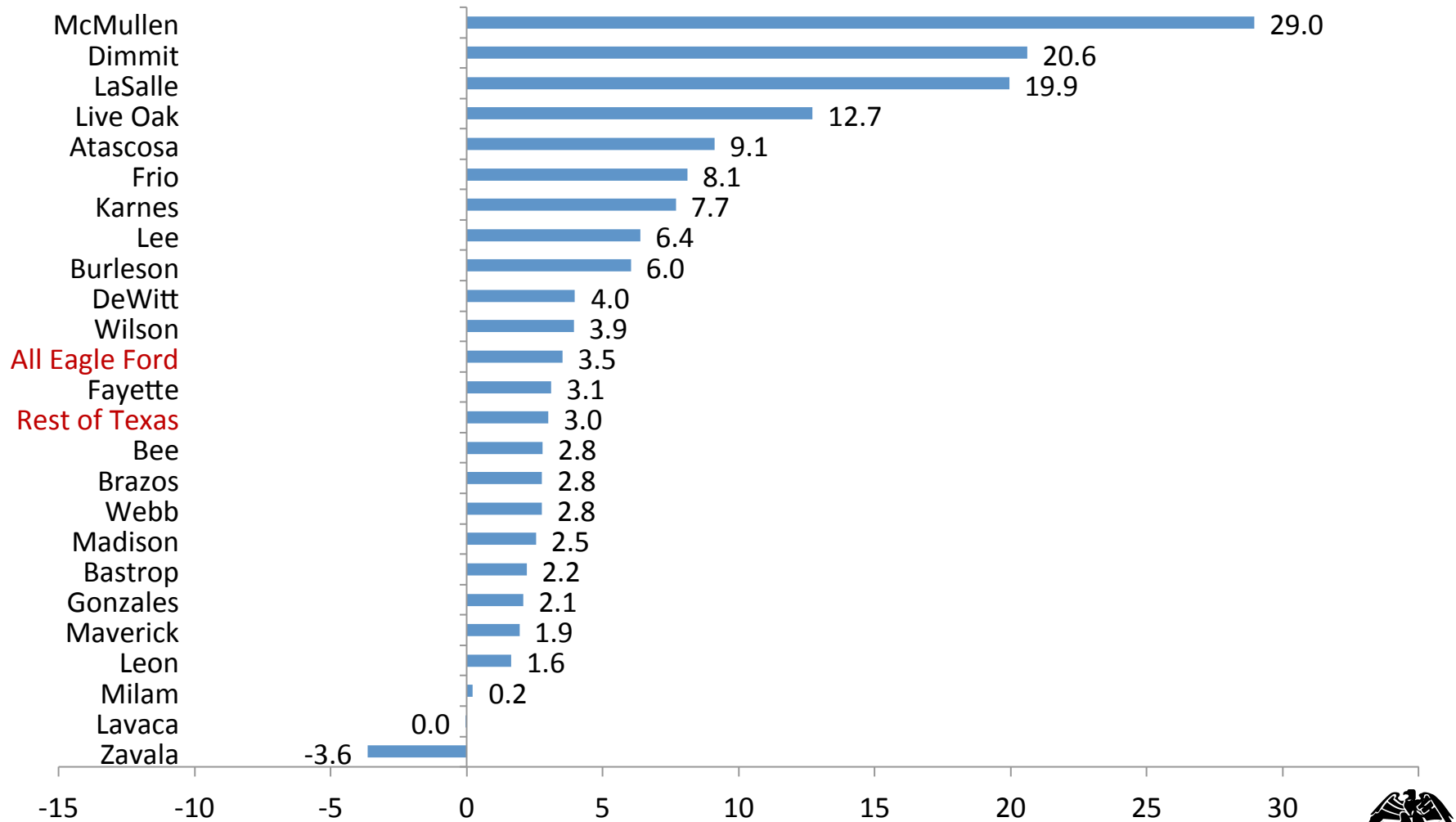
Federal Reserve Bank of Dallas



# Employment Across Eagle Ford Counties

(Annualized Percent Change)

First quarter 2010 to fourth quarter 2013



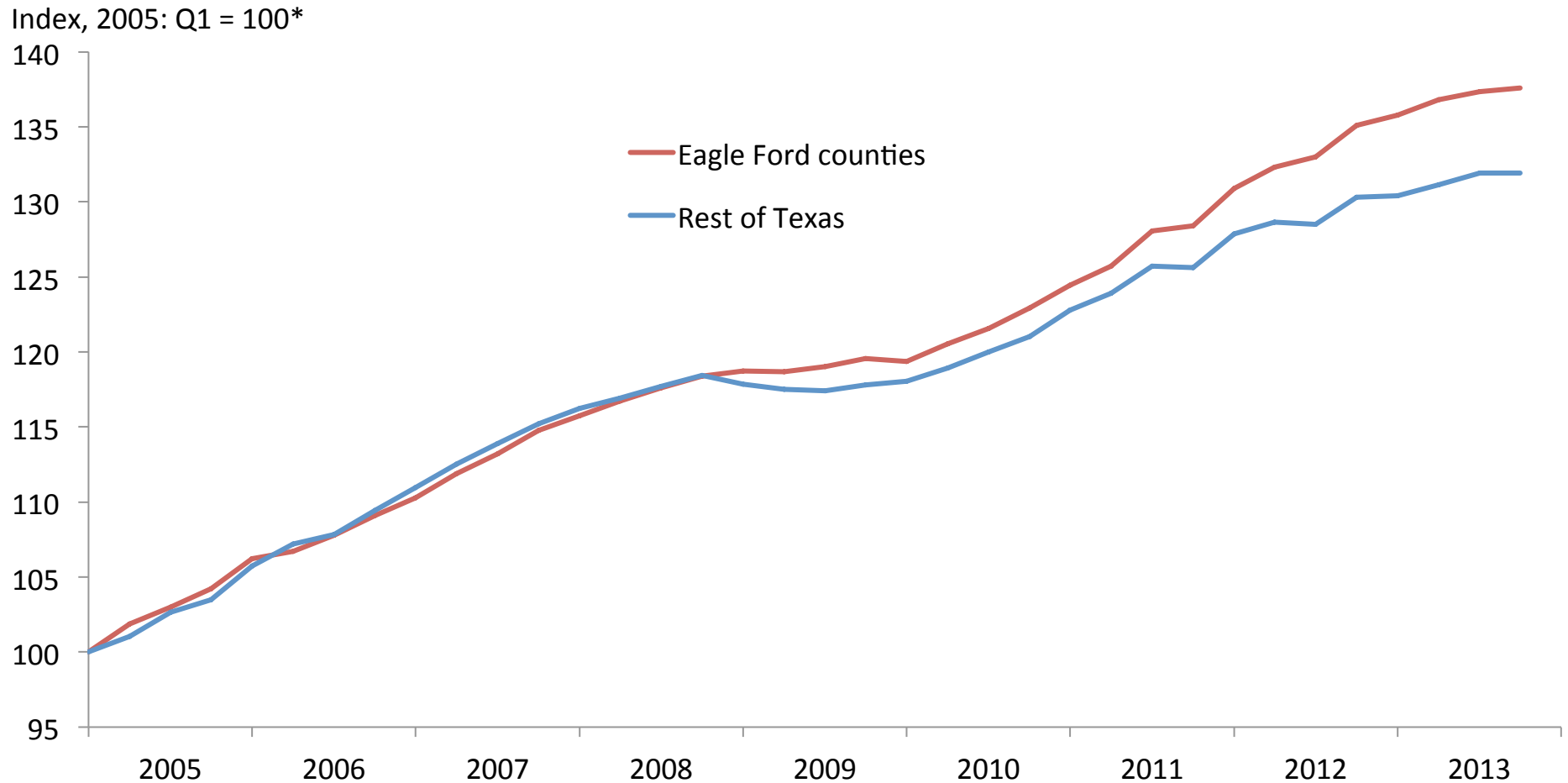
SOURCES: Texas Workforce Commission; Federal Reserve Bank of Dallas.

Federal Reserve Bank of Dallas





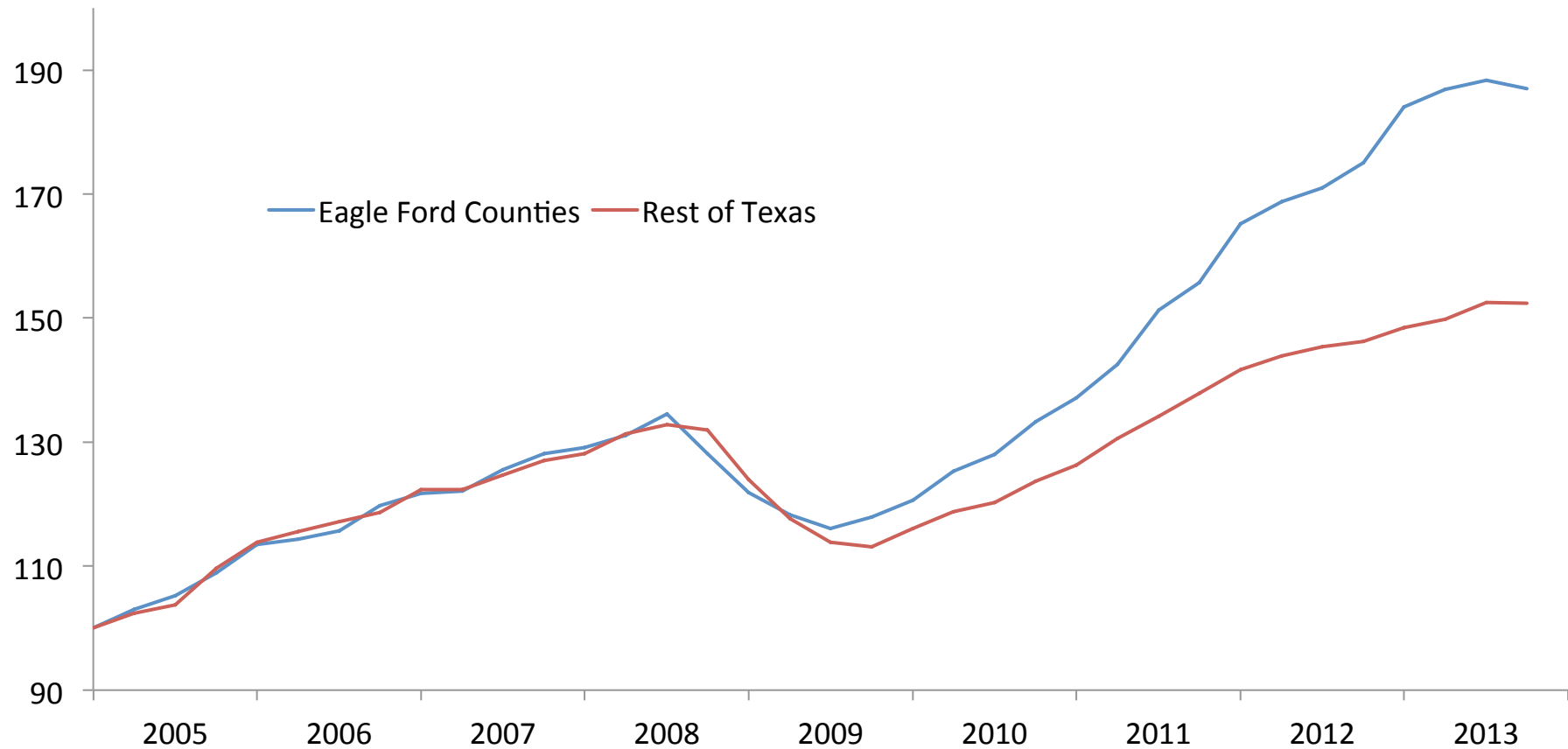
# Wages Growing Faster in Eagle Ford



Average Weekly Wages in Eagle Ford and Rest of Texas  
Texas Workforce Commission; Federal Reserve Bank of Dallas.

# As Well as Taxable Sales

Index, 2005:Q1 = 100\*

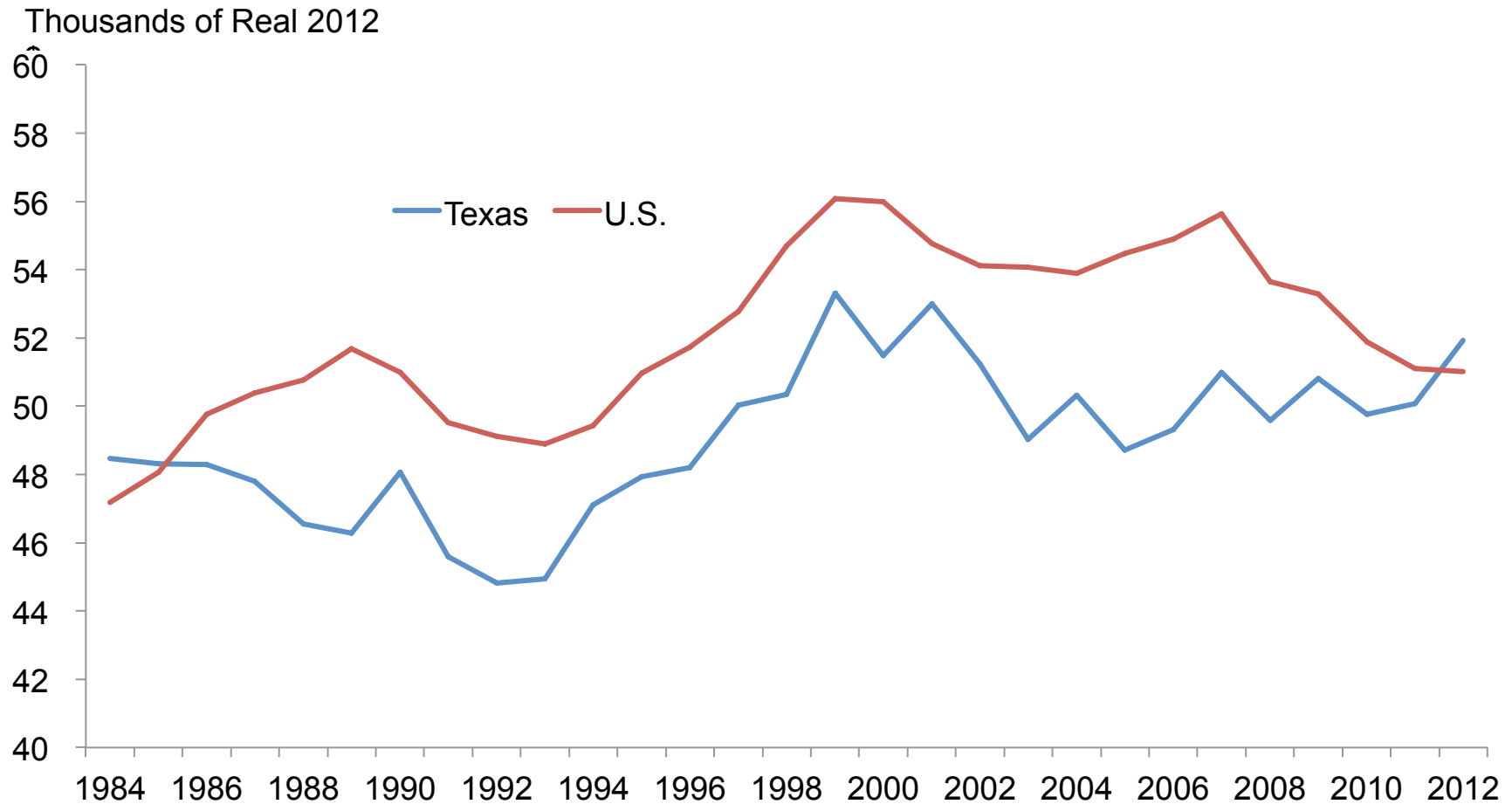


\*Seasonally adjusted.

SOURCES: Texas Comptroller of Public Accounts; Federal Reserve Bank of Dallas.

# Texas incomes close the gap

(real median household income)



SOURCE: March CPS.

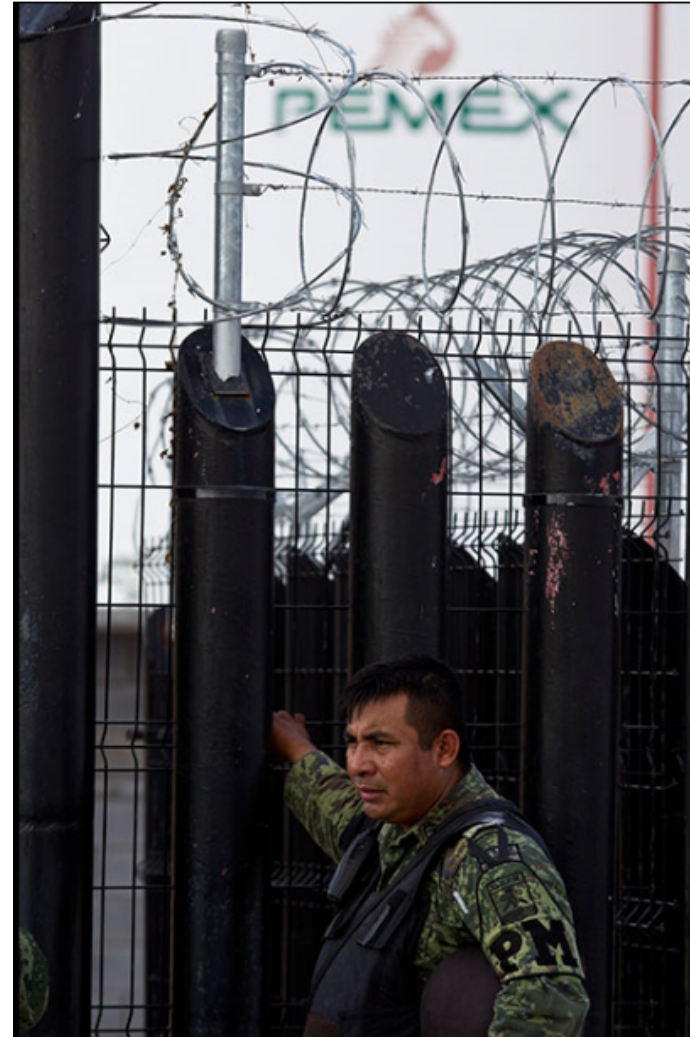
# From decree to reality

# Implementation Issues

- PEMEX for "low-hanging fruit" (mature fields)
- Communal land known as ejidos
  - 51 percent of Mexico's surface is owned or controlled by ejidos

# Implementation Issues

- Security
  - Theft from PEMEX  
> \$1 billion per year

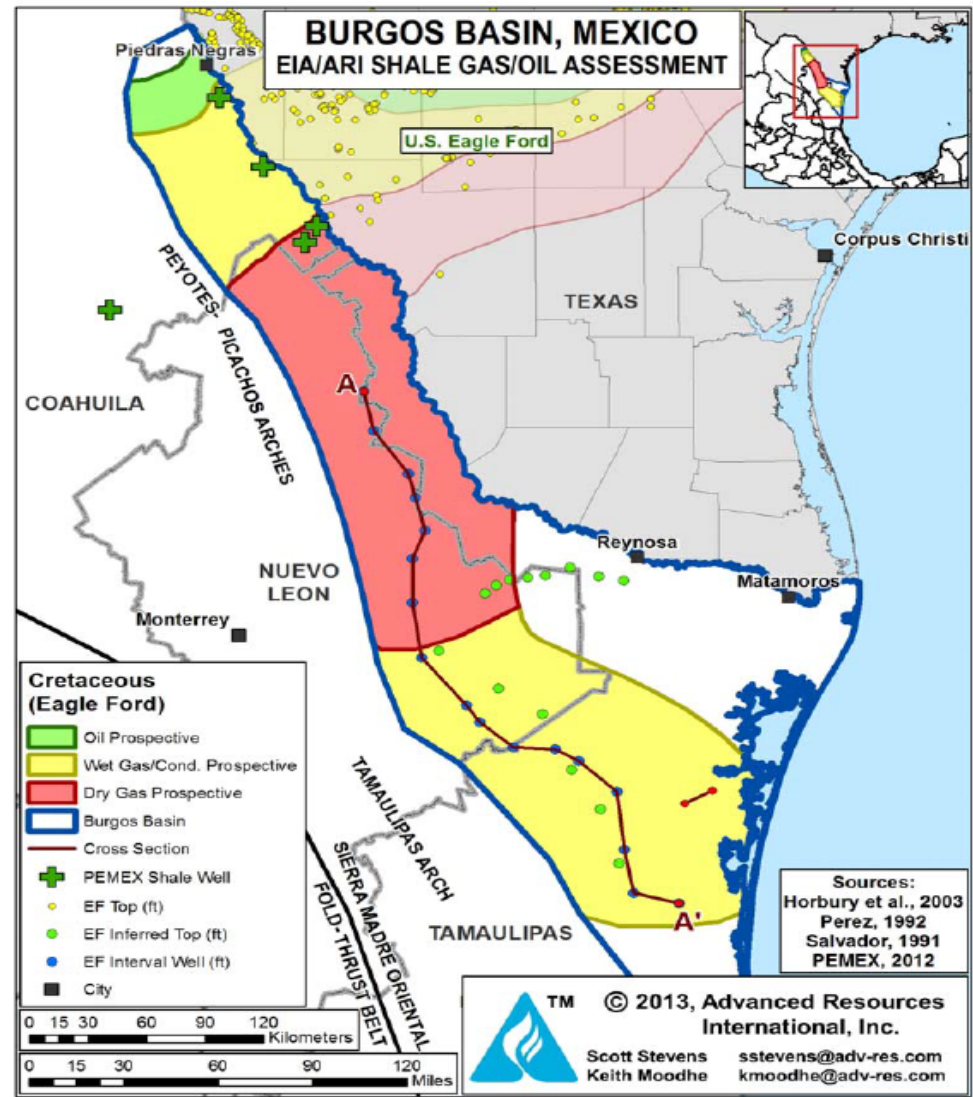


Source: Associate Press



# Burgos Basin Prospective Areas for Shale Gas and Shale Oil

- Oil deposits may only be located across from Eagle Pass in Piedras Negras municipality
- Less attractive dry and wet gas closer to Reynosa and Matamoros



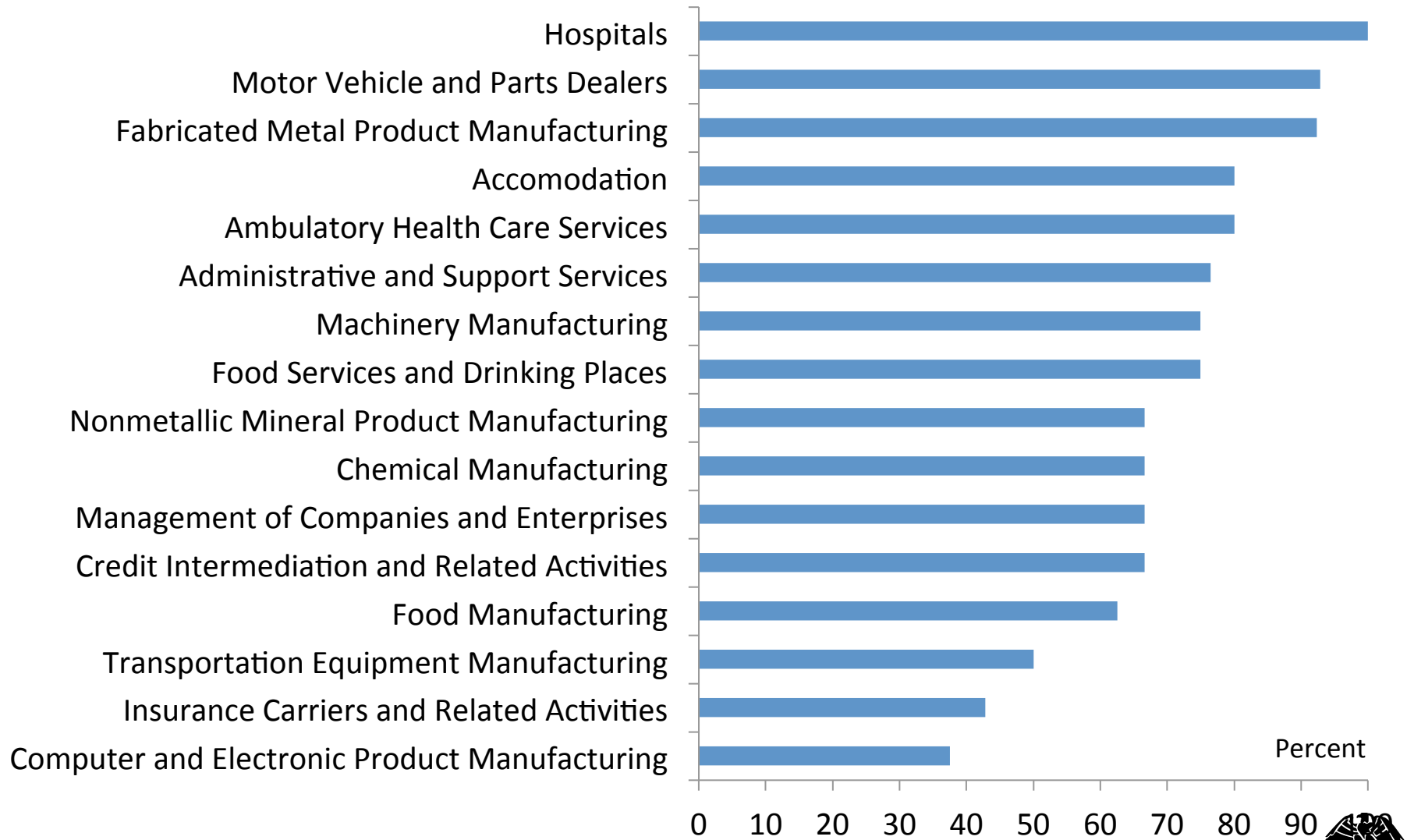
SOURCE: ARI, 2013.

# Domestic Issues



# Both Hard and Soft Skills in High Demand

## Reasons for Problems Finding Qualified Workers

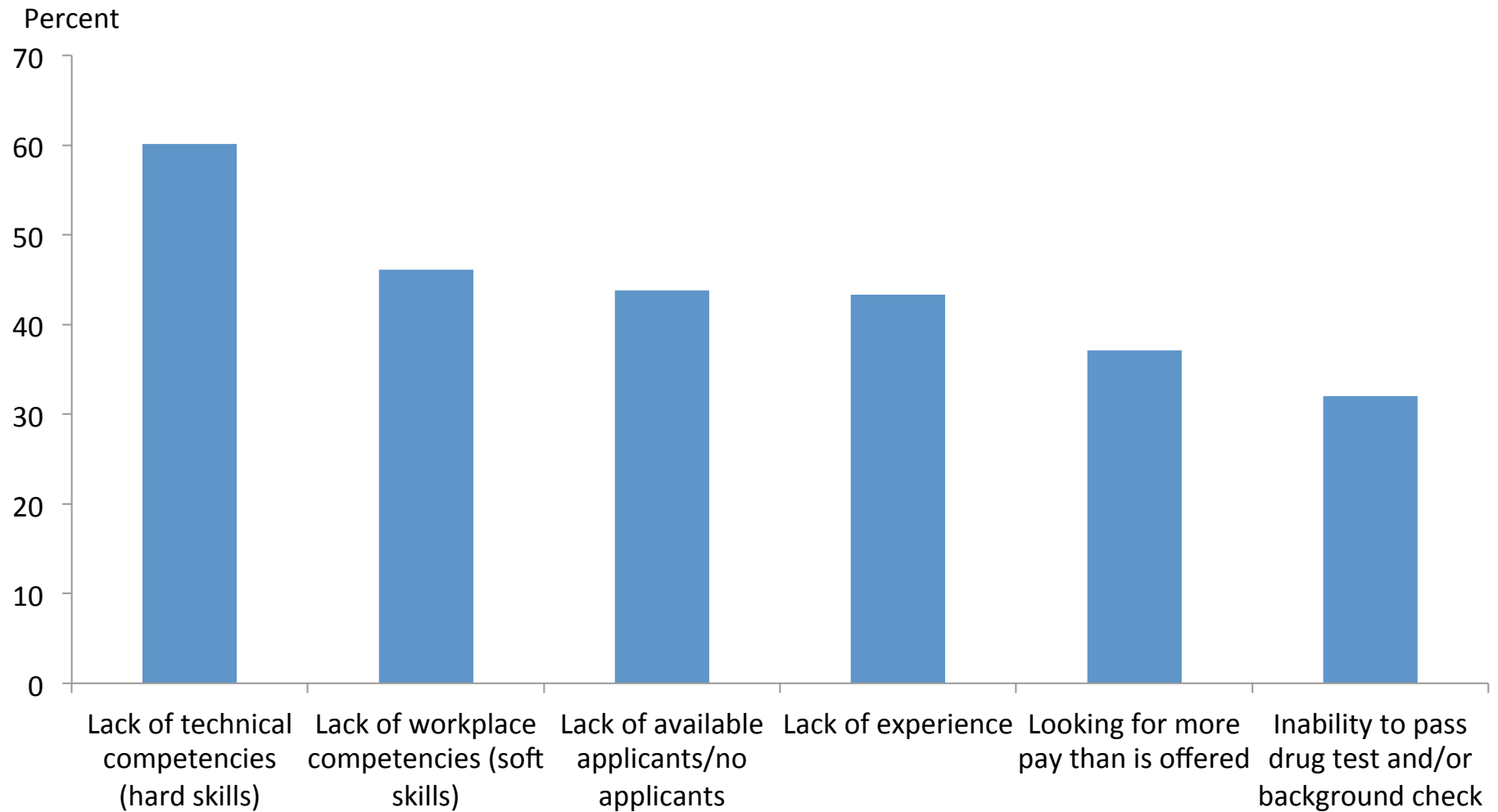


Source: Federal Reserve Bank of Dallas Texas Business Outlook Surveys, May 2014 special questions survey



# Both Hard and Soft Skills in High Demand

## Reasons for Problems Finding Qualified Workers

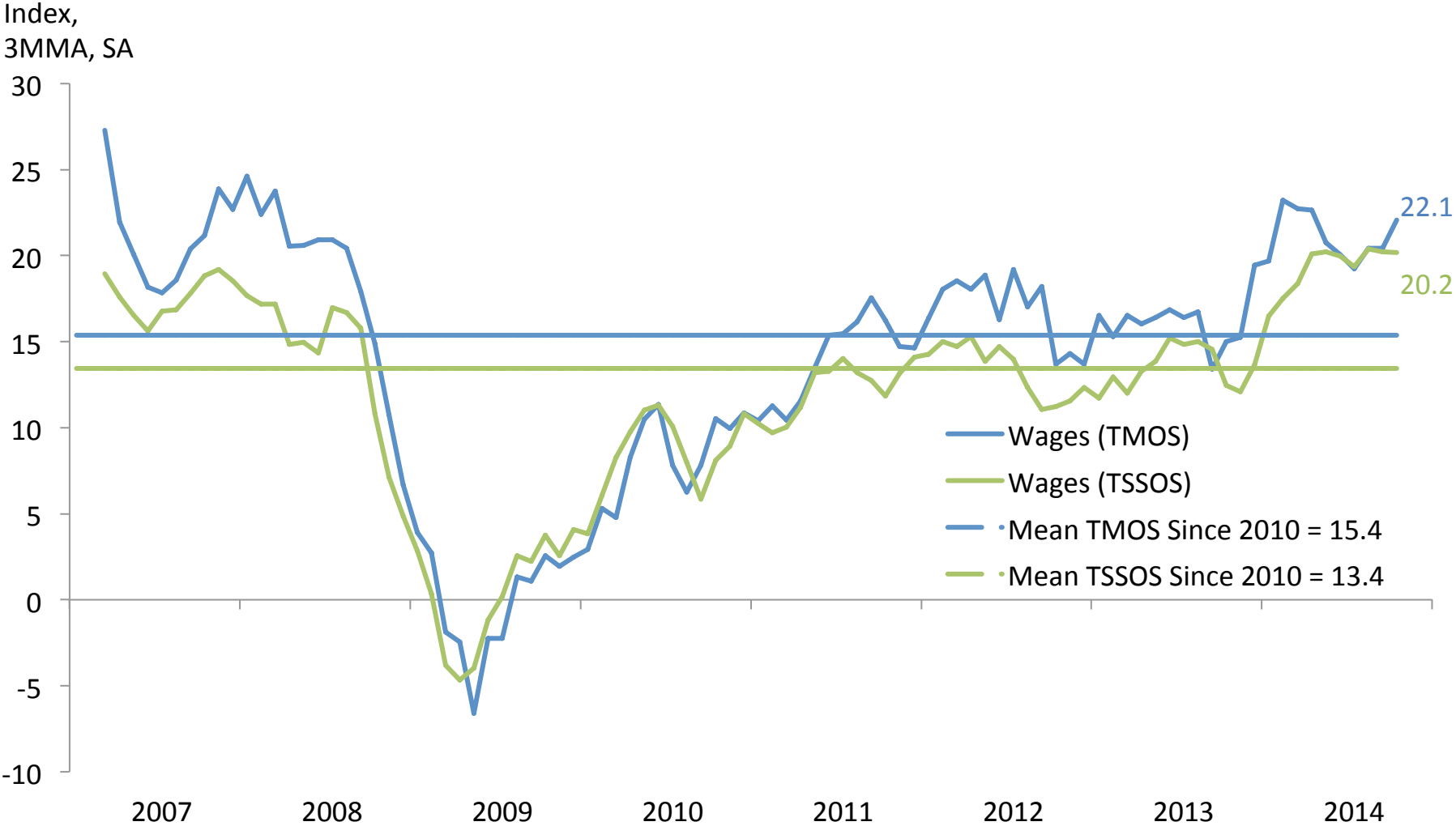


SOURCE: Federal Reserve Bank of Dallas Texas Business Outlook Survey, May 2014 special questions survey.

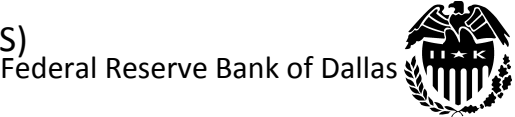
Federal Reserve Bank of Dallas



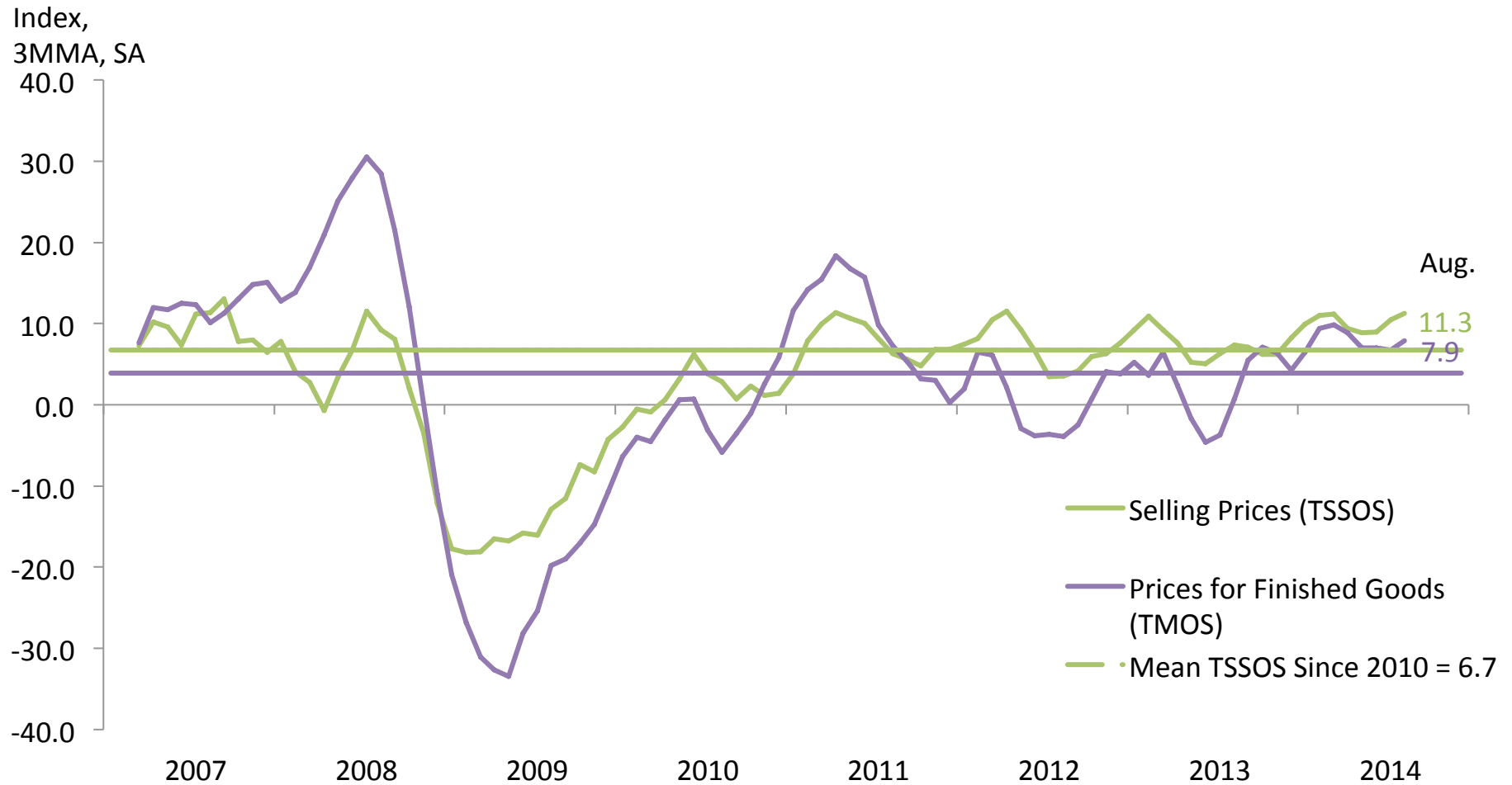
# Wage Pressures at Post-Recession Highs



SOURCES: Federal Reserve Bank of Dallas Texas Manufacturing Outlook Survey (TMOS)  
Texas Service Sector Outlook Survey (TSSOS).



# Price Pressures Above their Post-Recession Averages



SOURCES: Federal Reserve Bank of Dallas Texas Manufacturing Outlook Survey (TMOS); Texas Service Sector Outlook Survey (TSSOS).

# Summary

- Strong job and wage growth could spread across the Texas valley
  - Technical expertise will flow from Texas to Mexico
  - Investment will flourish in both sides of the border
  - Trade between Texas and Mexico will increase

A 10 percent increase in maquiladora output leads to an increase in the adjacent U.S. city as follows:

- 2.8 percent increase in total employment in El Paso
- 4.6 percent increase in total employment in Laredo
- 2.2 percent increase in total employment in Brownsville
- 6.6 percent increase in total employment in McAllen

The bulk of the impact is on the service of the economy

# Summary

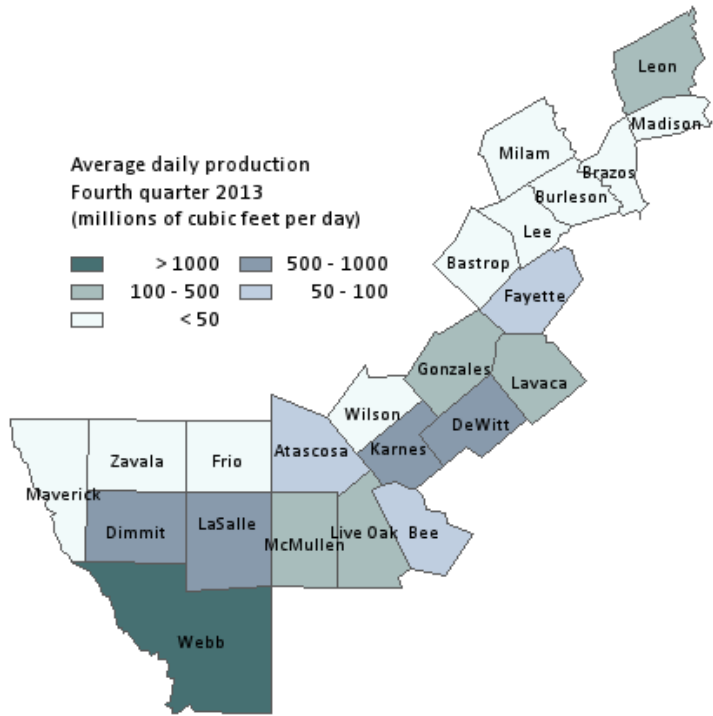
However...

- Demand for workers, high and low skilled
  - Greater labor shortages, wage pressures
- Legal system in Mexico, security could limit benefits

# Questions?

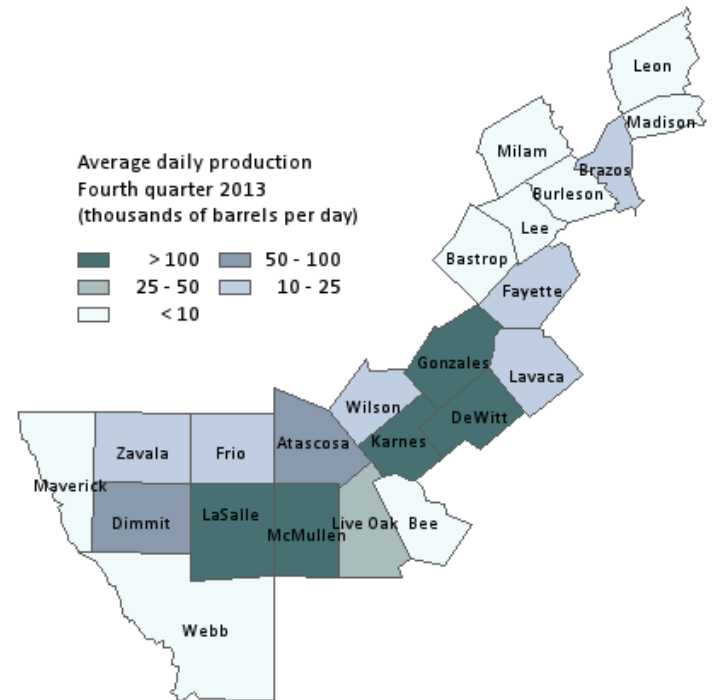
Please go to  
[www.dallasfed.org](http://www.dallasfed.org)  
for data and regional  
information.

### Gas Production Zones in Eagle Ford Shale



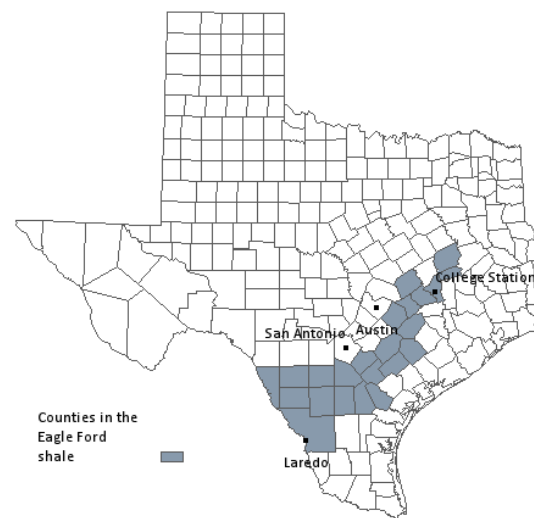
SOURCES: Energy Information Administration; Railroad Commission of Texas; calculations by Federal Reserve Bank of Dallas.

### Oil Production Zones in Eagle Ford Shale



SOURCES: Energy Information Administration; Railroad Commission of Texas; calculations by Federal Reserve Bank of Dallas.

### Location of Eagle Ford Shale



SOURCE: Energy Information Administration.

Federal Reserve Bank of Dallas





# Texas Economic Update

- Texas grew 3.7 % through May
  - Added 171,500 jobs
- Manufacturing job growth weak, but output expanding
- Construction and energy came in strong
- Outlooks optimistic
- Expect 3-3.5% growth for the year
- Texas will outpace nation in 2014.