What Drives Texas?

Mine Yücel
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What sets Texas apart?

Equal Share to U.S.
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Equal Share to U.S.

O&G Extraction

Location Quotient

O&G
Ref & Hi-Tech
Extrac Petrochem
Mfg
Svc
Exports
Const
Trade, Trans & Util
Info
Fin Activities
Prof & Bus
Educ
Leisure & Hosp
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O&G Extrac
Ref & Petrochem
Hi-Tech Mfg
Hi-Tech Svc
Exports Const Mfg Trade, Trans & Util Info Fin Activities Prof & Bus Educ Leisure & Hosp

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Exports

0 1 2 3 4 5

O&G Extrac Petrochem Mfg Svc Const Mfg Trade, Trans & Util Info Fin Activities Prof & Bus Educ Leisure & Hosp
Energy in Texas

• Texas #1 producer of oil and gas in the nation
  – 28% of oil production
  – 28.4% of natural gas production
• Texas has
  – 25% of U.S. refinery capacity
  – 60% of U.S. petrochemical production
• Prominence of oil and gas extraction industry has diminished, but remains substantial
• High energy prices still benefit the Texas economy
Oil and gas output share reflects energy prices

Share of Total Texas

WTI Spot Price

Federal Reserve Bank of Dallas
Oil and gas and the Texas economy

• Texas went into recession with the collapse of oil prices in 1986
  – Sector lost half its employment
• Texas economy diversified away from oil following the recession
• Share of energy declined as economy recovered
Oil and gas output share reflects energy prices

Share of Total Texas

WTI Spot Price

Percent

$/barrel

'63 '66 '69 '72 '75 '78 '81 '84 '87 '90 '93 '96 '99 '02 '05 '08 '11

Federal Reserve Bank of Dallas
Oil and gas output share reflects energy prices

Share of Total Texas

WTI Spot Price

Percent

$/barrel

Federal Reserve Bank of Dallas
Growth of shale gas in Texas

- Energy sector’s resurgence driven first by natural gas, then oil
- Improvements in technology key:
  - Horizontal drilling
  - Hydraulic fracturing
- Texas produced 70% of U.S. shale output in 2009, 45% in 2011.
Refining and petrochemicals

• Texas # 1 in downstream production
• High oil and gas prices hurt downstream industries
• Strong growth in foreign demand boosts downstream industry
High Tech in Texas

• High-tech manufacturing and services an important economic driver in the 90s
  – High-tech manufacturing output grew 20X as fast as Texas GDP
  – Austin -- “silicon prairie”
  – Dallas – “telecom corridor”

• Tech bust caused industry downsizing

• Growth strongest in computer systems design since bust
Boom and bust in high-tech manufacturing

Thousands, SA


Federal Reserve Bank of Dallas
Texas high-tech employment growth

Index, '90=100


Computer Systems Design
Teleco Data Processi Computer & Electronics

Federal Reserve Bank of Dallas
Texas high-tech output

 Millions, real $
TX exports outgrow CA and the U.S.

Index,
Jan. 1997 = 100
Texas trade

• The Gulf Coast and the U.S.–Mexico border are key trading regions for Texas.

• Texas Gulf Coast is a major producer of oil, oil products, petrochemicals and plastics.
  – Exports have grown rapidly in recent years.

• Mexico is our largest trade partner.
  – Much of the trade on the border is intra-industry: parts sent to Mexico for assembly and later returned to the U.S. as final goods
# Texas’s top trading partners

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>34.7%</td>
</tr>
<tr>
<td>Canada</td>
<td>8.8%</td>
</tr>
<tr>
<td>China</td>
<td>4.4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>4.0%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.6%</td>
</tr>
<tr>
<td>Korea</td>
<td>3.0%</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.6%</td>
</tr>
<tr>
<td>Colombia</td>
<td>2.0%</td>
</tr>
<tr>
<td>Japan</td>
<td>1.8%</td>
</tr>
<tr>
<td>Belgium</td>
<td>1.7%</td>
</tr>
<tr>
<td>UK</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
# Texas’s top exports

<table>
<thead>
<tr>
<th>Industry</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum and coal</td>
<td>20.5</td>
</tr>
<tr>
<td>Chemicals</td>
<td>18.7</td>
</tr>
<tr>
<td>Computers and electronics</td>
<td>16.8</td>
</tr>
<tr>
<td>Machinery</td>
<td>11.0</td>
</tr>
<tr>
<td>Transportation equipment</td>
<td>8.6</td>
</tr>
<tr>
<td>Ag</td>
<td>3.3</td>
</tr>
<tr>
<td>Electrical appliances</td>
<td>3.1</td>
</tr>
<tr>
<td>Primary metals</td>
<td>3.0</td>
</tr>
<tr>
<td>Fabricated metals</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Texas exports grew strongly

Petroleum and Chemicals
High-tech
Texas Economy

• Texas economy in expansion
• Texas employment grew 1.8 percent in 2011
  – Added a total of 189,300 jobs
  – 262,200 private jobs
• 93,800 jobs added in 2012 through April.
• Expect 2.5 percent growth in 2012
Texas’ employment growth bests nation’s
The Texas Recovery: Strengths

- Strong energy sector
- Rapidly growing exports
- No housing bubble or bust
- Healthy banks
- State finances relatively healthy, although budget cuts hurt
2012 employment growth by sector

(NAICS Super Sectors, SA by FRB Dallas

YTD percent change, SAAR

-4 -2 0 2 4 6 8 10 12 14

Trade, Transp & Utilities (20.1%) 3.2
Government (16.5%) -1.4
Educational & Health Services (13.6%) 3.1
Prof. & Business Services (12.8%) 1.7
Leisure & Hospitality (9.9%) 3.5
Manufacturing (8.0%) 4.0
Financial Activities (6.1%) 3.5
Construction (5.3%) 7.8
Oil & Gas Extraction and Mining Support (2.4%) 12.8
Information (1.9%) 4.0

Federal Reserve Bank of Dallas
Exports weak in 2012

Index, SA Real
Jan. 2000=100
Summary

• Energy, tech and trade have been major drivers of Texas growth in the past
• These sectors have changed and restructured over the years
• Remain mainstays of the Texas economy
• Have been a source of strength in the recovery