



Institute for Energy Economics
and Financial Analysis

Texas petrochemical expansion lacks rewards for host cities

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Main Points

- Increased production in NGLs, primarily ethane, spurred petrochemical producers to build more cracking capacity, which even prior to the recent expansion the petrochemical industry was concentrated in three key regions along the Texas Gulf Coast.
- Our report focused on the companies and the cities where they operated, using their applications for tax abatement, to collectively look at the amount of capacity expansion, the investments in these projects, the tax reduction foregone by the school districts in the cities where the investment occurred.
- With the key question being “What did communities get in return for their sacrifice?”

U.S. ethane steam crackers by location



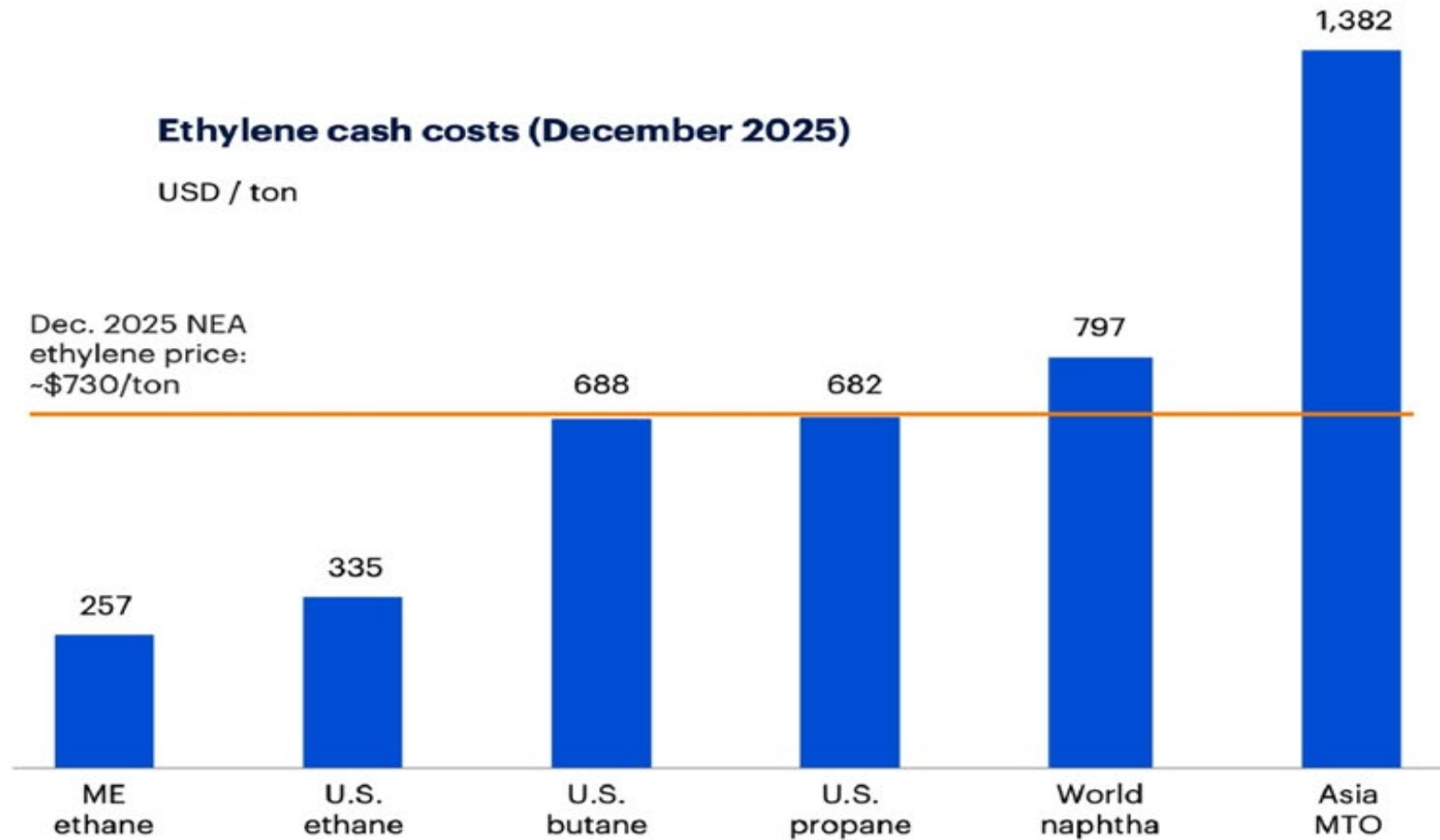
Source: Energy Information Administration map in Department of Energy report to Congress, *U.S. Ethane: Market Issues and Opportunities September 2022*

Summary of the Ethylene Capacity Expansion

	Expansion Investment	Capacity Added	Tax Incentives
	(\$ billion)	million tons per annum	(\$ million)
Golden Triangle	\$ 13.3	2.50	447
Houston Ship Channel	\$ 11.4	3.80	529
Coastal Bend	\$ 15.8	6.50	806
Total	\$ 40.5	12.8	1,782

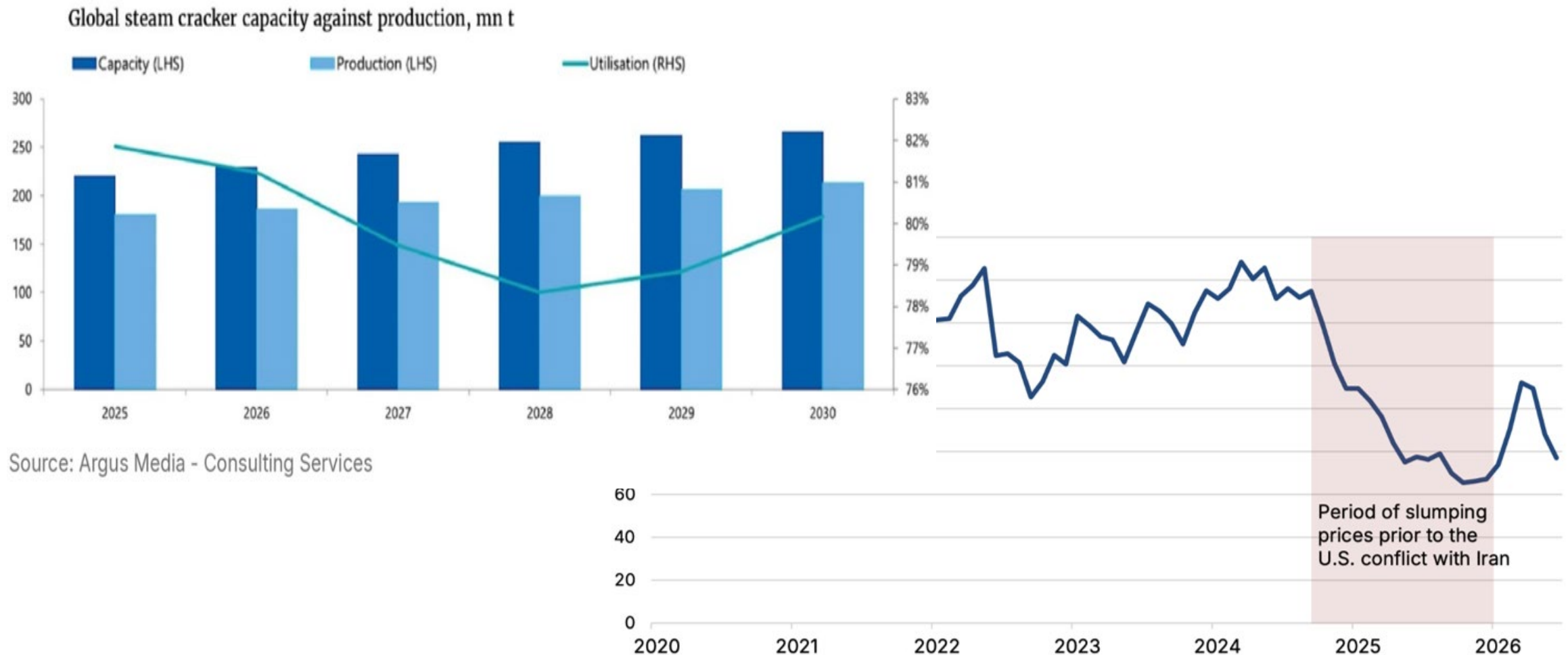
Source: Chapter 313 Applications to Texas Comptroller of Public Accounts for Tax Abatement, Company Press Releases

Lower Cost Provider Scenario



Note: ME stands for the Middle East; NEA stands for Northeast Asia.
Source: CMA, in LyondellBasell 2025 Investor Handbook

Oversupplied Conditions and Stock Performance



Source: Using S&P Global Capital IQ for share prices, IEEFA compiled an index including Celanese, Dow, LyondellBasell, and Westlake's monthly average share prices

Average Annual Population Growth 2010 to 2020

10-Yr CAGRs

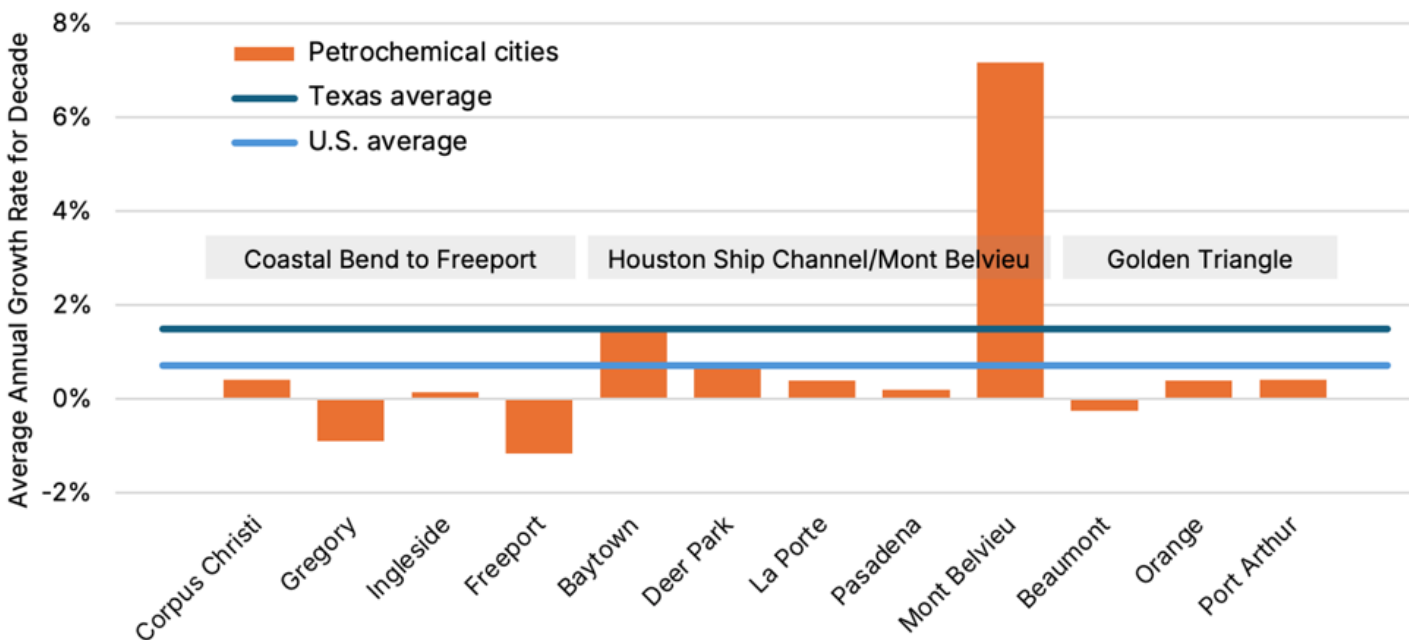
- National Population 0.7%
- Texas Statewide 1.5%
- Petrochem Cities 0.4%

Petrochemical Complex Host Cities

○ Corpus Christi	317k
○ Ingleside	10k
○ Gregory	2k
○ Freeport	11k
○ Baytown	85k
○ Deer Park	34k
○ La Porte	37k
○ Pasadena	149k
○ Mont Belvieu	9k
○ Beaumont	113k
○ Orange	19k
○ Port Arthur	56k

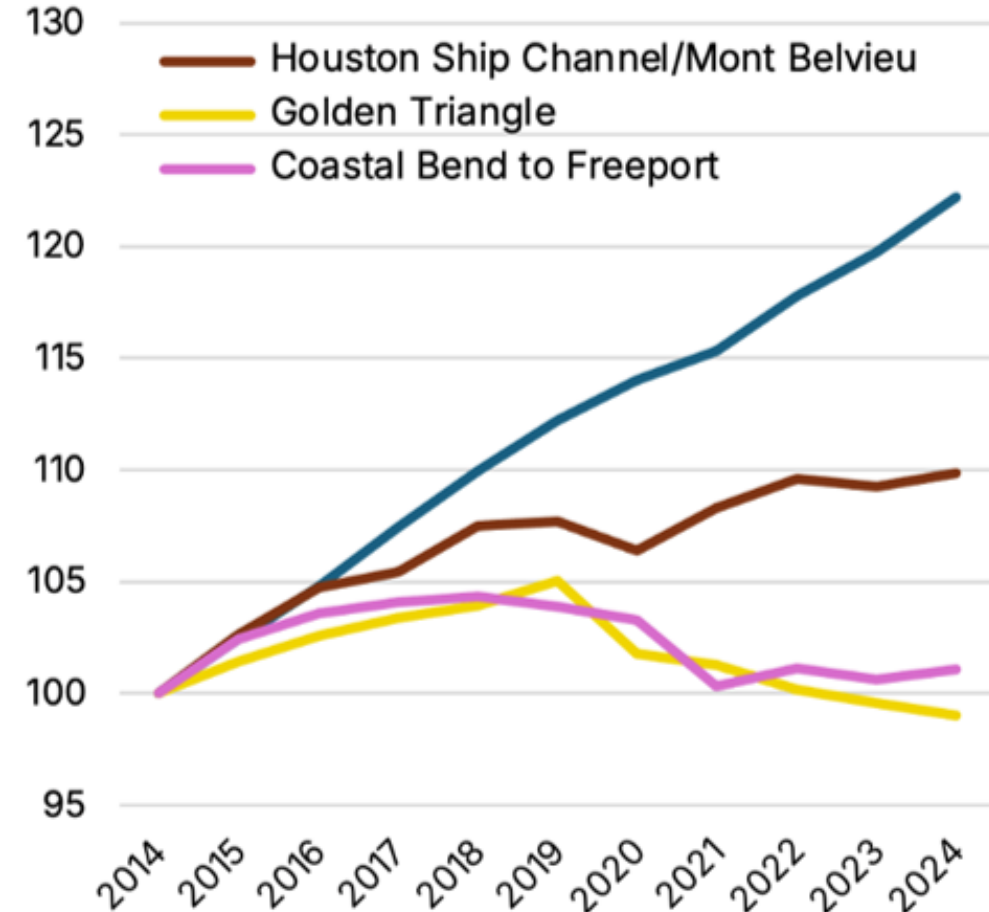
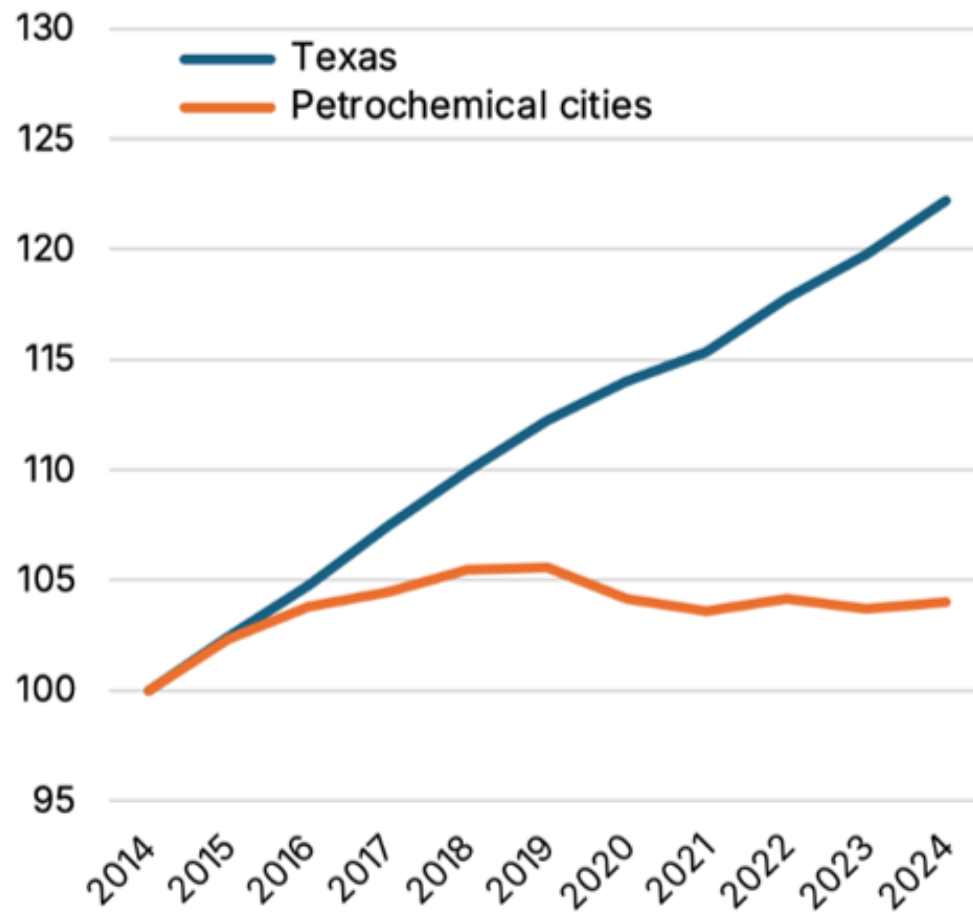
Total Population 842k

Average annual population growth between 2010 and 2020



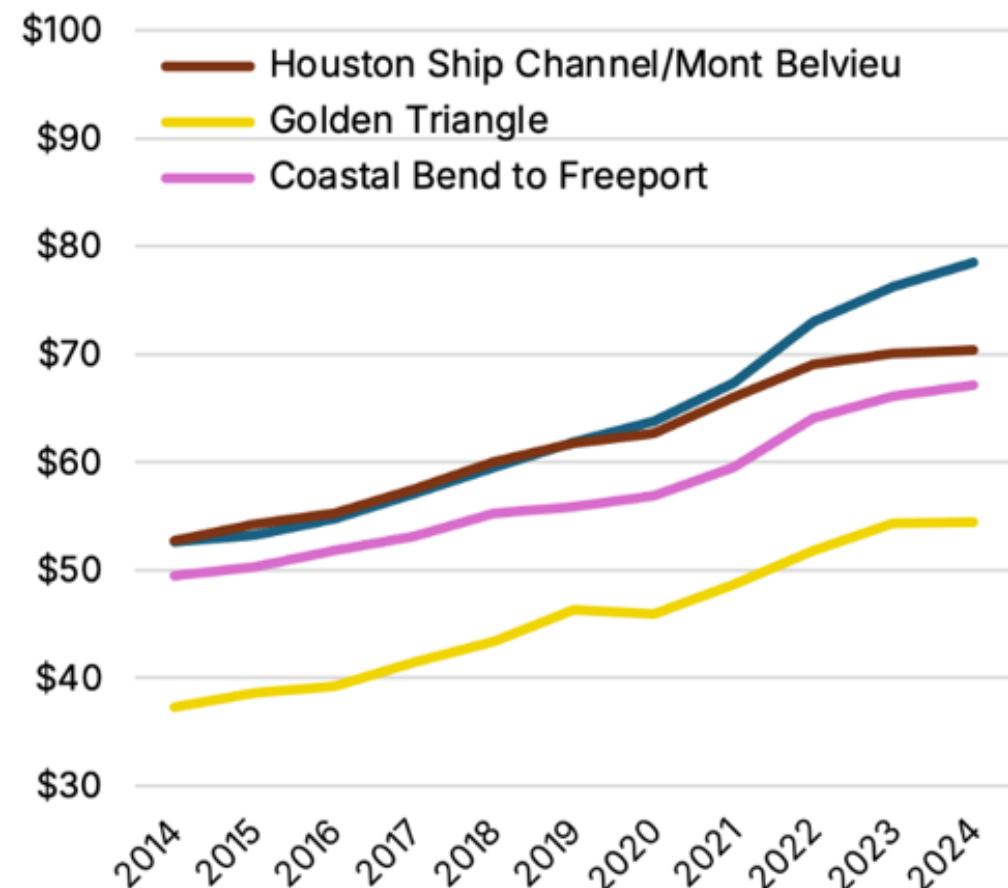
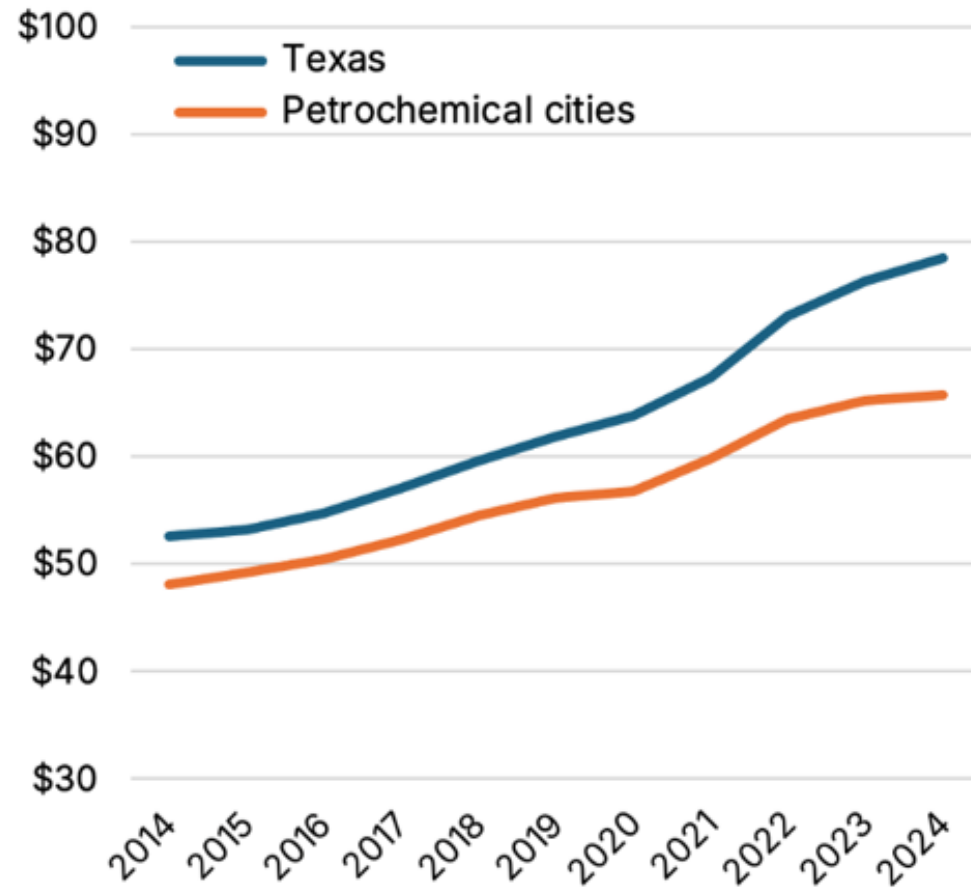
Sources: U.S. Census Bureau, Historical Population Change Data 1910 to 2020; Texas Census (2010, 2020)

Employed Workforce – Indexed Growth



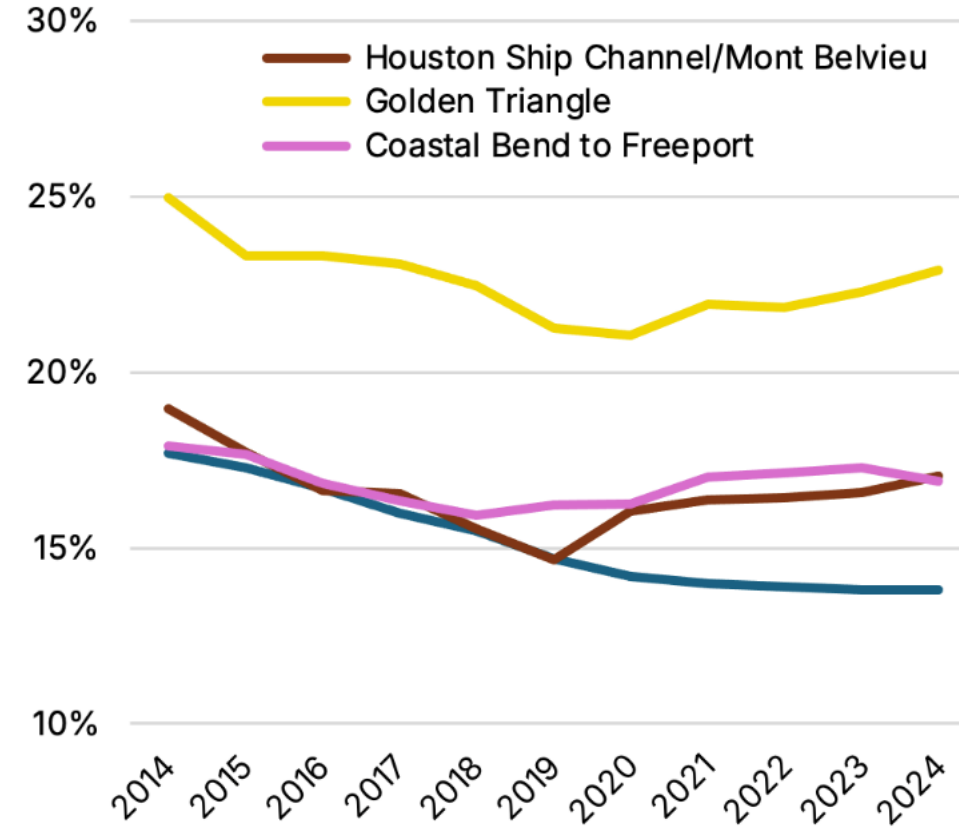
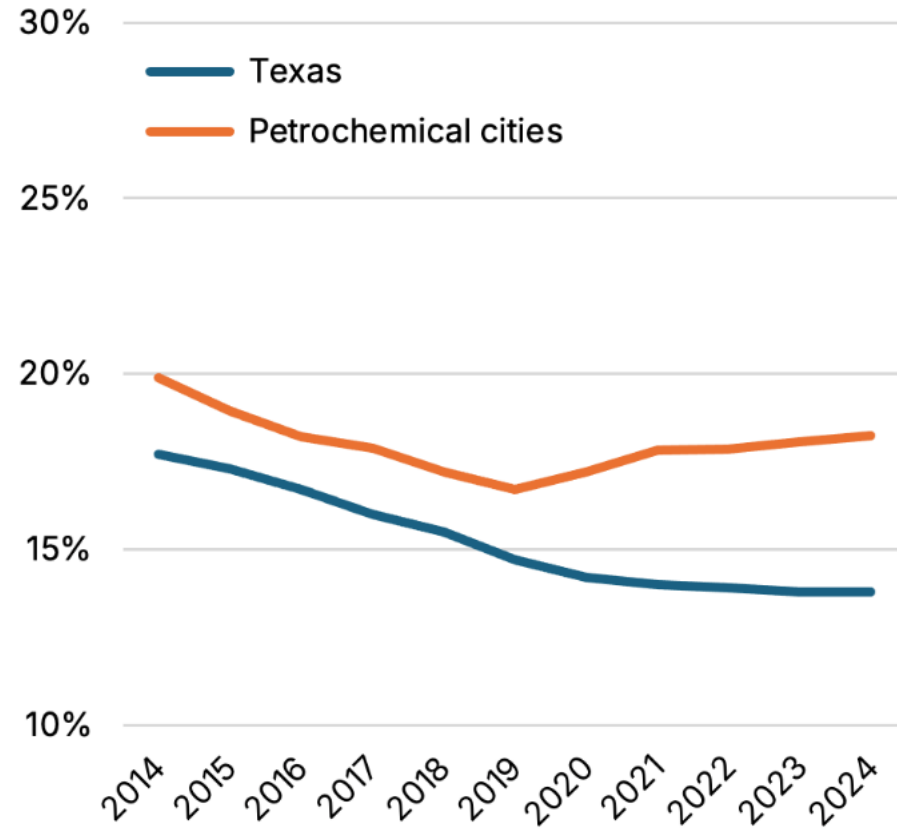
Source: U.S. Census Bureau, American Community Survey (5-year vintages 2014 to 2024)

Median Household Income (\$ thousand)



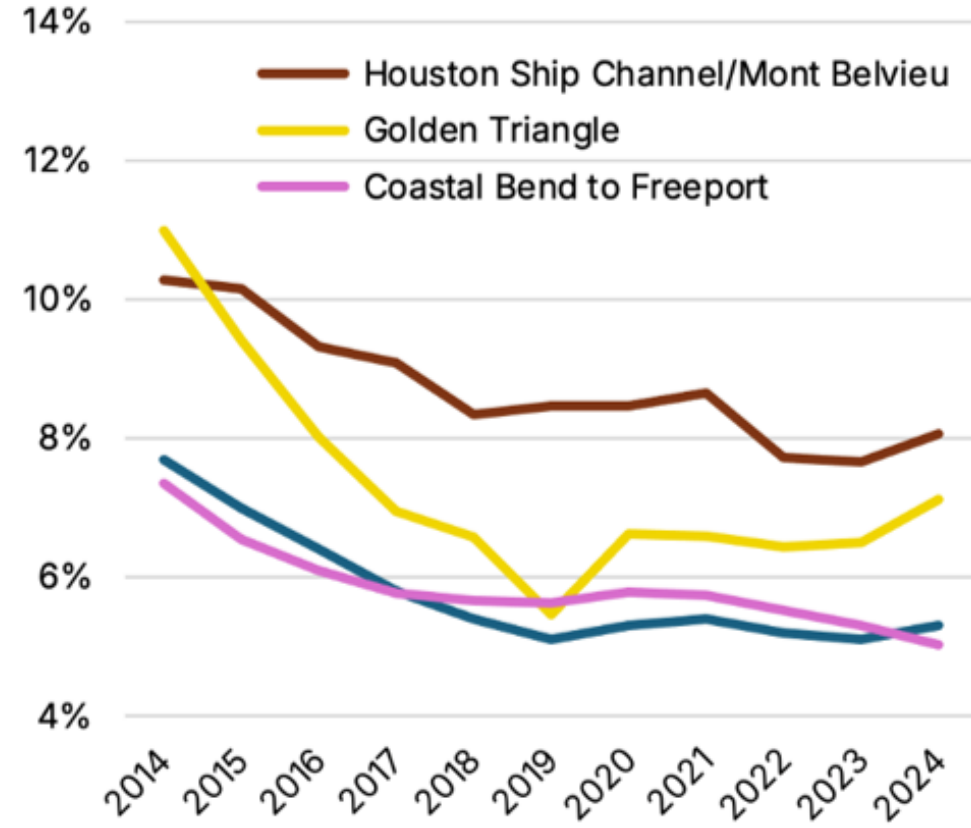
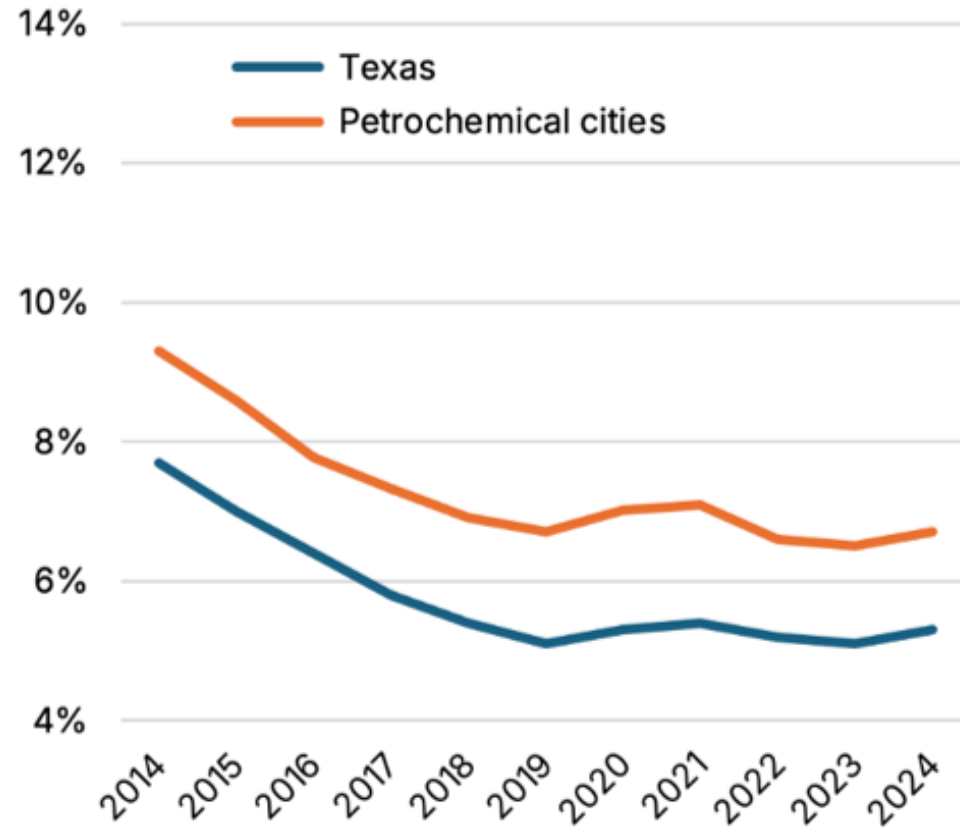
Source: U.S. Census Bureau, American Community Survey (5-year vintages 2014 to 2024)

Poverty Rate



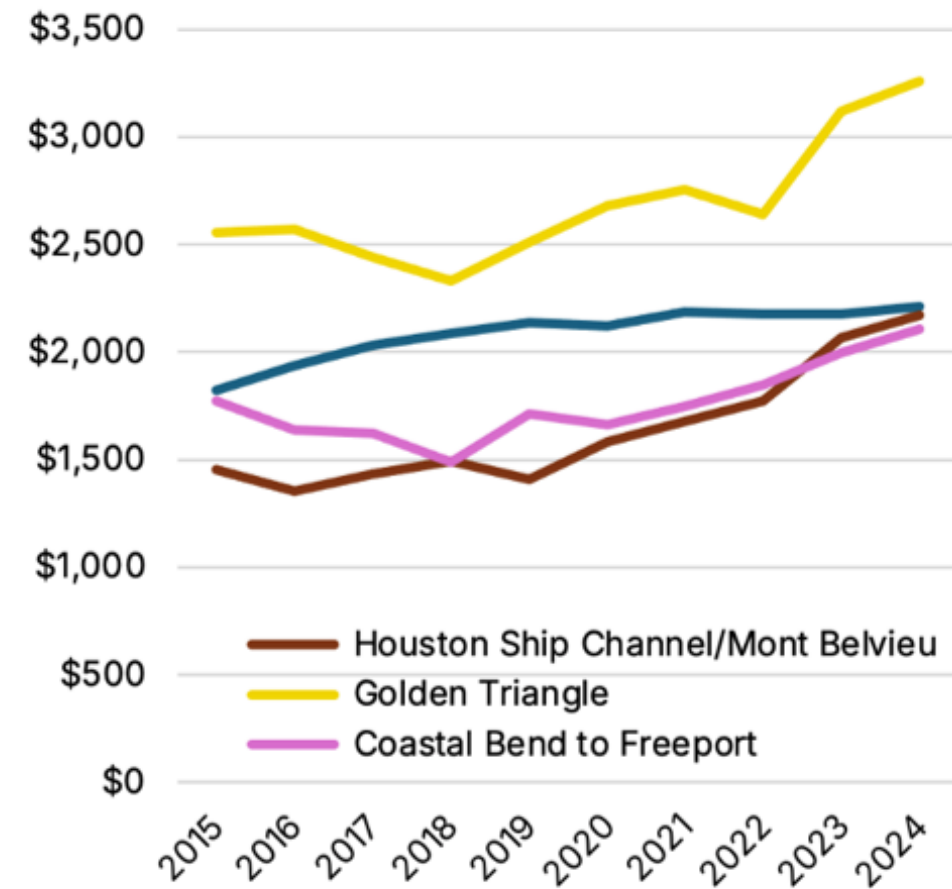
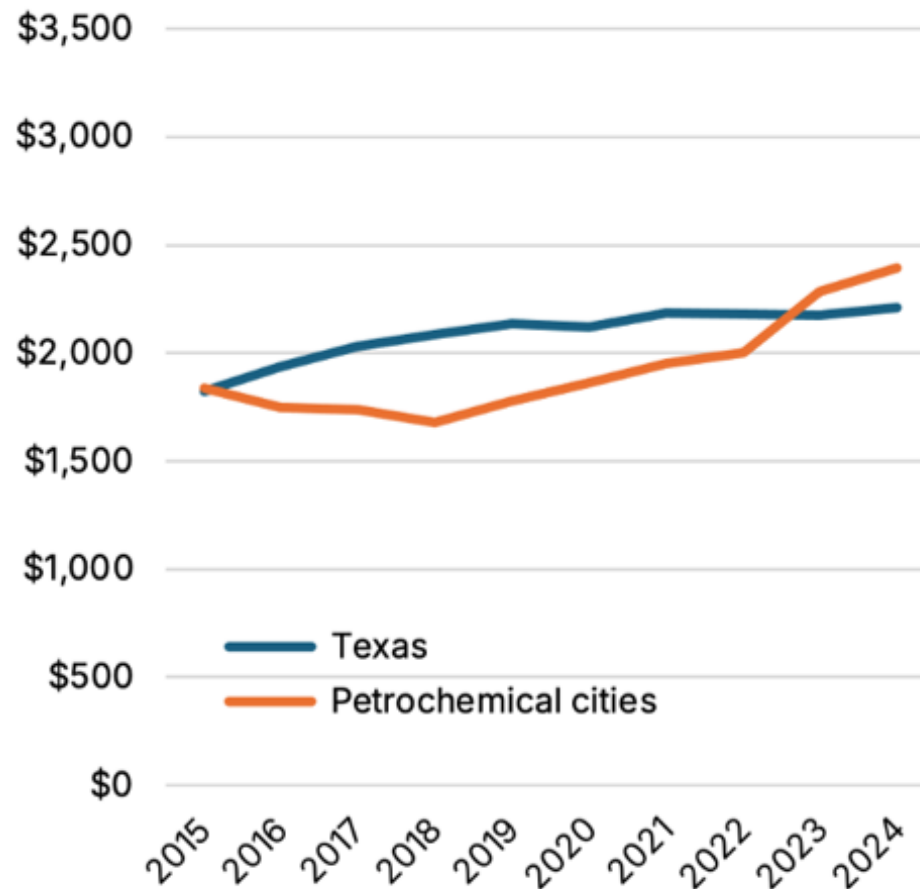
Source: U.S. Census Bureau, American Community Survey (5-year vintages 2014 to 2024)

Unemployment Rate



Source: U.S. Census Bureau, American Community Survey (5-year vintages 2014 to 2024)

Debt Per Capita In Petrochemical Regions

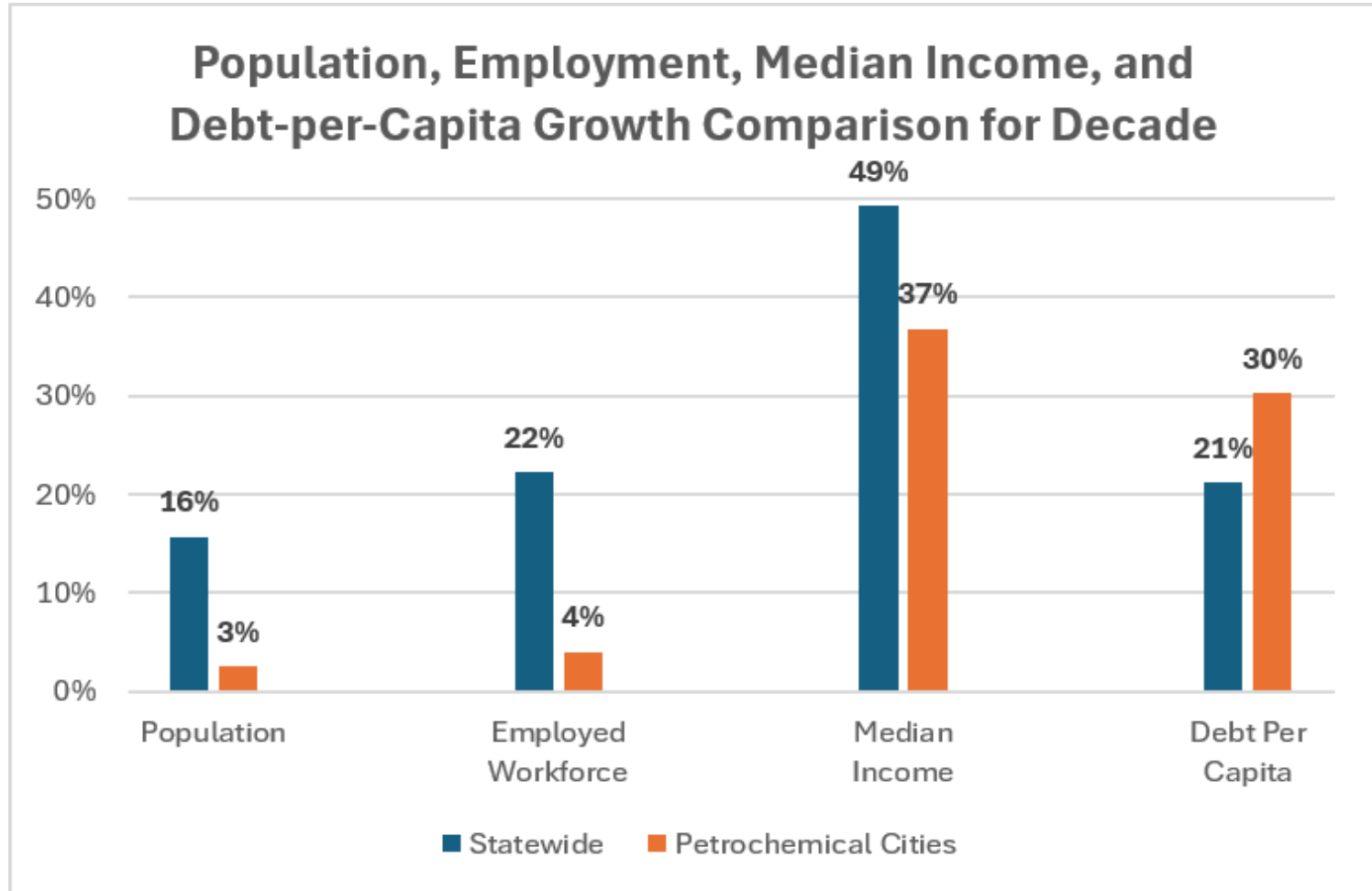


Source: Weighted average of Annual Financial Comprehensive Reports (AFCR) for Orange, Beaumont, Port Arthur, Pasadena, Deer Park, La Porte, Baytown, Corpus Christi, and Ingleside, Texas AFCR

Economic Growth Metrics Summary 2014 to 2024

Where people live:

- Golden Triangle
 - Beaumont
 - Orange
 - Port Arthur
- Houston Ship Channel
 - Baytown
 - Channelview
 - Deer Park
 - La Porte
 - Pasadena
 - Mont Belvieu
- Coastal Bend
 - Corpus Christi
 - Ingleside
 - Gregory
 - Freeport

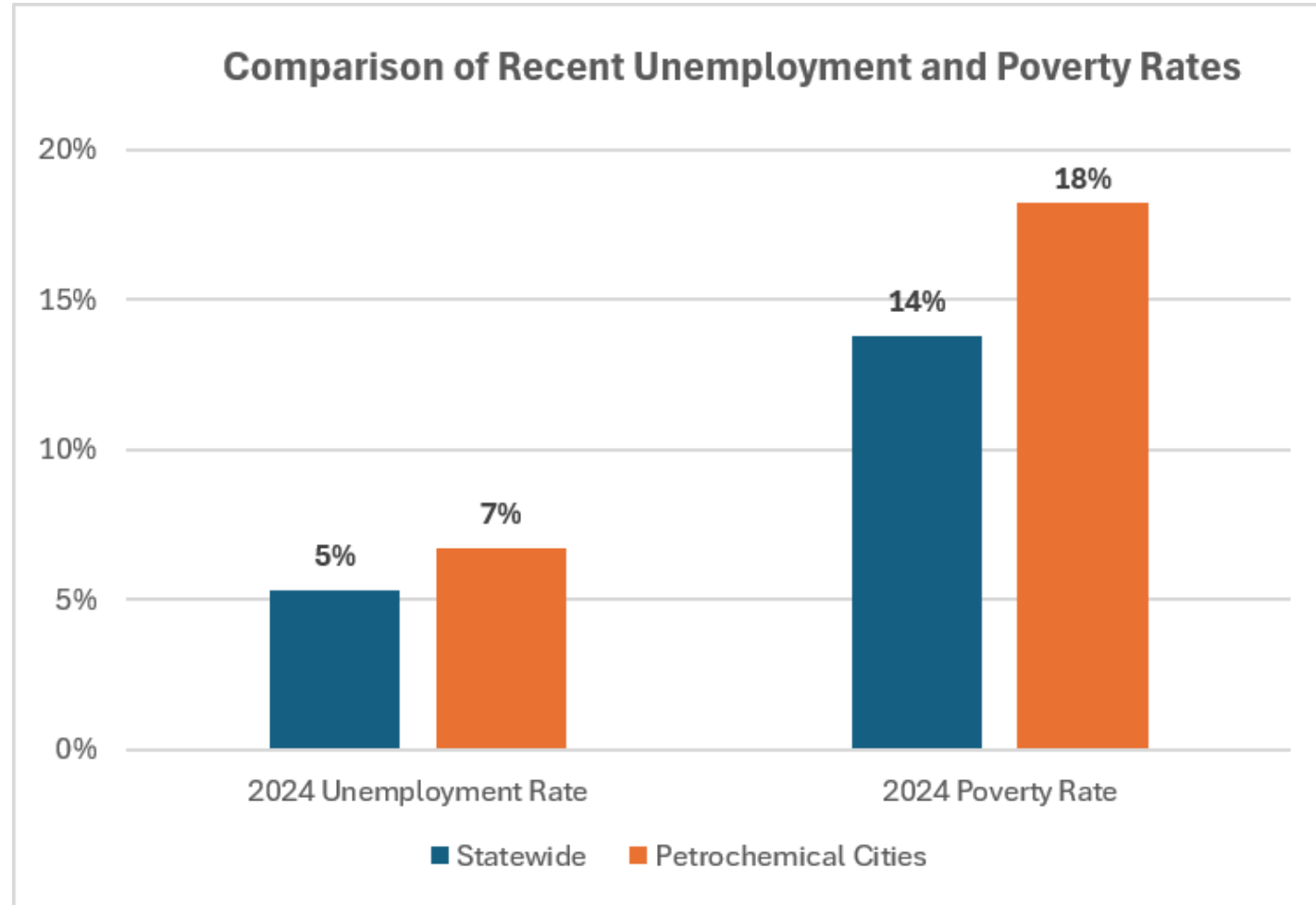


Source: U.S. Census: American Community Surveys

Economic Growth Metrics Summary for 2024

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Source: U.S. Census: American Community Surveys

Underperforming Economic Metrics

	Growth over Decade				2024 Metrics	
	Population	Employed Workforce	Median Income	Debt Per Capita*	Unemployment Rate	Poverty Rate
Golden Triangle	-1%	-1%	46%	27%	7%	23%
Houston Ship Channel	6%	10%	33%	50%	8%	17%
Coastal Bend	1%	1%	36%	19%	5.0%	17%
Avg for Petchem Cities	3%	4%	37%	30%	7%	18%
Statewide	16%	22%	49%	21%	5.3%	14%

Source: U.S. Census: American Community Surveys, * ACFRs of Baytown, Beaumont, Corpus Christi, Deer Park, Freeport, Gregory, Ingleside, La Porte, Mont Belvieu, Orange, Pasadena, Port Arthur

Conclusions

- **Petrochemical Investment and Capacity Expansion**
 - **\$40.5 billion invested, adding 12.8 million tons capacity in Texas regions.**
 - **Tax incentives totaled \$1.78 billion, but communities still underperform statewide averages.**
- **Community Economic Impact**
 - **Cities did not experience a growth surge; plants are now underutilized – all brings into question the effectiveness of the tax abatement granted.**
- **Industry Trends and Future Outlook**
 - **Ethylene glut expected to persist, reducing industry profitability.**
 - **Wealth mainly moves down the supply chain, not benefiting local communities hosting petrochemical plants.**



Thank You

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