

BEA's Regional Accounts: An Update

C2ER Annual Conference 2018

June 8, 2018



- Regional Accounts Core Statistics
- Recent Additions
- Program Initiates/New Statistics
- Questions and Answers

BEA's Regional Core Statistics



- Subnational measurement of U.S. economic activity
- Consistent with BEA's National Accounts
- Consistent across geography
- Consistent over time

- **Gross Domestic Product**

- The market value of goods and services produced by labor and property
 - Current \$
 - Real (Deflated using national industry prices)
- State Annual (1963-forward)
- *State Quarterly?*
- Metropolitan Area Annual (2001-forward)
- *Counties?*

- Personal Income and Employment
 - The income received by or on behalf of residents of a state or county
 - Net earnings by place of residence (compensation and proprietors' income)
 - Property income (dividends, interest, and rent)
 - Personal current transfer receipts
 - Number of jobs, full and part-time
 - Wage and salary employment
 - Proprietors' employment
 - State Annual (1929– forward; 1969 – forward)
 - State Quarterly (1948 – forward)
 - County and Metro Area Annual (1969 – forward; 1969 – forward)

- Regional Input Output Modeling System (RIMS II)
 - Estimates of the impact of an initial change in economic activity on industries within a defined geography
 - RIMS II multipliers are used to study economic impacts of a wide range of projects
 - The impacts can be expressed in terms of output (sales), value added, earnings, or employment (full- and part-time jobs)
 - Based on industry relationships from national input-output (I-O) accounts
 - Adjusted for leakages with regional data
 - Customizable geographies

- Real Personal Income/Region Price Parities (4/24/14)
 - States
 - Metropolitan Areas
- Personal Consumption Expenditures (PCE) by state (12/1/15)
- Quarterly GDP by state (12/10/15)
- Arts and Cultural Production Satellite Account (ACPSA)
 - State compensation and employment (4/19/17)
 - Value added (3/6/18)

Regional Price Parities (RPPs)



- Regional price parities (RPPs)
 - Spatial price index
 - State and metropolitan areas
 - Goods, rents, other services
 - Measure the differences in the price levels of goods and services across states and metropolitan areas for a given year
 - Regional price levels expressed as a percentage of the overall national price level for a given year.
 - Average RPP across states (US RPP) = 100

- Average price level in Connecticut
 - 8.8% higher than national average (108.8/100.0)
 - 12.1% higher than in Utah (108.8/97.0)

	Regional Price Parities, 2014			
	All Items	Goods	Services	
			Rents	Other
United States	100.0	99.4	101.1	100.1
Connecticut	108.8	104.3	116.9	109.3
Hawaii	116.8	108.9	158.4	103.6
Mississippi	86.7	94.4	63.2	93.4
North Dakota	91.5	94.9	81.9	91.4
Utah	97.0	97.5	91.6	99.4
Range across all states	31.4	14.5	100.0	24.2

- Personal income adjusted for price level differences
 - Across regions
 - Over time
- Use RPPs in conjunction with BEA's personal consumption expenditures (PCE) price index
- Allows for comparisons of the purchasing power of personal income across regions and over time.

Real Personal Income

State	PCE Price Index	RPP	Current\$ PI (\$ billion)	Real PI (\$ billion)
Hawaii	109.1	116.8	65.3	51.2
South Dakota	109.1	88.0	38.6	40.2
United States	109.1	100.0	14,683.1	13,458.3

Price adjustment for HI:

$$\text{PI at RPPs} = \frac{\text{PI}}{\text{RPP}} = \frac{65.3}{1.168} = 55.9$$

$$\text{Real PI} = \frac{\text{PI at RPPs}}{\text{PCE Price Index}} = \frac{55.9}{1.091} = 51.2$$

$$\text{IRPD}^* = \frac{\text{PI}}{\text{Real PI}} = \frac{65.3}{51.2} = 127.5$$

* Implicit Regional Price Deflator

- Accounting framework aligns state personal income and expenditures
- PCE measures:
 - Out-of-pocket household spending
 - Spending on behalf of households
 - Imputations
 - Owner-occupied housing
 - Financial services without explicit payment
 - Net expenditures of non-profit institutions serving households

- Uses:
 - Examine spending trends over time
 - Per capita measures indicators of economic well-being
 - Fiscal policy, regional macro and I-O analysis
 - Geographic marketing information

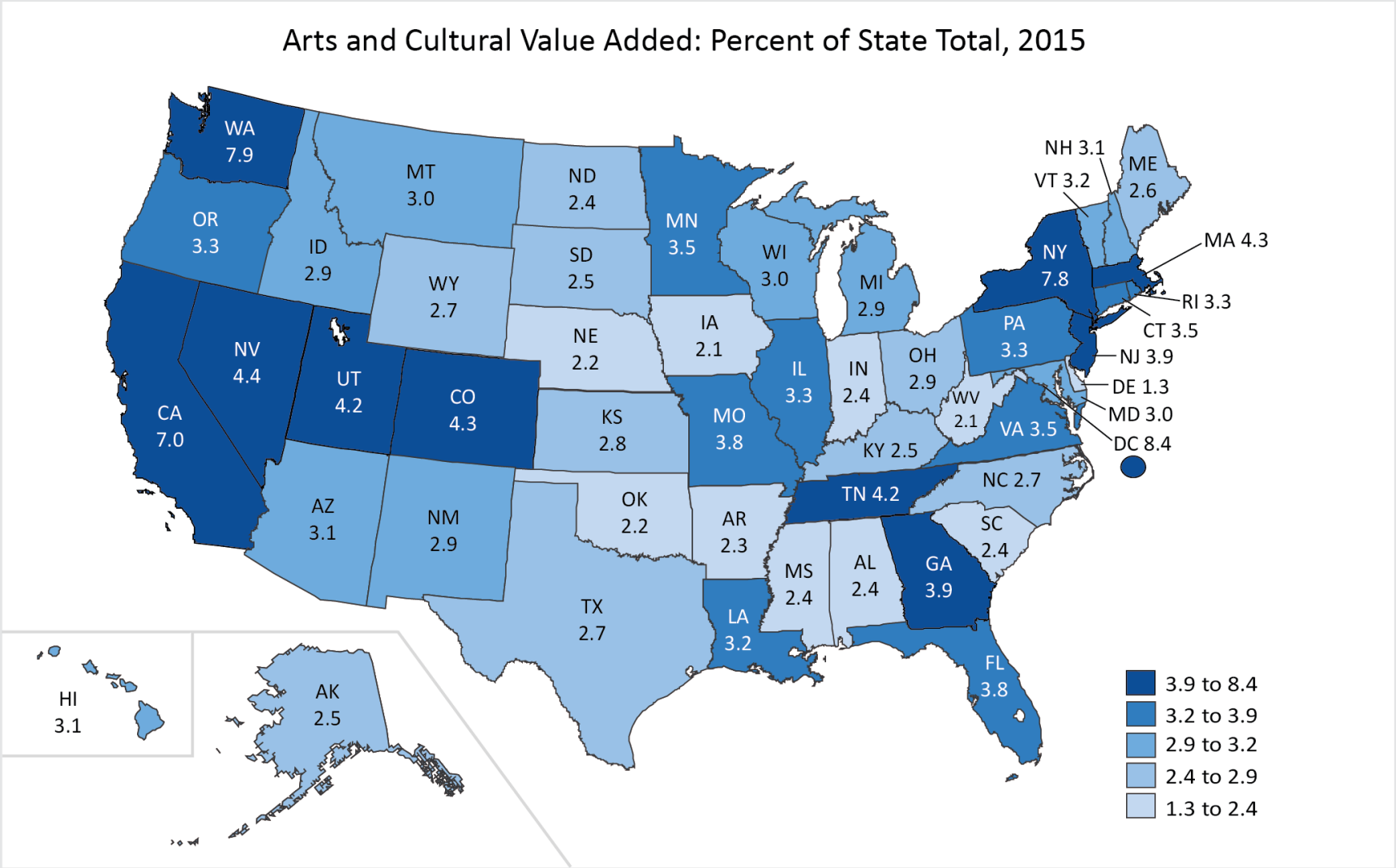
- Earlier read on state of the economy
- Earlier identification of weakening industries
- More precise timing of upturns and downturns in state economic activity

- **Satellite Accounts:** Designed to expand the analytical capacity of the standard accounts without interfering with their general purpose
 - Complement existing accounts
 - Provides a laboratory for development of concepts and methodologies
 - Expands the detail of the accounts
 - Flexible classification structure
 - Allows more focus on a specific activity

- Motivated and sponsored by the National Endowment (NEA) for the Arts
- Measures the impact of arts and cultural activities on the U.S. and individual state economies
 - Contribution of arts and cultural production value added to state GDP
 - Contribution of arts and cultural production to state compensation and employment

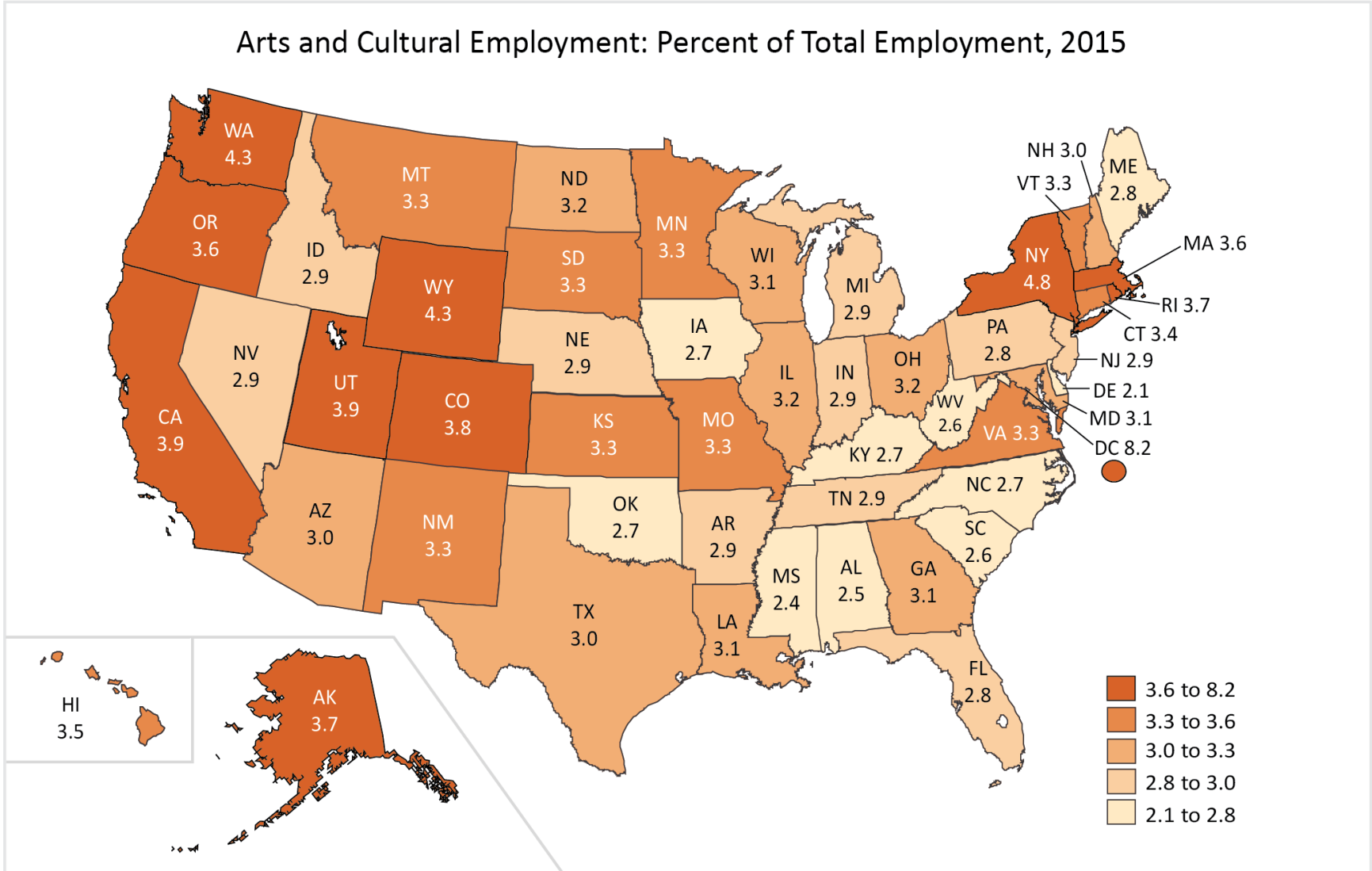
Arts & Cultural Economic Activity as a Percent of GDP by State

Arts and Cultural Value Added: Percent of State Total, 2015



Arts & Cultural Activity Employment as a Percent State Employment

Arts and Cultural Employment: Percent of Total Employment, 2015



- Outdoor Recreation Satellite Account (ORSA)
- GDP by County

- Measure the contribution of outdoor recreation to a state's economy
- Mandated by the “Outdoor Recreation Jobs and Economic Impact Act of 2016”
- Required BEA to assess and analyze the outdoor recreation economy of the United States and the effects attributable to it on the overall U.S. economy.”

- Defining outdoor recreation
 - No international standards to rely upon
 - BEA staff worked closely with outdoor recreation experts from academia, government, and industry to develop the definition of outdoor recreation
 - Conventional: Examples: hunting, hiking, camping, and fishing
 - Comprehensive: Includes activities such as agritourism and outdoor festivals
- Prototype statistics for the U.S. were released in February 2018
- Plan to release official statistics for the U.S. in September 2018

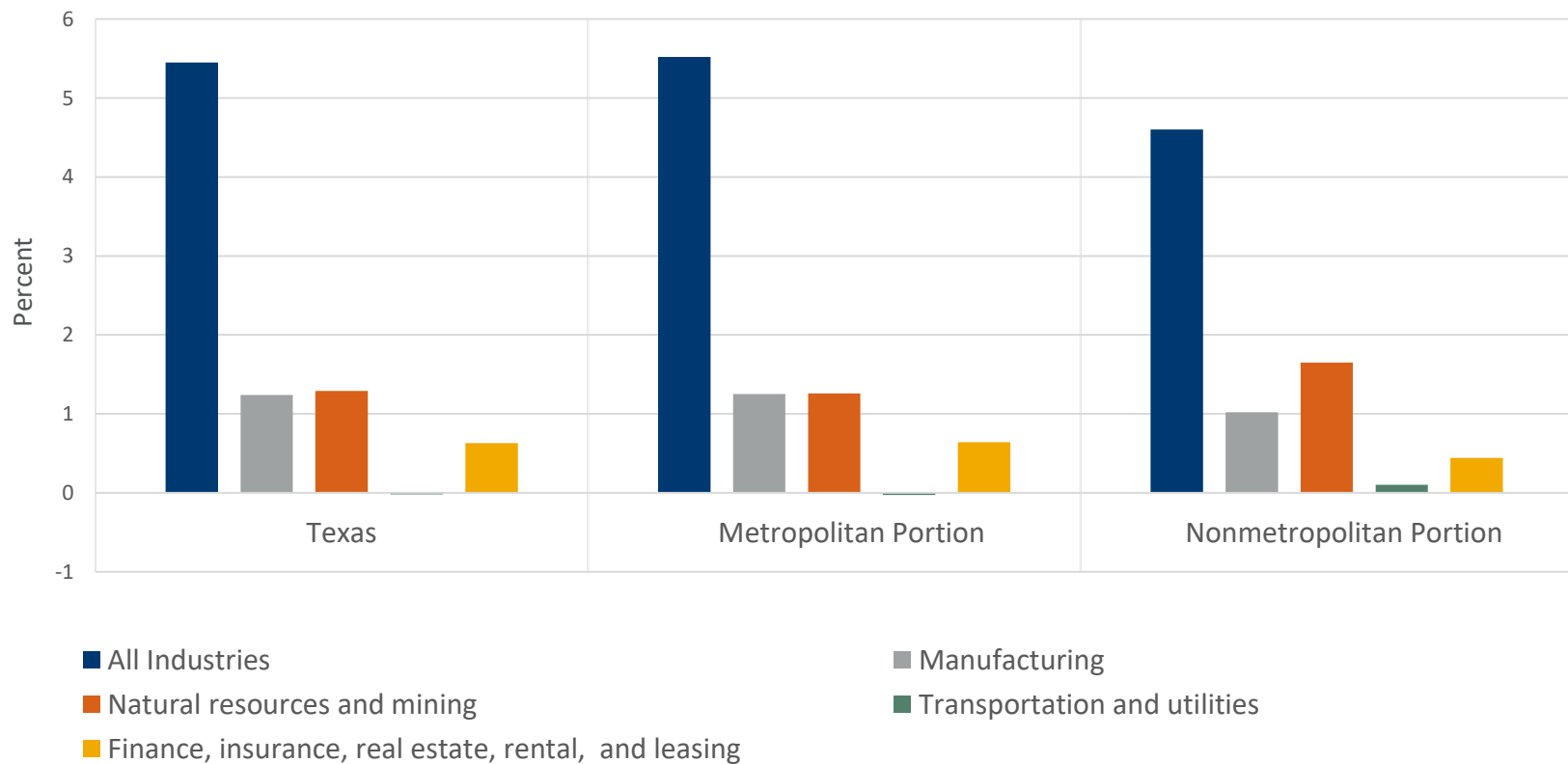
- Research on methodology and developing data sources for regional accounts has begun
- Contingent on FY 2019 funding and beyond
- Plan to provide state-level statistics
 - Value added
 - Compensation and employment

- BEA publishes personal income statistics for the nation, states, metropolitan areas, and counties. Statistics available at the county level:
 - Annual frequency, 1969 - forward
 - By component and industry
- BEA also publishes GDP statistics for the nation, states, and metropolitan areas
- GDP by county statistics are the logical extension to providing output statistics at increasingly finer levels of geographic detail

- Provide a much richer picture of the geographic distribution of the nation's economic activity
 - Assist analysts in the assessment of local economic performance
 - Inform resource allocation decisions
 - Assist planners and policymakers in the development of strategies that promote economic growth and in the assessment of strategies over the long run
- Inform and lead to improvements of GDP by metropolitan area statistics and GDP by state statistics

Texas Case Study

Contributions to Percent Change in Real GDP, Select Sectors, 2013

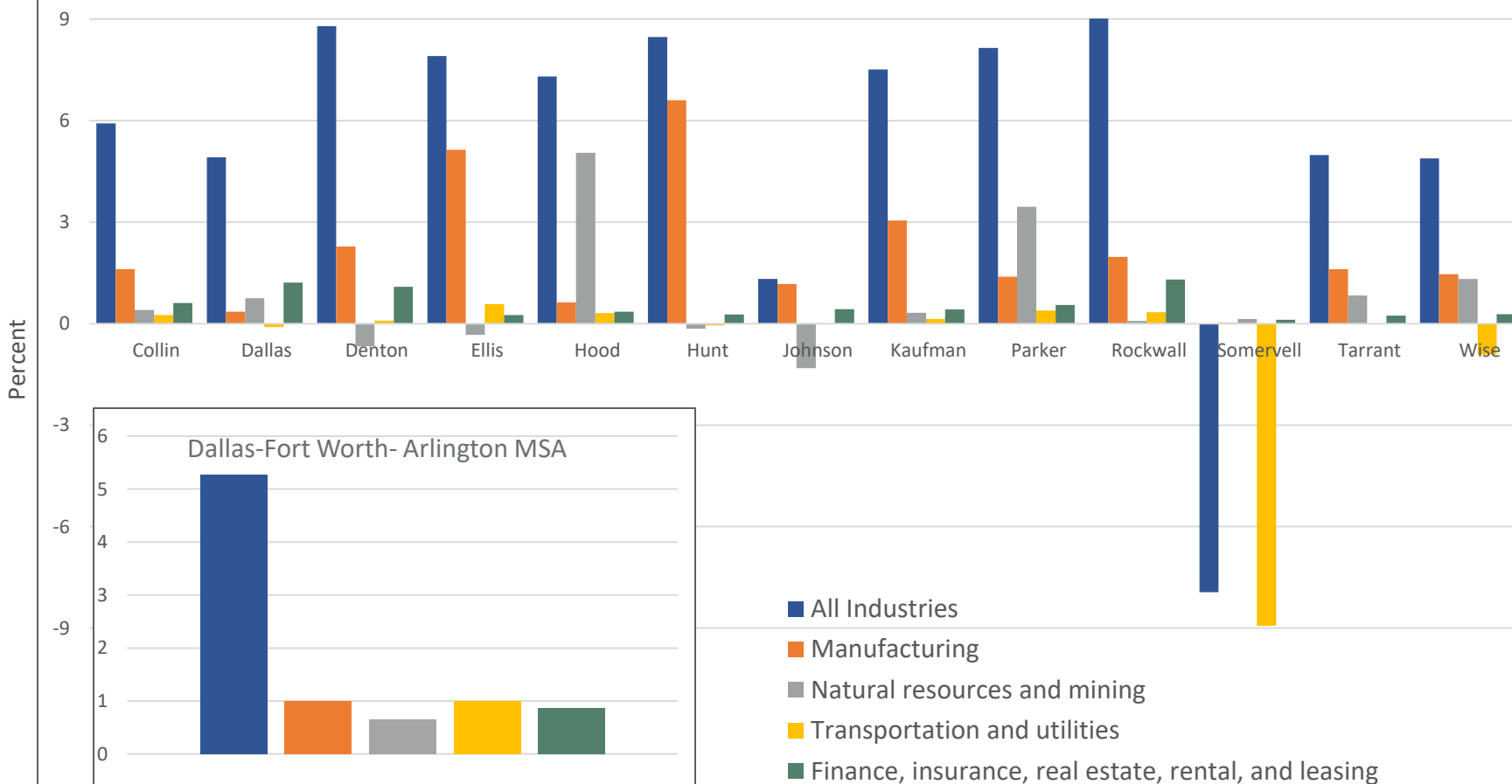


Texas Case Study

Dallas-Fort Worth-Arlington Metropolitan Area and Component Counties



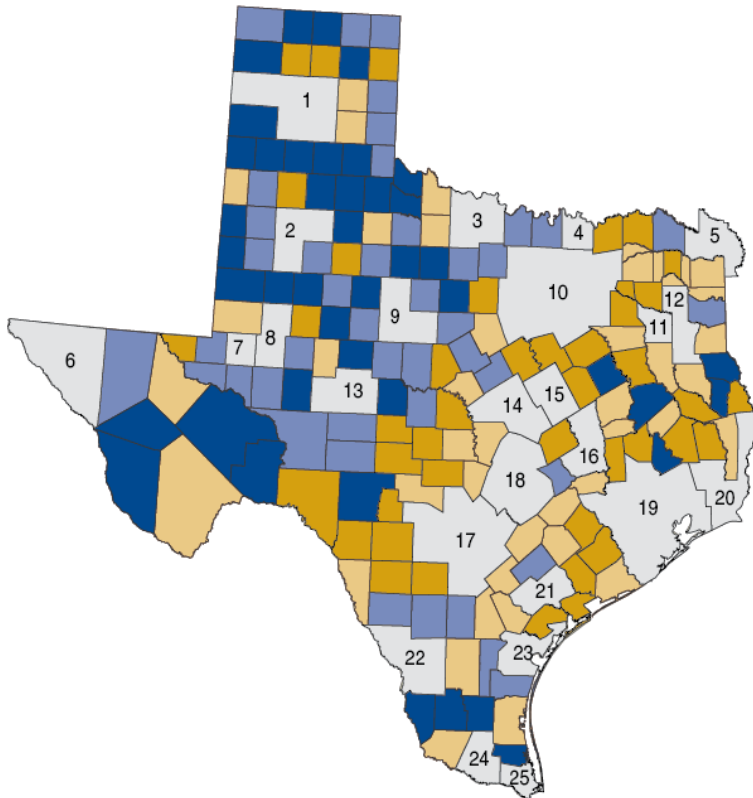
Contributions to Percent Change in County Real GDP, Select Sectors, 2013



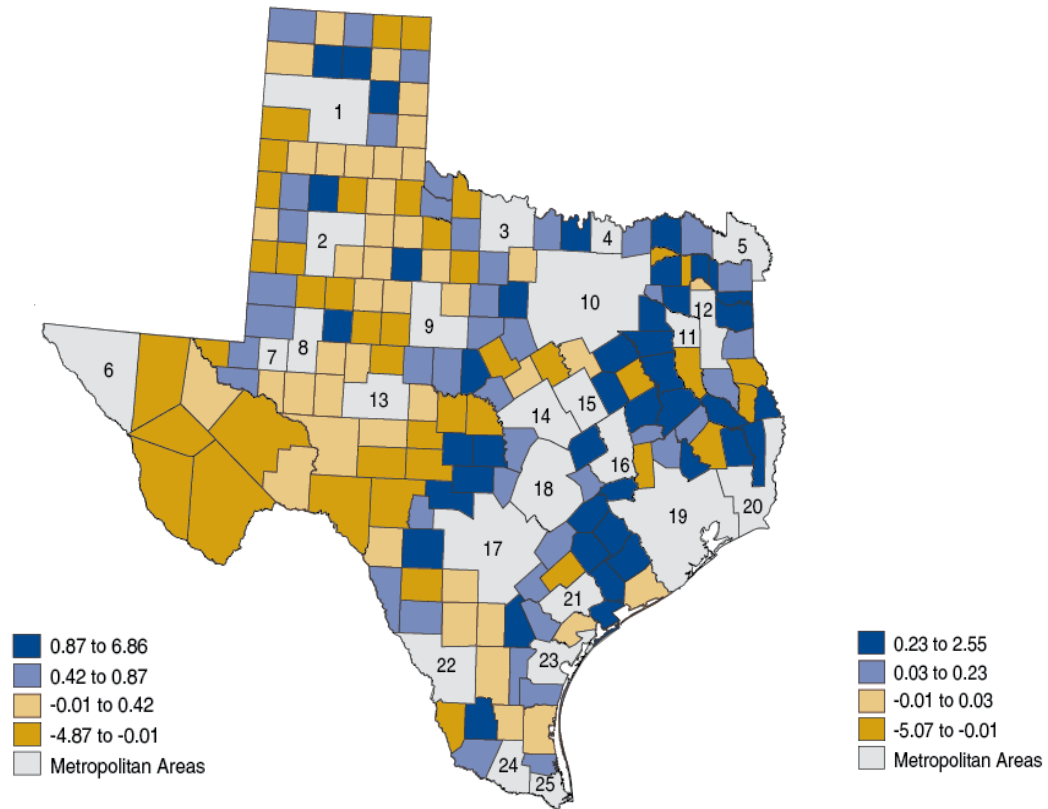
Texas Case Study

Sector Contribution to County GDP Growth, Nonmetropolitan Counties, 2013

Natural Resources and Mining



Manufacturing



- ✓ Data sources identified
- ✓ Available data sources processed
- ✗ New data sources acquired
- ✓ Methodologies developed for most industries
- ✓ Program estimation software
- ✗ Review draft statistics
- ✗ Evaluate and refine methodology
- ✗ Apply suppressions
- ✗ Final review of statistics
- ✗ Recommend publishable detail

- Industry detail: All-industry total GDP for all counties; possibly highly aggregate industry detail
- Data series: Annual current- and inflation-adjusted GDP statistics
- Period: 2012-2015
- Release timeframe: Late September – early November 2018