BEA's Subnational Special Topics Accounts: Outdoor Recreation and Research & Development

Christian Awuku-Budu

Second Webinar of the Sub-national Sprint of the United Nations Network of Economic Statisticians

October 1, 2025

Bureau of Economic Analysis
U.S. DEPARTMENT OF COMMERCE

Background—BEA's Special Topics (Satellite) Accounts

- Provide supplementary statistics on key aspects of the economy while maintaining consistency with core BEA statistics like GDP
- Expand the analytical capacity of BEA's core accounts without changing them
- Most are thematic (rearranging existing data); some are experimental/extended accounts (measuring activities not captured in other BEA statistics)
- 15 special topics accounts are currently published on BEA website

BEA Special Topics Accounts Since 1990s

- SNA recommendations (e.g., household production)
- Congressional mandates (e.g., outdoor recreation, global value chains)
- Federal partnerships (e.g., marine economy, travel and tourism)
- Core statistics improvements/extensions (e.g., R&D for state-level analysis)
- Other initiatives to fill data gaps for policy, decision-making, and economic analysis (e.g., small business, space economy)

General Approach

- Thematic accounts
  - Built on national Supply and Use Tables (SUTs)
  - Developed in collaboration with subject-matter experts from federal agencies, academia, and trade organizations to identify in-scope activity
  - Use various sources of data for partial allocations of in-scope activity
  - Generally aggregate activity by NAICS industries
    - Exception: Outdoor recreation account aggregates data by both industry and activity

- Experimental/Extended accounts
  - Typically not based on SUTs
  - Rely on specialized data sources and methodologies

Subnational Data Availability and Challenges

- Only 4 of BEA's 15 special topics accounts provide state-level data
  - Outdoor Recreation (ORSA)
  - Research & Development
  - Arts and Culture Production
  - Distributional Measures of State Personal Income

- Key challenges
  - Limited subnational data from censuses, surveys, and administrative sources
  - High cost of private-sector data when available
  - Budget constraints often limit scope of reimbursable federal agreements to national data

Account-Specific Insights

- Outdoor Recreation Account (Thematic)
- R&D Production Account (Exploratory)

Outdoor Recreation Account—Background

- Mandated by the *2016 Outdoor Recreation Jobs and Economic Impact Act*

- Development timeline
  - 2018: First release (2012–2016 national estimates)
  - 2019: Added state-level prototype statistics
  - Updated annually

- Built in consultation with outdoor recreation experts from academia, government, and industry

- Two definitional approaches
  - Conventional: Traditional activities requiring physical exertion in nature-based environments
  - Broad: All recreational activities undertaken for pleasure outdoors

ORSA—Scope and Measurement

- Core activities
  - Production and purchase of goods/services used directly for outdoor recreation
  - *E.g., gear, equipment, fuel, concessions, maintenance, fees*
- Supporting activities
  - Goods and services supporting access to outdoor recreation
  - *E.g., trip expenses, construction, government expenditures*
- Geographic measurement
  - By place of production or merchant location, not consumer residence

Outdoor Recreation Activity Categories

Total Outdoor Recreation

Total Core Outdoor Recreation

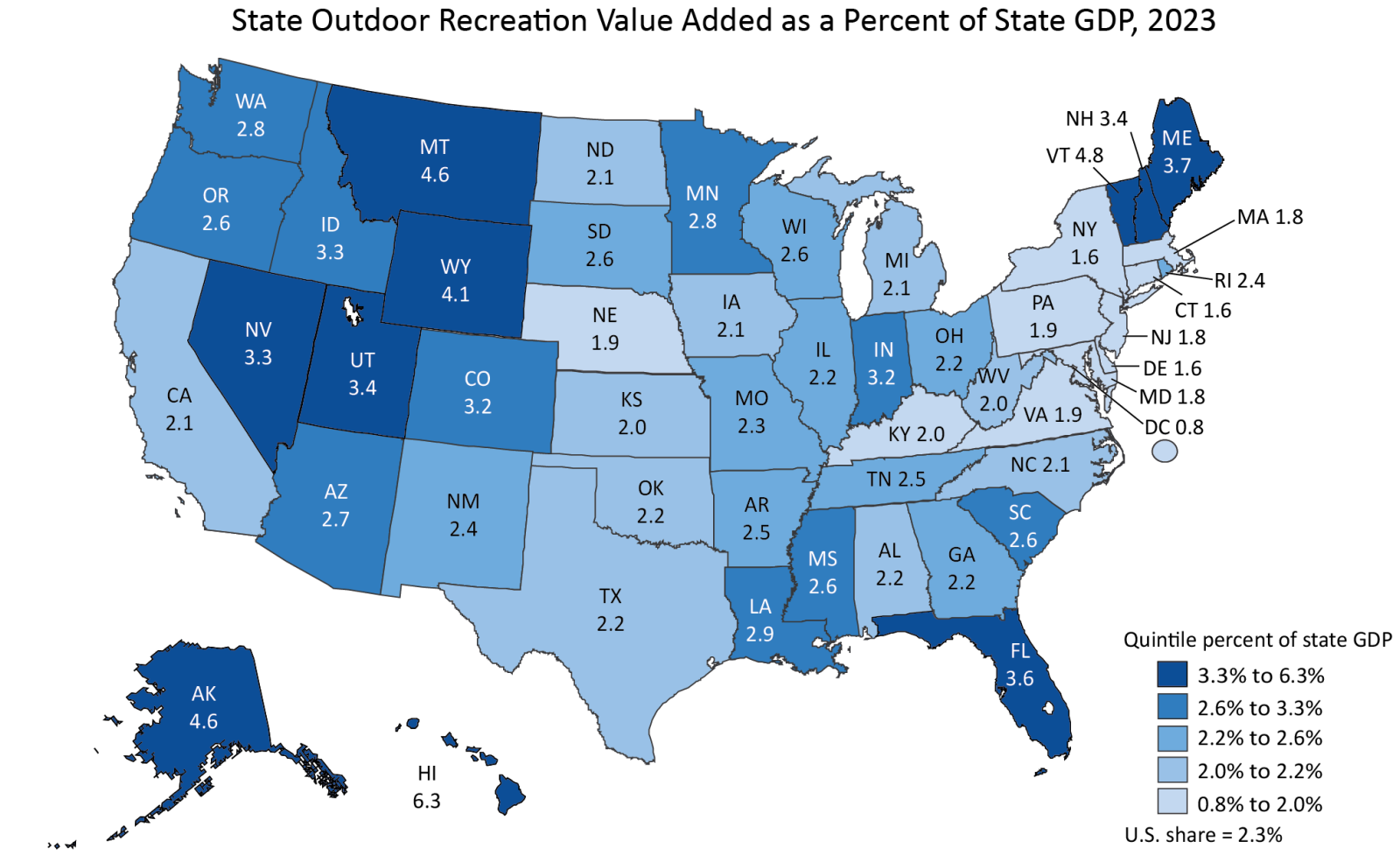
Conventional Core Outdoor Recreation	Other Core Outdoor Recreation	Supporting Outdoor Recreation
Bicycling	**Amusement parks/water parks**	**Construction**
Boating/fishing Canoeing, kayaking, fishing (excludes boating), sailing, other boating	**Festivals/sporting events/concerts**	**Local trips**
Climbing/hiking/tent camping	**Field sports**	**Travel and tourism** Food and beverages, lodging, shopping and souvenirs, transportation
Equestrian	**Game areas (includes golfing and tennis)**	**Government expenditures** Federal government, state and local government
Hunting/shooting/trapping Hunting/trapping, shooting (includes archery)	**Guided tours/outfitted travel** Air and land guided tours/ outfitted travel, water guided tours/outfitted travel (includes boating and fishing charters)	
Motorcycling/ATVing	**Productive activities (includes gardening)**	
Recreational flying	**Other outdoor recreation activities**	
RVing	**Multi-use apparel and accessories (Other)**	
Snow activities Skiing, snowboarding, other snow activities		
Other conventional outdoor recreation activities Other conventional air and land activities, other conventional water activities		
Multi-use apparel and accessories (conventional)		

Boating/Fishing Activity

...are produced by these industries:

- Motor vehicle and parts dealers
- Transportation Equipment manufacturing
- Finance and insurance
- Arts, entertainment and recreation
- Educational services

ORSA Contribution to State GDP, 2023



U.S. Bureau of Economic Analysis

ORSA Value Added: State Rankings, 2023

By Size

Rank	State	Value Added ($ Billions)
1	California	$ 81.5
2	Florida	$ 57.8
3	Texas	$ 55.8
4	New York	$ 33.9
5	Illinois	$ 24.4
6	Washington	$ 22.5
7	Ohio	$ 19.3
8	Pennsylvania	$ 18.9
9	Georgia	$ 18.5
10	Colorado	$ 17.2

U.S. Bureau of Economic Analysis

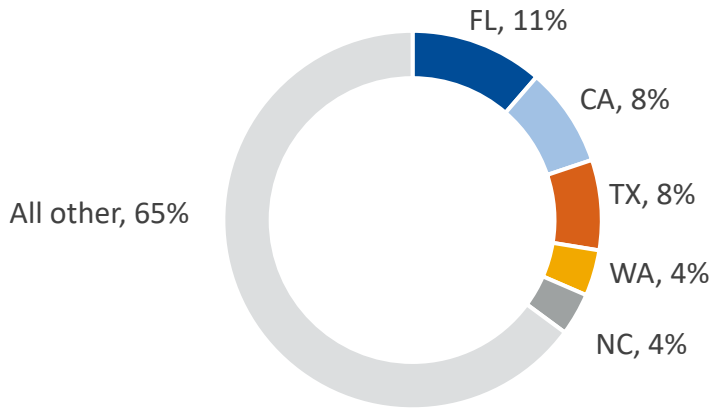
By Growth

Rank	State	% Growth, 2022–2023
1	Massachusetts	13.3%
2	Hawaii	13.2%
3	Alaska	13.0%
4	Nevada	12.8%
5	Maryland	12.2%
6	Nebraska	11.9%
7	Georgia	11.8%
8	New Jersey	11.6%
9	New York	11.6%
10	Arizona	10.8%

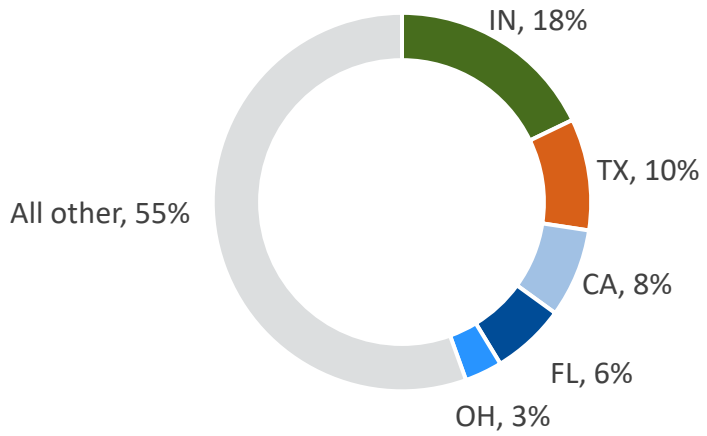
U.S. Bureau of Economic Analysis

ORSA Value Added, Selected Activities, 2023

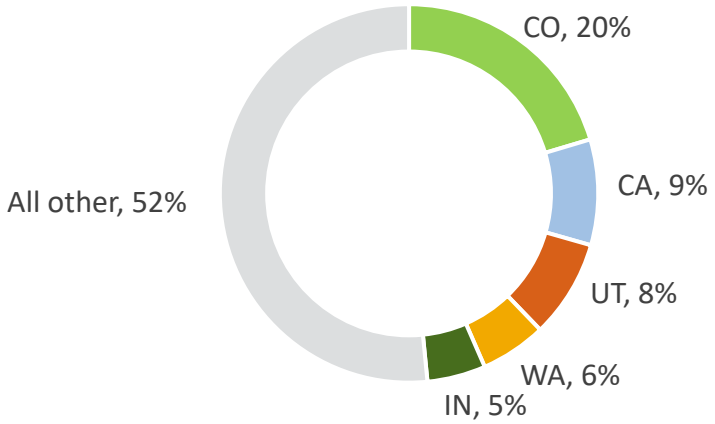
Boating/Fishing



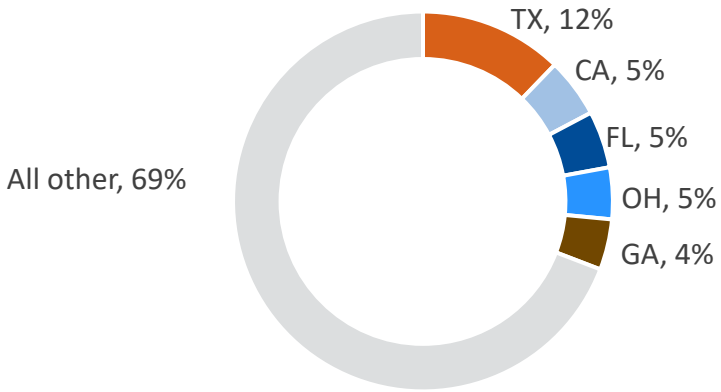
RVing



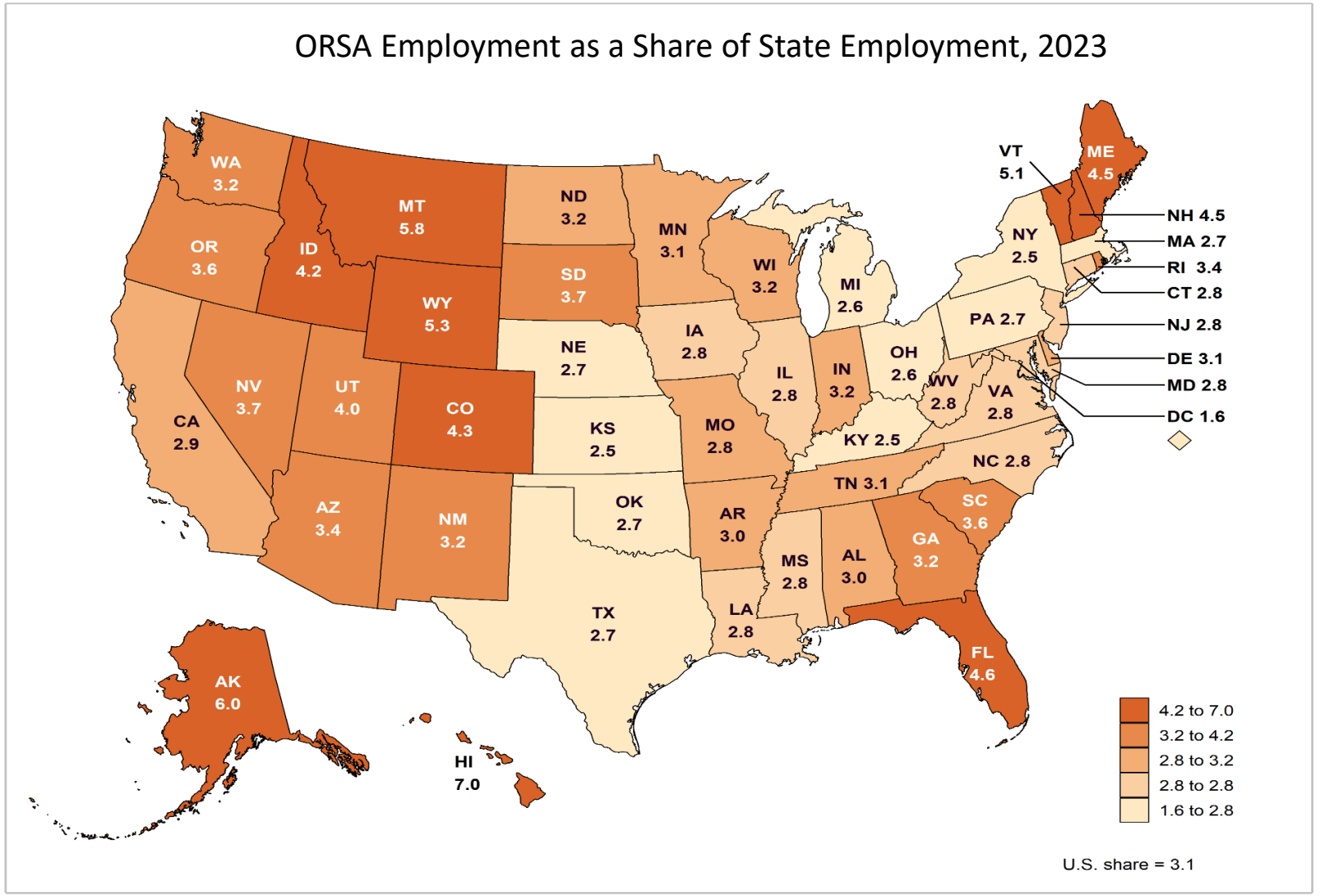
Snow Activities



Hunting/Shooting/Trapping



ORSA Share of State Employment, 2023



U.S. Bureau of Economic Analysis

Research & Development Account—Background

- Interagency agreement with the National Science Foundation (NSF)

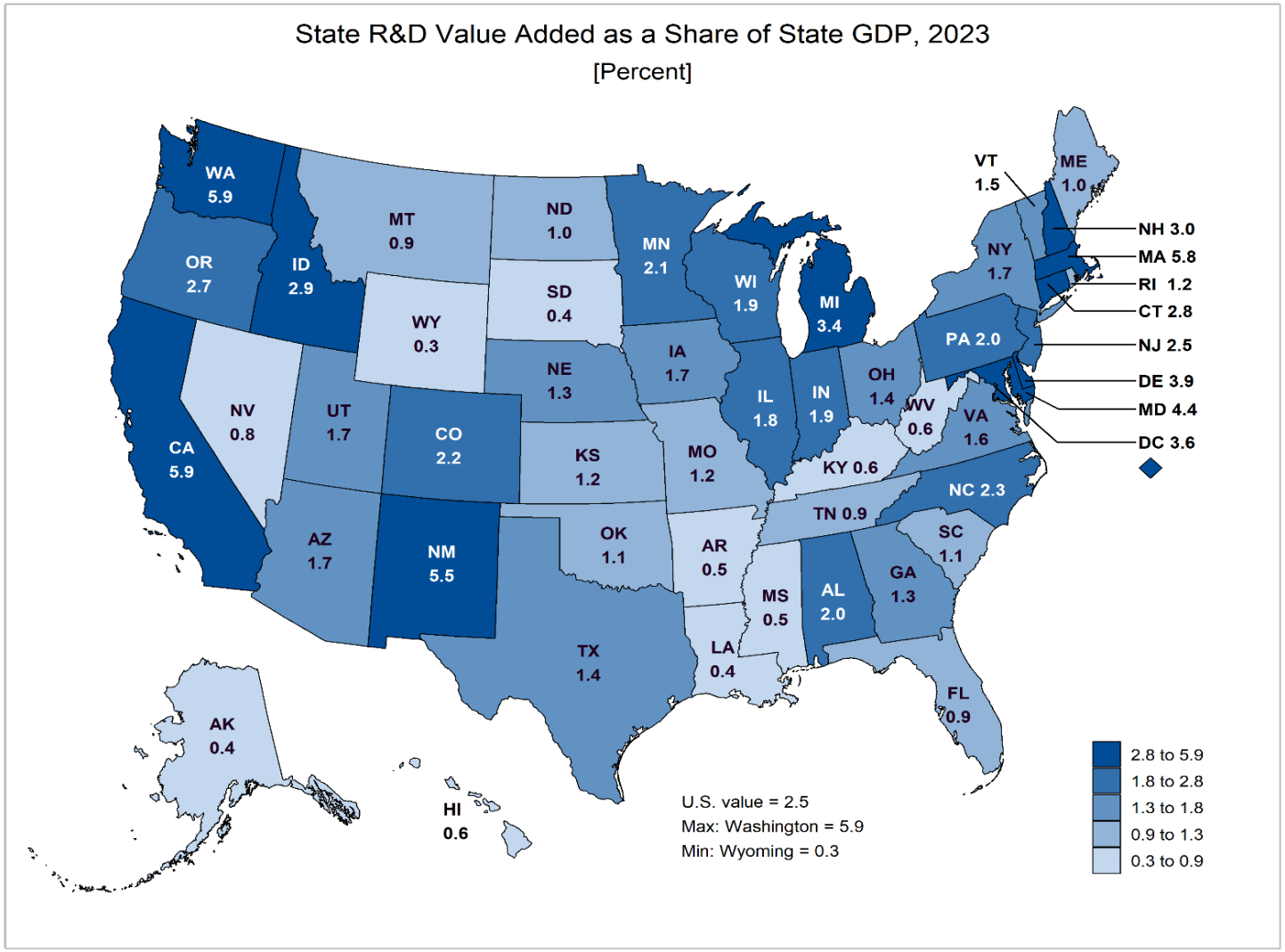
- Development timeline:
  - 2021: BEA-NSF agreement initiated
  - 2024: First experimental statistics released
  - 2025: Extended timespan back to 2012, added 2022–2023 data

- Built in consultation with R&D experts using primarily NSF survey data on R&D performance

R&D Account—Geography of R&D

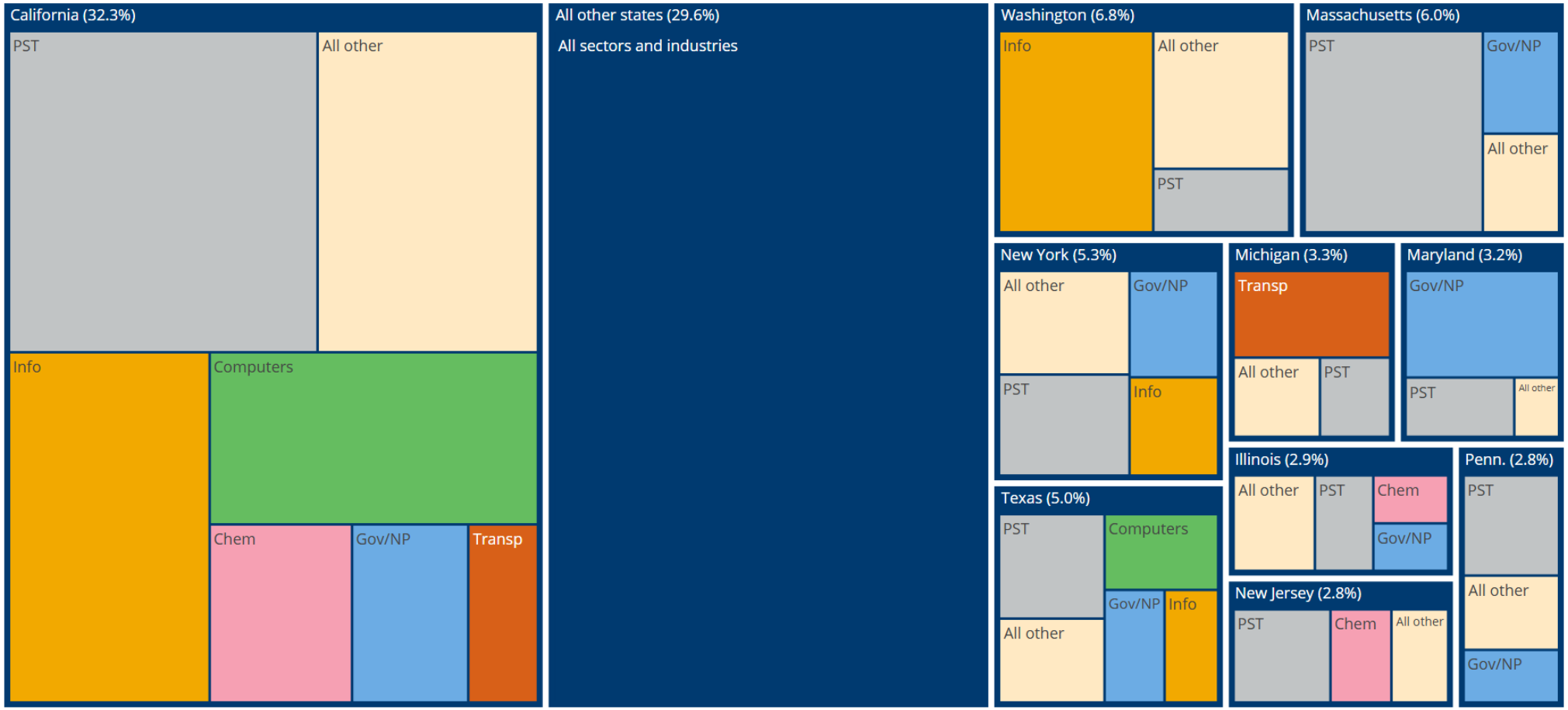
- Measured by place of performance, not funding location or location of end use
- Key distinction: R&D production vs. R&D investment
  - R&D production: Geography represents the location where R&D is performed
  - R&D investment: Geography represents the location where R&D is used as a productive asset
- R&D can be produced in one state and used in multiple states

R&D Contribution to State GDP, 2023



U.S. Bureau of Economic Analysis

State Distribution of U.S. R&D Value Added, 2023



R&D VA: State Rankings, 2023

By Size

Rank	State	Value Added ($ Billions)
1	California	$ 226.5
2	Washington	$ 48.0
3	Massachusetts	$ 42.4
4	New York	$ 37.4
5	Texas	$ 34.9
6	Michigan	$ 23.1
7	Maryland	$ 22.7
8	Illinois	$ 20.2
9	New Jersey	$ 19.9
10	Pennsylvania	$ 19.3

U.S. Bureau of Economic Analysis

By Growth

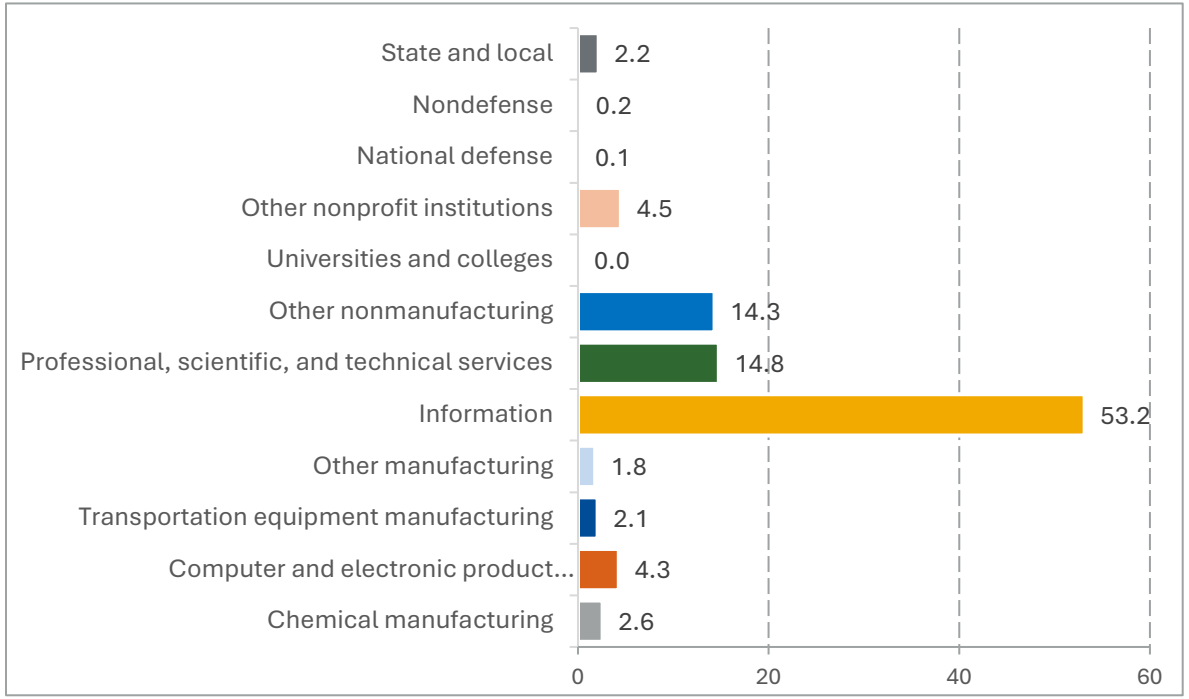
Rank	State	% Growth, 2022–2023
1	Nebraska	35.9%
2	North Dakota	32.6%
3	Oklahoma	30.3%
4	Delaware	25.7%
5	South Dakota	24.7%
6	Tennessee	22.7%
7	South Carolina	20.0%
8	Kentucky	19.5%
9	Indiana	19.3%
10	Arkansas	18.7%

U.S. Bureau of Economic Analysis

R&D Value Added, Selected Industries, 2023

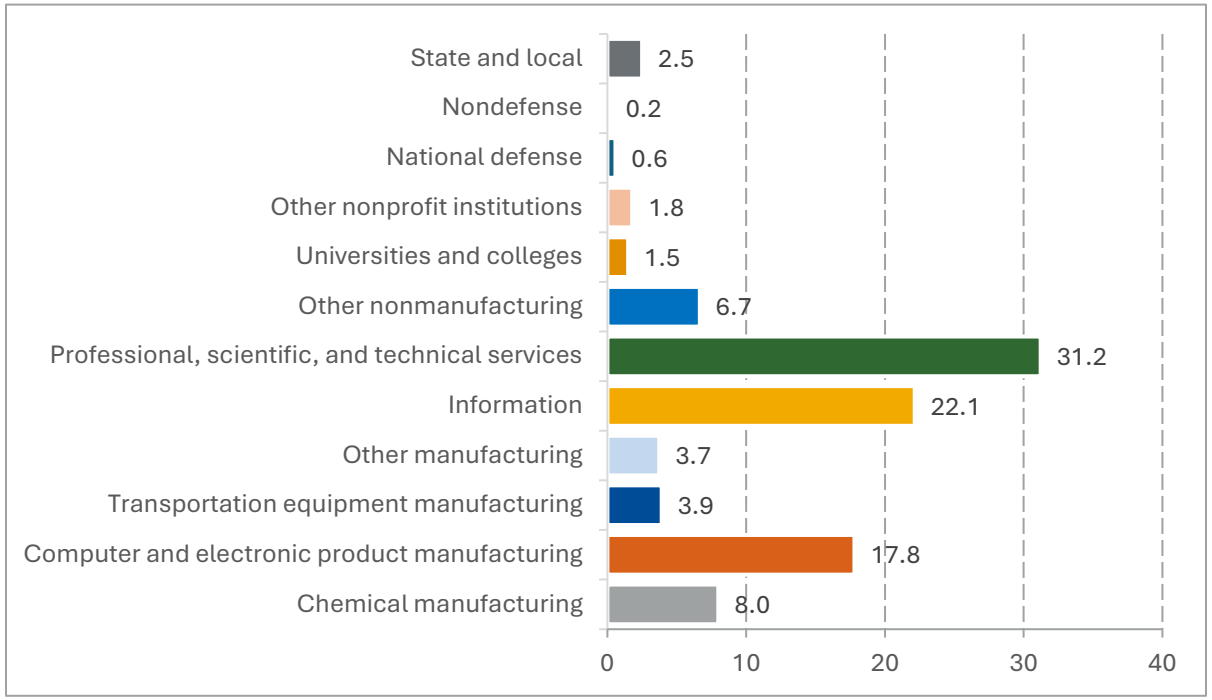
Washington

[Percent of State Total R&D Value Added]

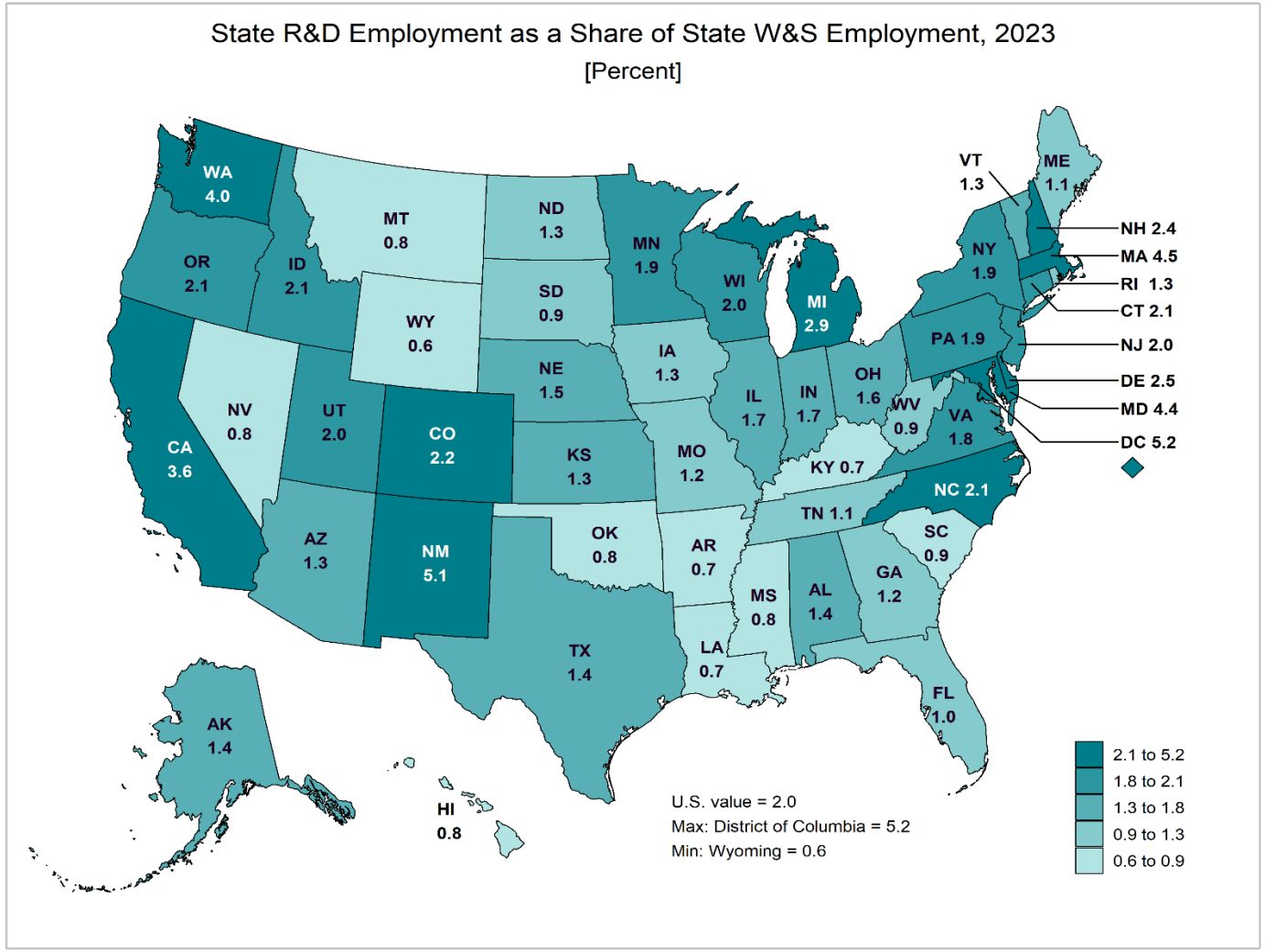


California

[Percent of State Total R&D Value Added]



R&D Share of State Employment, 2023



U.S. Bureau of Economic Analysis