



Innovation @ BEA: Harnessing the Power of Private Data Sources

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Overview



Past: Establish the foundation for innovation

BEA has a proven track record of leveraging private—including high frequency and big data sources—to provide **more timely, accurate, relevant, and detailed statistics.**

Present: Strengthen the data infrastructure

Recent innovations include:

- **Timely:** Consumer spending snapshots
- **Accurate:** “Advance” services estimates
- **Relevant:** Health care statistics
- **Detailed:** Real consumer spending by state

Future: Never stop building...

- What are the opportunities and challenges?
- Where are we headed next?



BEA has a long history of using private datasets



BEA uses roughly 140 private vendor datasets in the production of our accounts—highlights include:



American Dental Association (ADA)
Amtrak
Automobile Dealers Exchange
Services of America (ADESA)
Baker Hughes
Bank for International Settlements
Bank of America
Bank of England



Boeing
BoxOfficeMojo
BP Oil Spill data from Gulf Coast
Claims Facility
Bureau Van Dijk
Campaign Finance Institute
(Cfinst.org)
Cardweb.com



D. K. Shiflett & Associates (Travel & Tourism data)
Depository Trust and Clearing Corporation
Deutsche Bundesbank
Farm Credit System
Federal Home Loan Banks
Federal Housing Administration (FHA)
First Data Corporation



Foundation Center
Futures Industry Association
General Re Life Corporation (Genre.com)
GivingUSAreports.org
Global Trade Information Services
Gold Fields Mineral Services
Goldman Sachs (Goldmansachs.com)
Greyhound Lines, Inc.
Harris X (Video Streaming and Physical Video Rental)
HL&ISY health insurance data for Western PA
HL&ISY Managed Market Surveyor Insurance Data
Hoover's Online
IC Knowledge

"IHME, Disability Adjusted Life Years (DALYs)"
IHS Global
IMS Govt Solutions (Prescription Drug data)
Inside Mortgage Finance
Institute for Building Technology and Safety (IBTS)
Institute of Real Estate Management
Insurance Services Online
Investment Company Institute (ICI)



Army Corps of Engineers)

McDash (LPS Applied Analytics) mortgage interest data
McGraw Hill Construction,
Engineering News-Record (ENR)
Medicare Data on Provider Practice and Specialty (MDPPAS)
Mercer's National Survey of Employer Sponsored Health Care Plans
MergerMarket
Modern Healthcare
MoneyGram International



Mortgage Bankers Association
Motorcycle Industry Council
MSCI Inc
Nacha.org (The Electronic Payments Association)
Nasdaqtrader.com (NASDAQ)
National Academy of Social Insurance (NASI)
National Association of College Stores (NACS)
National Association of Independent Schools (NAIS)
National Association of Realtors (NAR)
National Automobile Dealers Association (NADA)
National Bicycle Dealers Association (NBDA)

National Center for Charitable Statistics (Urban Institute)
NCES



Establishment Time Series Database
National Institute on Money in State Politics (Followthemoney.org)
National Marine Manufacturers Association (NMMA)
National Shooting Sports Foundation
National Association of Insurance Commissioners (NAIC)
Newspaper Association of America (NAA)
Nielsen (Monthly Physical Music and Digital Downloads)
Nielsen (Tobacco Sales)
NPD Group



Pharmaceutical Research and Manufacturers of America (PhRMA)
Pharmetrics Health Insurance Claims Data
PHC4 Hospital Inpatient/Outpatient Administrative Data
Portfolio Media
RI Polk



By IHS Markit association of

America (RIAA)
Remittance - IMS Health 835
Transaction for Orthopedist and Cardiologist medical providers
Research Insight
Securities Industry and Financial Markets Association (SIFMA Sifma.org)
SK&A Physician, hospital and health Smith Travel Research



scanner data)
Thomson Reuters Benefit Plan Design data
TIAA-CREF Institute
T-Mobile
Truven Health (Medical Claims & grouper)
Tufts Medical Data
Turner Construction Company
UPS
Vending Times
Verizon
Wall Street Journal
Wards' Automotive Reports



LLP



BEA uses private data to provide more timely, accurate, relevant, and detailed statistics

**Improve timeliness
and accuracy**

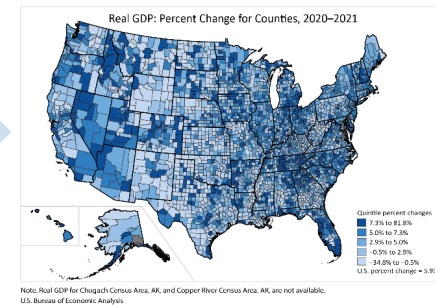
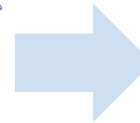
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Better data, faster

**Spotlight new
perspectives**

- ✓ Health care
- ✓ Outdoor recreation
- ✓ Digital economy
- ✓ Global supply chains
- ✓ Space economy

**Expand geographic
detail**



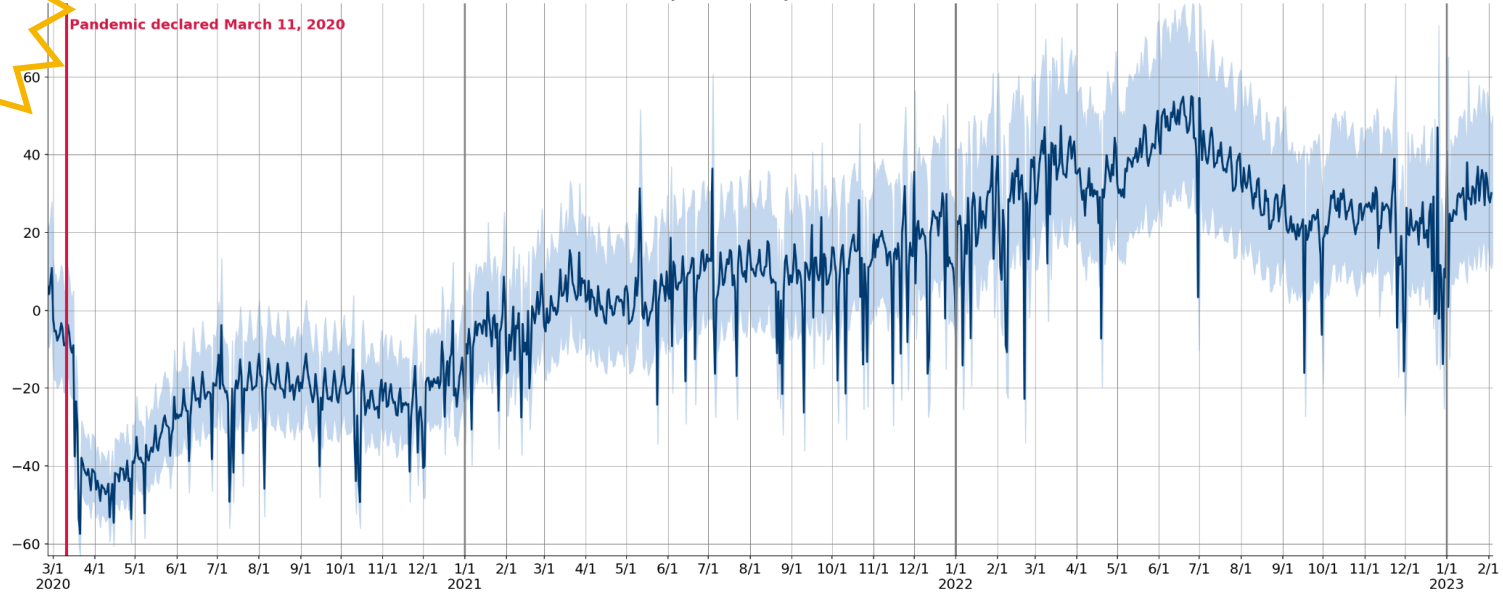
BEA has near real-time data on aspects of consumer spending



Timely

Spending on Gasoline Stations

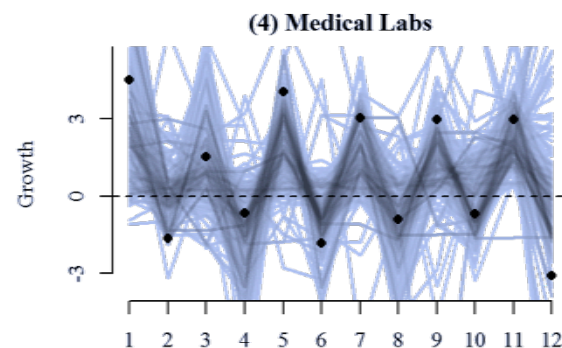
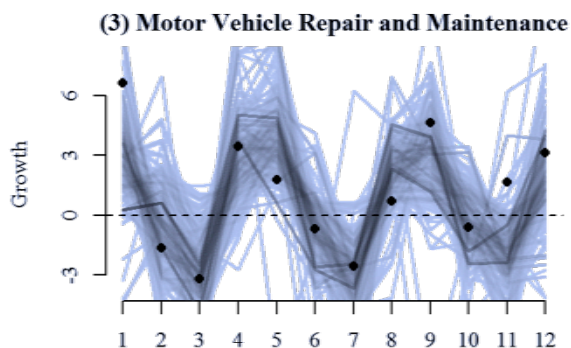
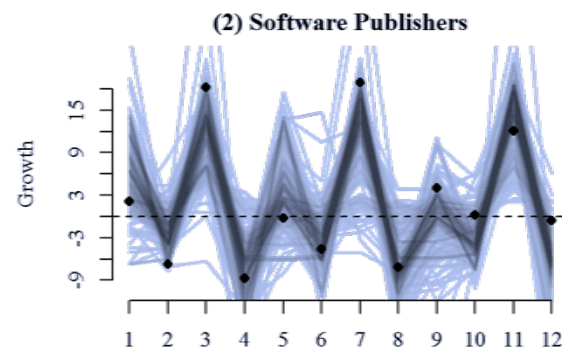
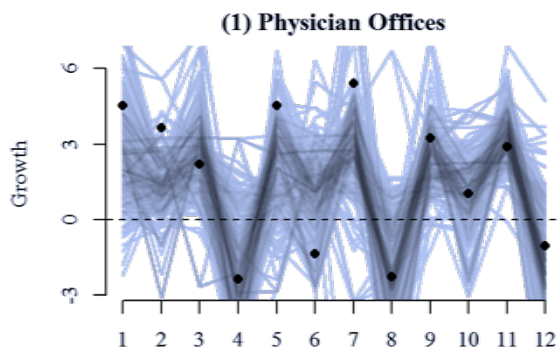
An Event Study Based on Payment Card Transactions



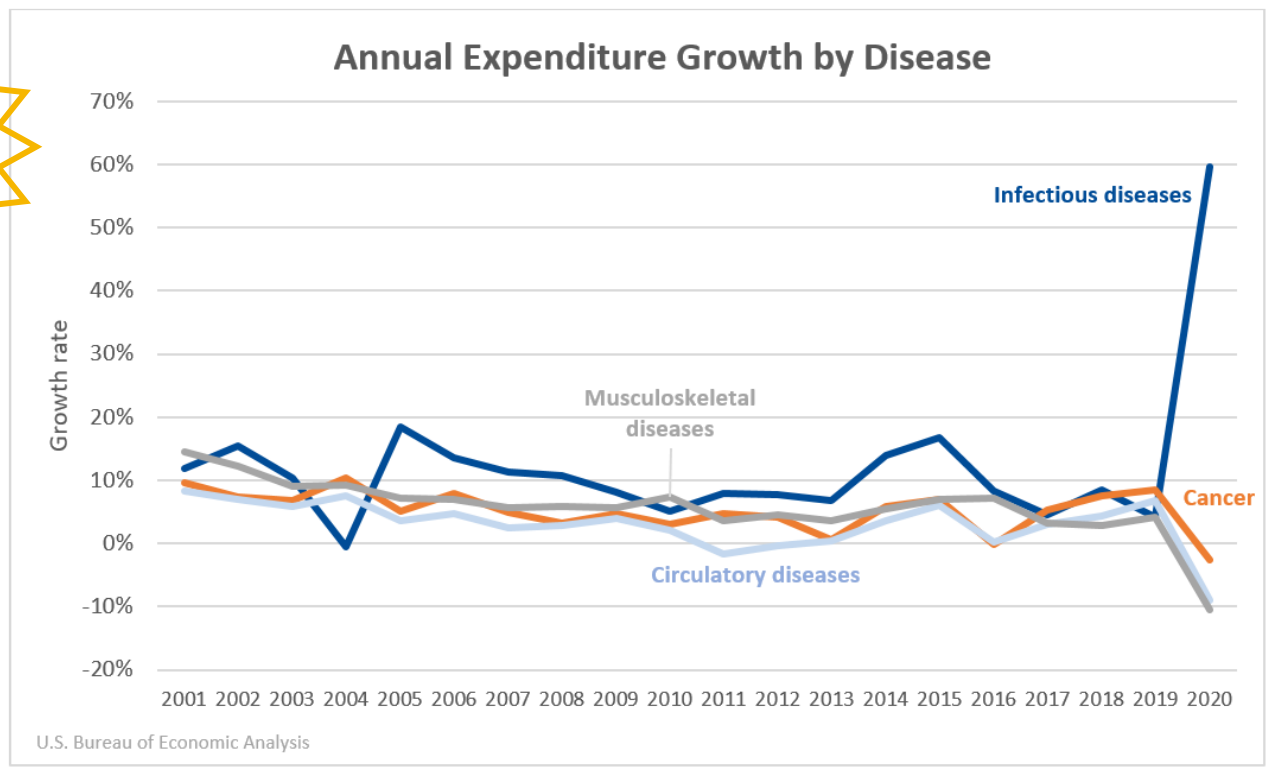
Note: Chart shows the difference from the typical level of spending without COVID-19-related changes in the economy. The typical level corresponds to a value of 0. The shaded area represents 95 percent confidence interval bands.

U.S. Bureau of Economic Analysis

Using payment card data improves the early estimates of consumer spending on services



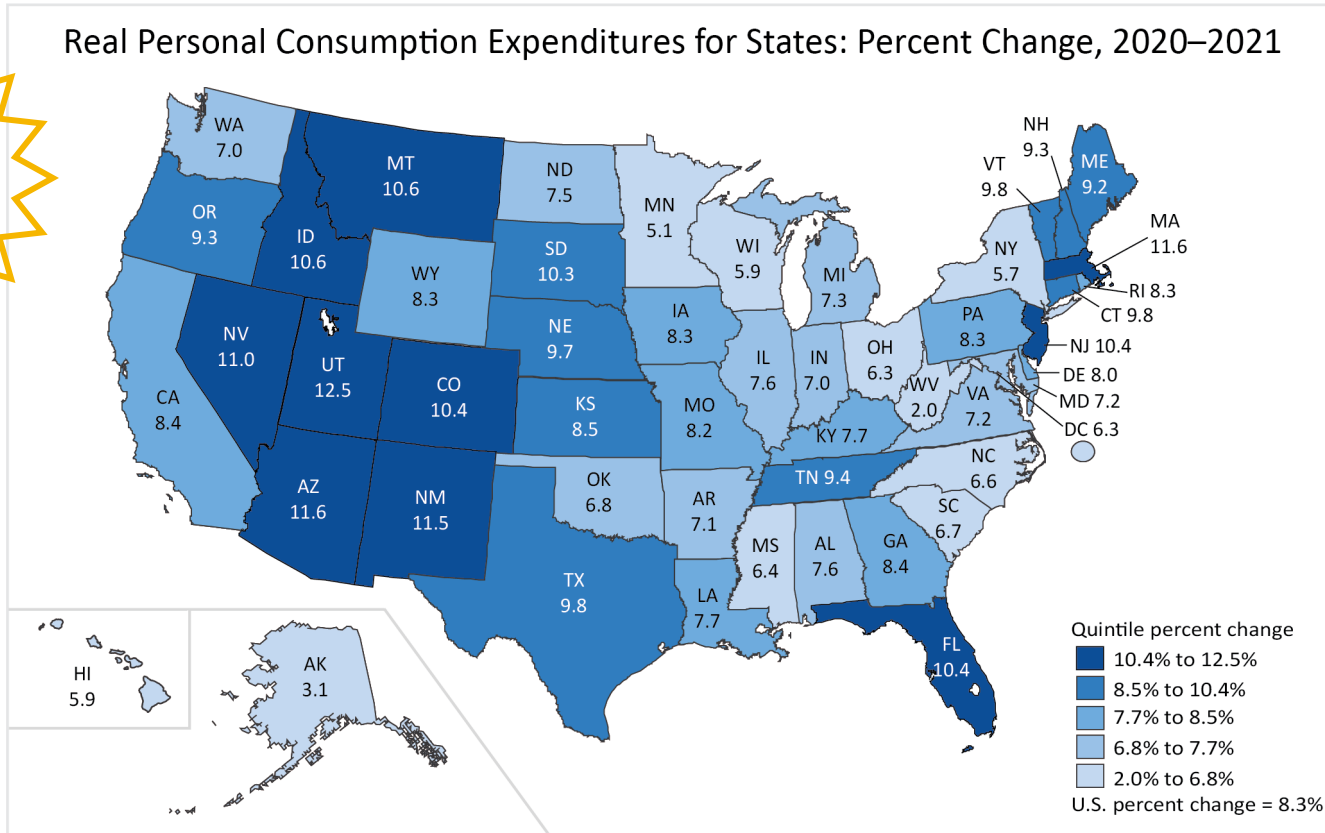
Infectious disease spending increased 60% in 2020



Real consumer spending increased in all 50 states in 2021



Real Personal Consumption Expenditures for States: Percent Change, 2020–2021



U.S. Bureau of Economic Analysis



There are many exciting opportunities related to private data

Proven Benefits

- ✓ Timeliness
- ✓ Accuracy
- ✓ Relevance
- ✓ Detail

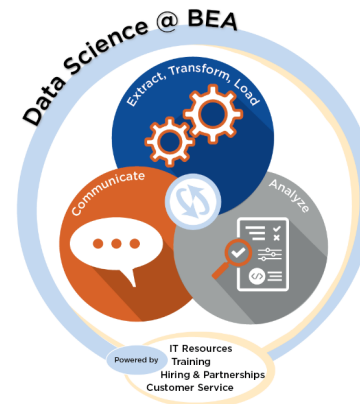
Human Capital



Collaboration



IT Infrastructure



Remaining challenges with private data include data quality, availability, and costs

Data Quality

- ✓ Representativeness
- ✓ Classification
- ✓ Documentation

Availability

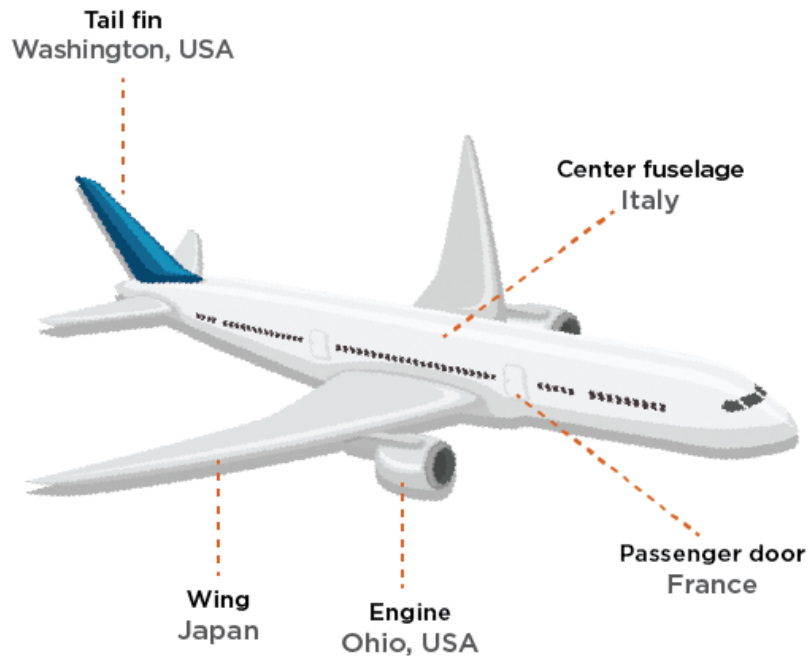


Costs



What's next? BEA is developing a more complete and nuanced view of supply chains

Global Value Chains



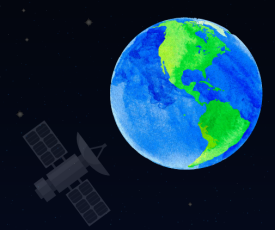
The new data will help analyze global value chains—increasingly complicated supply chains that link many countries together to produce a good or service.

What's next? BEA is spotlighting the role of the Space Economy



Exploring the Space Economy

\$195 billion in U.S. gross output*
*all data are from 2019



What is the U.S. space economy?

The space economy consists of space-related goods and services, both public and private. This includes goods and services that:

- Are used in space, or directly support those used in space (*space vehicles, launch pads, space weapon systems, insurance*)
- Require direct input from space to function, or directly support those that do (*satellite telecommunications and broadcasting; GPS and Positioning, Navigation, and Timing equipment*)
- Are associated with studying space (*research and development, educational services, planetariums, observatories*)

These estimates are experimental statistics as we continue to refine our measurement of the U.S. space economy.

In private industry, the space economy supports **354,000** full- and part-time jobs

How do we measure it?

One way: by measuring industries' space-related gross output, which is principally measured as an industry's sales or receipts.

Gross Output by Industry Group


(Billions of Current Dollars)

Year	Total	Information	Manufacturing	Government	Wholesale Trade	Professional & Business Services	All other
2012	\$175	67	54	29	23	25	26
2013	\$182	60	55	29	25	30	29
2014	\$184	63	53	30	26	29	31
2015	\$190	65	52	31	27	31	32
2016	\$191	64	51	32	27	32	32
2017	\$190	64	50	32	27	34	32
2018	\$192	61	51	34	27	38	32
2019	\$195	60	51	38	32	32	32

Note: Industry group levels may not add to total levels due to rounding.


BEA's research on the space economy, including measurement of space-related government employment, continues subject to the availability of data, resources, and funding. Please email us at SpaceEconomy@bea.gov with any feedback on improvements to the experimental statistics. For information about our methodology, or to sign up to receive updates on the statistics, go to bea.gov.

www.bea.gov/data/special-topics/space-economy



U.S. Space Economy Components

- Information**
Telecommunications, broadcasting, software
- Manufacturing, Wholesale Trade & Retail Trade**
Space vehicles; space weapons; satellites; ground equipment; search, detection, navigation, and guidance systems (GPS/PNT equipment)
- Government**
Military, civilian, federally funded research and development centers
- Professional & Business Services**
Research and development; engineering and technical services; computer systems design; geophysical surveying and mapping services
- Construction**
Space facilities, observatories, planetariums
- Other Services**
Launch services, education, insurance, observatories, planetariums



Recap



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Recent highlights include:

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- **Relevant:** Health care statistics
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Any questions?