Economic Innovation at the Census Bureau
Drive for Change

Stay Relevant

Meet Data Needs
Timely, granular, standardized

Improve Efficiency
Consistency across programs

Declining Budgets

Declining Response Rates
Economic Innovation at the Census Bureau
What is High Frequency Data?

Time series data that is collected at a finer time scale

Examples:
- Business Formation Statistics
- Monthly State Retail Sales Data Product
- Business Trends & Outlook Survey
Road Map to High Frequency Data

- Research & Methodology
- Experimental Data Product
- Standard Data Product
What is Business Formation Statistics?

- Focuses on measuring early-stage business activity with shorter lag and with more frequent updates
- Derived from applications for Employer Identification Number (EIN)
Who are our BFS Partners?
BFS Timeline

July 17
First release of Quarterly BFS by Economic Indicator Division (national, regional, state)

April 9
First release of Weekly BFS (national, regional)

April 16
Weekly state data added

November 11
Annual release of county level Business Application series through 2019

February 10
First Monthly BFS Release, including monthly series by 2-digit NAICS

July 1
Annual county BA series through 2020

December 8
Remove experimental status; make standard data product

June 23
Annual county BA series through 2021

February 3
Updated release of Weekly BFS by NAICS for 2006-2021

November 10
Implement new HBA NAICS Criteria

January 14
Final Quarterly BFS Release

Publications by Year
- 2019 – 2 Quarterly Releases
- 2020 – 41 Weekly Releases, 4 Quarterly Releases, 1 Annual Release
- 2021 (estimated) – 49 Weekly Releases, 11 Monthly Releases, 1 Quarterly Release, 1 Annual Release
Types of BFS Series

BFS consists of:
- 4 Business Application Series
- 8 Business Formation Series (formations are applications that become employer businesses)

<table>
<thead>
<tr>
<th>BFS Publications</th>
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<tbody>
<tr>
<td><strong>Frequency</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td><strong>Series</strong></td>
</tr>
<tr>
<td><strong>Geography</strong></td>
</tr>
<tr>
<td><strong>Other</strong></td>
</tr>
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</table>
Visualizing BFS Data

https://www.census.gov/econ/bfs
What is Monthly State Retail Sales (MSRS)?

- More timely state-level retail sales
- Created using existing survey data, administrative data, and third-party/alternative data sources as its inputs
- No new data were collected
- First released in September 2020
What MSRS data are available?

- Year-over-year percentage changes by month back to January 2019 for:
  - Total Retail Sales excluding Non-store Retailers
  - 11 Retail Subsectors
    - Motor vehicle and parts dealers (NAICS 441)
    - Furniture and Home Furnishing (NAICS 442)
    - Electronics and Appliances (NAICS 443)
    - Building Materials & Supplies Dealers (NAICS 444)
    - Food and Beverage (NAICS 445)
    - Health and Personal Care (NAICS 446)
    - Gasoline Stations (NAICS 447)
    - Clothing and Clothing Accessories (NAICS 448)
    - Sporting Goods & Hobby (NAICS 451)
    - General Merchandise (NAICS 452)
    - Miscellaneous Store Retailers (NAICS 453)

- The state-level detail is not adjusted for seasonal variation, trading-day differences, moving holidays, or price changes.
- Published quality metrics include standard errors and coverage measures.
June 2022
Year-over-Year Percentage Changes by State

Source: June 2022 MSRS Report
S = Estimate suppressed due to quality concerns
* The 90 percent confidence interval includes zero.
There is insufficient statistical evidence to conclude that the actual change is different from zero.
Note: State retail sales data not adjusted for seasonal variation, trading-day differences, moving holidays or price changes.

https://www.census.gov/retail/state_retail_sales.html
What is the Business Trends & Outlook Survey?

- Started as the Small Business Pulse Survey
- Measured the effect of changing business conditions during the coronavirus pandemic
- Complemented existing Census Bureau data by providing detailed, near real-time info on challenges faced by small businesses
- Partnered with subject matter experts at other federal agencies for content
Business Trends & Outlook Survey

**BTOS Creation**
- SBPS Lessons Learned
- Stakeholder Feedback
- Leadership strategy

**Goals**
- Continue producing near real time data products
- Produce economic pulse

**Progressive, Incremental Scope**
- Single Units
- Multi Units
- Emergency Economic Info Collections
- Non-Employers
- Business Characteristics
- Uncertainty

**Business Trends and Outlook Survey (BTOS)**

<table>
<thead>
<tr>
<th>Frame</th>
<th>2020 Business Register</th>
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<tbody>
<tr>
<td>Sample Design</td>
<td>Stratified systematic sample with strata defined by state and sector</td>
</tr>
<tr>
<td>Content</td>
<td>Designed to capture economic norms, impacts of unforeseen events</td>
</tr>
<tr>
<td>Instrument</td>
<td>Centurion</td>
</tr>
<tr>
<td>Timing</td>
<td>Ongoing 2-week data collection period and data publications</td>
</tr>
<tr>
<td>Data Products</td>
<td>New indexes summarizing core concepts</td>
</tr>
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</table>
Visualizing BTOS Data

The Business Trends and Outlook Survey (BTOS) is a survey designed to measure the U.S. business climate on a timely basis. Indexes summarize survey topics. The four indexes above are key performance indicators covering business’s current performance, revenues, employees, and hours. An index of 100 corresponds to a balanced business representation for the measure, while higher values generally imply more widespread positive performance. Refer to the documentation for more information.

https://www.census.gov/hfp/btos/data
Economic Innovation at the Census Bureau
What is the Annual Integrated Economic Survey?

- Integration of seven current annual economic surveys
  - Annual Retail Trade Survey
  - Annual Wholesale Trade Survey
  - Service Annual Survey
  - Annual Survey of Manufactures
  - Annual Capital Expenditures Survey
  - Report of Organization
  - Manufacturers' Unfilled Orders Survey

- Created as a result of a study and recommendations by the National Academy of Sciences (NAS)
<table>
<thead>
<tr>
<th>AIES Components &amp; Teams</th>
<th>Project Direction &amp; Alignment</th>
<th>Operations</th>
<th>Content and Analysis</th>
<th>Frame and Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey Planning &amp; Integration</strong></td>
<td>Coordinate and align all aspects of SLC for the new annual program to move to production</td>
<td><strong>Collection Framework</strong></td>
<td>Coordinate collection efforts, conduct survey pilot, develop a collection strategy, and work with enterprise team (DICE) to plan collection operations for integrated annual.</td>
<td><strong>Annual Content Determination and Harmonization</strong></td>
</tr>
<tr>
<td><strong>Respondent Research</strong></td>
<td>Research with respondents to inform content harmonization, collection, and instrument design</td>
<td><strong>Processing System</strong></td>
<td>Gather requirements, develop infrastructure, and implement a new processing system to support the integrated annual</td>
<td><strong>Annual Program Requirements</strong></td>
</tr>
<tr>
<td><strong>Indicator Alignment</strong></td>
<td>Ensure alignment w/ indicators to accommodate future expansion of implemented improvements</td>
<td><strong>Macro, Disclosure, &amp; Dissemination</strong></td>
<td>Determine requirements and processes to prepare for tabulation, disclosure, and dissemination and release data</td>
<td><strong>Data Products and Release Planning &amp; Coordination</strong></td>
</tr>
<tr>
<td><strong>Instrument Design</strong></td>
<td>Develop a standard, cohesive, integrated collection instrument</td>
<td><strong>Status Changes</strong></td>
<td>Determine the processing needs to make sense from both a respondent and analyst perspective to be as clean and methodologically sound.</td>
<td><strong>Analyst Toolkit</strong></td>
</tr>
<tr>
<td><strong>Alternative Data Sources</strong></td>
<td>Evaluate and leverage alternative data for suitability to improve processes &amp; methods (SEC Data, NPD)</td>
<td><strong>Rule Engine</strong></td>
<td>Determining and documenting rules for flagging problem data and simple data updates</td>
<td><strong>2022 Econ Census Content Determination</strong></td>
</tr>
<tr>
<td><strong>Account Management Activities</strong></td>
<td>Centralized and coordinated single point of contact of largest enterprises</td>
<td><strong>Data Management</strong></td>
<td>Develop governance of standard names and metadata to ensure data coherence</td>
<td><strong>Time Series</strong></td>
</tr>
<tr>
<td><strong>Data User Outreach</strong></td>
<td>Increase data awareness, develop data user training (webinars, online tutorials)</td>
<td><strong>Sampling</strong></td>
<td>Research/implement sampling improvements (sampling unit, stratification, and coordinated sampling)</td>
<td><strong>Disclosure Methodology</strong></td>
</tr>
<tr>
<td><strong>Frame Extraction Research</strong></td>
<td>Research frame extraction, create frame roadmap, and develop a frame prototype</td>
<td><strong>Production Frame Development</strong></td>
<td>Develop and test production frame parameters and programs, and deliver final frame.</td>
<td><strong>Post Data Collection Methodology</strong></td>
</tr>
</tbody>
</table>
AIES Pilot

- Pilot due date was June 15, 2022 - collection closed
- Preliminary counts - of the 78 companies (covering 2,863 establishments) recruited:
  - 49 total completes
  - 12 partial completes
  - 6 dropouts
  - 11 non-responses
- Conducted debriefing interviews, e-mailed Response Analysis Surveys, and analyzed collected data
- Preliminary results from above activities have been presented
- Phase II planning in progress now
Next Steps

- AIES Sample Refresh
- Covering AIES during Economic Census Years
- Impact on Economic Indicators
Economic Innovation at the Census Bureau
An innovative partnership to combine already collected administrative and survey data linking it together to provide new information about the U.S. economy at very low cost.
LEHD Data Products

**QUARTERLY WORKFORCE INDICATORS (QWI)**
- Employment, Hires, Separations, and Wages by Worker Demographics
- Key uses:
  - Understanding the aging workforce
  - Examining hiring trends in local labor markets
  - Identifying where wages are high or where wages are growing in local labor markets

**LEHD ORIGIN-DESTINATION EMPLOYMENT ESTIMATES (LODES)**
- Block-level employment by where workers live and work
- Key uses:
  - Local economic development planning
  - Emergency planning
  - Business site selection

**JOB-TO-JOB FLOWS (J2J)**
- Hires and separations by worker origin and destination employment characteristics
- Key uses:
  - What labor markets are we losing workers to?
  - What industries are we attracting workers from?
  - Who is hiring workers from unemployment?
Visualizing LEHD Data

Job-to-Job Flows

Only 64% of employed workers hired by Houston area firms were previously employed in Houston.

Another 15% were employed by establishments in Dallas, Austin, San Antonio, and Beaumont.

Quarterly Workforce Indicators Explorer
Economic Innovation at the Census Bureau
What is Post-Secondary Employment Outcomes?

Experimental data product that provides tabulations providing national earnings and employment statistics for graduations of post-secondary institutions.
PSEO Coverage
Partnership Timeline

1. Execute Memorandum of Understanding (3-4 months)
2. Transfer data to Census (1 month)
3. Data Processing at Census (2 months)
4. Embargoed public-use data provided to state (1 month)
5. Data posted on Census website
Visualizing PSEO Data

[Image of a bar chart showing earnings for different fields]

https://lehd.ces.census.gov/data/pseo_explorer.html
Economic Innovation at the Census Bureau
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