Annual Integrated Economic Survey (AIES) Overview

September 2023
What we will cover today:

• AIES Background & Drivers
• Overarching Goals & Timeline
• Teams & Stakeholders
• Internal & External Communication
• Sampling Requirements
• Content Harmonization
• Research & Testing Activities
National Academy of Sciences (NAS) panel studied our annual economic surveys and provided Econ leadership with recommendations.

Small Econ group, with representations from the various divisions, reviewed the recommendations and selected which ones to implement.

Main drivers of this effort include:

- Meet data needs – timely, granular, standardized
- Improve efficiency – consistency across programs (content, processes, systems)
- Declining budgets
- Declining response rates
- Stay relevant
What is the Annual Integrated Economic Survey?

Integration of Seven Annual Economic Surveys

- ACES—Annual Capital Expenditures Survey
- ARTS—Annual Retail Trade Survey
- AWTS—Annual Wholesale Trade Survey
- ASM—Annual Survey of Manufacturers
- SAS—Service Annual Survey
- M3UFO—Manufacturers’ Unfilled Orders Survey
- COS—Report of Organization

Current State

- Industry focused.
- Overlapping content.
- National estimates.
- Independent samples.
- Different reporting units by program.
- Inefficient processes and operations.
- Varying classification systems.

Future State

- Alignment to enterprise programs.
- Consolidated processing system.
- Integrated frame and sample.
- National and state geographic estimates.
- Standardized and rotating content.
- Respondent centric.
- Coordinated collection and instruments.
- Harmonized reporting units.
- Leveraging of alternative data.
- Holistic company analysis.
- Economy-wide data products.

United States Census Bureau

2020
- Test coordinated collection, evaluate existing content.

2021
- Harmonize and test content, create frame prototype.

2022
- Test sample selection, finalize content, and conduct pilot.

2023
- Develop instrument & systems, conduct dress rehearsal, finalize frame.

2024
- Load finalized sample, launch the AIES, collect data.

2025
- Analyze and release the AIES data.
Transitioning of Annual Programs

• **Survey Year 2021**
  • Annual Survey of Manufacturers (ASM)
  • Report of Organization

• **Survey Year 2022**
  • Annual Retail Trade Survey (ARTS)
  • Annual Wholesale Trade Survey (AWTS)
  • Service Annual Survey (SAS)
  • Annual Capital Expenditures Survey (ACES)
  • Manufacturers’ Unfilled Orders Survey (M3UFO)
<table>
<thead>
<tr>
<th>AIES</th>
<th>Components &amp; Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey Planning &amp; Integration</strong></td>
<td>Coordinate and align all aspects of AIES for the new annual program to move to production</td>
</tr>
<tr>
<td><strong>Respondent Research</strong></td>
<td>Conduct research with respondents (e.g., cognitive testing, usability testing) to inform content harmonization, collection, and instrument design</td>
</tr>
<tr>
<td><strong>Indicator Alignment</strong></td>
<td>Ensure alignment w/ indicators to accommodate future expansion of implemented improvements</td>
</tr>
<tr>
<td><strong>Instrument Design</strong></td>
<td>Develop a standard, cohesive, integrated collection instrument</td>
</tr>
<tr>
<td><strong>Account Management Activities</strong></td>
<td>Determine rates &amp; responsibilities of account managers, who serve as single points of contact for largest companies</td>
</tr>
<tr>
<td><strong>Communications &amp; Outreach</strong></td>
<td>Increase internal and external awareness, develop training, provide notifications</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>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>Vacant (Lisa Donaldson, acting)</td>
</tr>
<tr>
<td><strong>Collection Framework</strong></td>
<td>Coordinate collection efforts, develop a collection strategy, and work with enterprise team (DICE) to plan collection operations for integrated annual</td>
</tr>
<tr>
<td><strong>Pilot &amp; Dress Rehearsal</strong></td>
<td>Plan and implement survey pilots and a dress rehearsal to inform the content and instrument and to make adjustments prior to production based on lessons learned</td>
</tr>
<tr>
<td><strong>Processing System</strong></td>
<td>Gather requirements, develop infrastructure, and implement a new processing system to support the integrated annual</td>
</tr>
<tr>
<td><strong>Macro, Disclosure, &amp; Dissemination</strong></td>
<td>Determine requirements and processes to prepare for tabulation, disclosure, and dissemination and release data</td>
</tr>
<tr>
<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>
</tr>
<tr>
<td><strong>Rule Engine</strong></td>
<td>Determine and documenting rules for flagging problem data and simple data updates</td>
</tr>
<tr>
<td><strong>Data Management</strong></td>
<td>Develop governance of standard names and metadata to ensure data coherence</td>
</tr>
<tr>
<td><strong>Content and Analysis</strong></td>
<td>Lisa Donaldson</td>
</tr>
<tr>
<td><strong>Annual Content Determination and Harmonization</strong></td>
<td>Determine core questions, rotating industry and topical questions, aligning to the Economic Census, where possible</td>
</tr>
<tr>
<td><strong>Annual Program Requirements</strong></td>
<td>Determine program requirements for the new annual survey to meet user needs/data gaps</td>
</tr>
<tr>
<td><strong>Data Products and Release Planning &amp; Coordination</strong></td>
<td>Determine data products, develop processes for effective analytical review/analysis, and establish plans for optimal data release</td>
</tr>
<tr>
<td><strong>Analyst Toolkit</strong></td>
<td>Create an AIES analysis plan and develop tools for micro/macro analysis</td>
</tr>
<tr>
<td><strong>AIES Web Presence</strong></td>
<td>Create an external webpage for early awareness and communication of upcoming changes with AIES as well as a future page for data release</td>
</tr>
<tr>
<td><strong>2022 Econ Census Content Determination</strong></td>
<td>Provide Econ Census content aligned with Annual content and without duplication</td>
</tr>
<tr>
<td><strong>Frame and Methods</strong></td>
<td>Kim Moore</td>
</tr>
<tr>
<td><strong>Sampling Research</strong></td>
<td>Research/implementation sampling improvements (sampling unit, stratification, and coordinated sampling)</td>
</tr>
<tr>
<td><strong>Frame Extraction Research</strong></td>
<td>Research frame extraction, create frame roadmap, and develop a frame prototype</td>
</tr>
<tr>
<td><strong>Post Data Collection Methodology</strong></td>
<td>Develop requirements, test, evaluate, and implement selected approaches for weight adjustment/calibration, variance estimation &amp; replication, non-response adjustment, and hot deck imputation</td>
</tr>
<tr>
<td><strong>Time Series</strong></td>
<td>Determine changes to time series for all impacted surveys and how best to handle those changes across the various programs</td>
</tr>
<tr>
<td><strong>Production Frame Development</strong></td>
<td>Develop and test production frame parameters and programs, and deliver final</td>
</tr>
<tr>
<td><strong>Production Sampling</strong></td>
<td>Develop, test, and implement production sample process</td>
</tr>
</tbody>
</table>

**TEAM STATUS KEY**
- **NOT STARTED**
- **IN PROGRESS**
- **COMPLETED**

Patterned boxes: Team operates in conjunction with a team whose work includes AIES-critical deliverables and outputs but whose scope is larger than AIES-specific outcomes.
AIES Stakeholders

**Internal**

**Leadership Support**
- Executive Sponsors
  - Econ Associate Director
  - Econ Assistant Director
- Senior Leadership Team
  - Econ Associate Director
  - Econ Assistant Director
  - Econ Division Chiefs
  - CES Division Chief
- Portfolio Management
  - Governing Board (PMGB)

**Portfolio & Cost Integration**
- Strategic Portfolio Management Office (SPMO)
- Economic Directorate Support Services (EDSS)
- CFO Budget Division (BUD)

**Enterprise Collaborators**
- Enterprise Data Lake
- Data Ingest and Collection for the Enterprise (DICE)
- Center for Enterprise Dissemination Services and Consumer Innovation (CEDSCI)
- Data Architecture Standards
- Disclosure Modernization
- Enterprise Frames Team
- Data Science Training Program
- Improving Design of Web Surveys through Standardized Practices

**Stakeholder Divisions**
- Economic Applications Division (EAD)
- Economic Indicators Division (EID)
- Economic Management Division (EMD)
- Economic Reimbursable Division (ERD)
- Economic Statistical Methods Division (ESMD)
- Economy-Wide Statistics Division (EWD)

**External**

**Main Agency Collaborators**
- Federal Reserve Board (FRB)
- Bureau of Labor Statistics (BLS)
- Bureau Economic Analysis (BEA)
- Centers for Medicare/Medicaid Services (CMS)

- Industrial Production and Capacity Utilization, Index of Capital Production
- Annual productivity series, producer price indexes, annual supply use tables
- GDP, input/output accounts, capital stock estimates, GNP weight deflators
- National Health Accounts, Health Care Providers Structure of Costs Analysis

- National Institute of Standards and Technology (NIST)
- Department of Commerce
- Appropriations and Budget
- Chief Statistician of the Federal statistical system

**Forums**
- Federal Statistical Research Data Centers (FSDRC)
- Federal Economic Statistics Advisory Committee (FESAC)
- National Association of Business, Economics and Technology (NABE)
- Federal Committee on Statistical Methodology (FCSM)
- State Data Centers (SDCs)
- American Economic Association (AEA)

**Strategies**
- Federal Register Notices
- Consult with Key Federal Data Users
- Account Managers Program
- Consult with Accounting Experts
- Promotion and Outreach
- External Customer Satisfaction Survey
- Cognitive and Usability Testing
- Consult with Trade & Professional Associations
AIES Internal Communication

- **Communication SharePoint subsite** includes:
  - Infographics
  - Frequently Asked Questions (FAQs)
  - Link to submit questions

- Teams Channel created to communicate info and ask questions

- More frequent updates via email and meetings to keep Econ up-to-date.
External website is live! [www.census.gov/aies](http://www.census.gov/aies)

- **Content Summary**
- **Instruction Manual**
- **Preview Survey Questions**
- **Transition language developed for legacy annual surveys**
- **External Communication Plan**
### Sampling Design Requirements

<table>
<thead>
<tr>
<th>National</th>
<th>Subnational</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revenue/Receipts, Annual Payroll, Inventories, Capital Expenditures...</td>
<td>• Revenue/Receipts, Annual Payroll, 1st Quarter Payroll, Employment</td>
</tr>
<tr>
<td>• Disaggregated industry (NAICS) levels</td>
<td>• Region, Division, State</td>
</tr>
<tr>
<td>• Differs by sector</td>
<td>• Aggregated NAICS levels (2 and 3-digit)</td>
</tr>
<tr>
<td>• 4-digit NAICS, 5-digit NAICS, 6-digit NAICS</td>
<td>• Aggregated NAICS level (2 through 4-digit manufacturing only)</td>
</tr>
</tbody>
</table>

• Recommended sample size for the 2023 AIES – 385,000 companies
• Plan to refresh the sample every 2-3 years
Content Harmonization

- Created a repository
- Organized content
- Gathered input from stakeholders
- Reviewed each item
Content Harmonization - Revenue

**Retail**
- What were the total sales of merchandise and other operating receipts for this firm in 2021?

**Wholesale**
- What were this firm’s TOTAL sales and operating revenue in 2021?*
- What were this firm’s sales and other operating receipts in 2021?

**Services**
- What were the revenues for this firm in 2021?

**Manufacturing**
- What was the total value of products shipped and other receipts for this establishment?
- What were the sales, shipments, receipts, or revenue?**

**AIES**
- What were the total sales, shipments, receipts, or revenue in 2021?

*Agents, Brokers, Representatives and Electronic Markets
** Added establishments
## Research & Testing

<table>
<thead>
<tr>
<th></th>
<th>Phase I Pilot</th>
<th>Phase II Pilot</th>
<th>2022 AIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timeline:</strong></td>
<td><strong>Start:</strong> March 2022</td>
<td><strong>Start:</strong> February 2023</td>
<td><strong>Start:</strong> September 2023</td>
</tr>
<tr>
<td></td>
<td><strong>Findings:</strong> Sept 2022</td>
<td><strong>Findings:</strong> June 2023</td>
<td><strong>Findings:</strong> December 2023</td>
</tr>
<tr>
<td><strong>Sample Size:</strong></td>
<td>78 recruited companies (62 provided data)</td>
<td>Mailed to 868 companies (As of 8/18/23, 510 have provided data)</td>
<td>Planned mail to approx. 8,300 companies</td>
</tr>
<tr>
<td><strong>Instrument:</strong></td>
<td>Qualtrics</td>
<td>Excel spreadsheet</td>
<td>Centurion-rendered instrument</td>
</tr>
</tbody>
</table>
| **Goals:**     | See if companies would/could actually report to the questions we were asking | • Test all collection units in one survey  
                  • More accurate measures of burden | • Instrument performance  
                  • More information on burden  
                  • Maximize enterprise partnerships |
Have Questions?
Want more information?

Email:
Econ AIES Project Managers List
(econ.aies.project.managers.list@census.gov)

Website:
Census.gov/aies