# Measuring the Impact of COVID-19 on Businesses and People:
# Lessons from the Census Bureau's Experience

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**Innovations in Measuring the Economic Impacts of COVID 19, AEAStat Session**

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# Overview

| Method | Businesses | Households |
|---|---|---|
| New Survey | Small Business Pulse Survey | Household Pulse Survey |
| New Use of Data | Business Formation Statistics | Community Resilience Estimates |
| Existing Surveys (new methods, new content) | Annual Business Survey<br>Annual Capital Expenditures Survey | American Community Survey |
| | Annual Survey of Manufactures<br>Service Annual Survey | Current Population Survey |
| | Economic Indicators | Survey of Income and Program Participation |

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# Process and Personnel

### Surveys

In-person contact (CAPI) => telephone contact (CATI)

CATI from call-center => CATI from home

Paper surveys => online surveys

Paper invitation => email invitation

Sampling strategies adjusted

### Administrative Data

New uses and enhanced uses

### Personnel

Shift to telework where possible (at times mandatory)

Encouraged innovation and experimentation

EXPERIMENTAL DATA

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# Small Business Pulse Survey

## Goal

Measure the effects of the pandemic on businesses overall and aspects of their operations and finances, leveraging existing infrastructure and producing high frequency geographic and industry detail.

## Process

Email invitation to online survey using existing frame. Response rate of >25%.

Three phases of collection, phase 4 being planned.

## Partners

Small Business Administration; Federal Reserve Board of Governors;  International Trade Administration;  Minority Business Development Agency; Bureau of Transportation Statistics; National Telecommunications and Information Administration; Office of Tax Analysis, Department of Treasury; Bureau of Labor Statistics.

## Content

### Overall

Overall effect of the pandemic with 5-bin response.

### Operations

Change in revenue, change in number of employees, change in employee hours, temporary closures.

### Challenges

Supply chain disruptions, factors impacting capacity, change in business's capacity, future needs.

### Finance

Cash on hand , loan or other payment defaults, requests for assistance, receipt of assistance.

### Outlook

Expectations. How much time until the business returns to average/normal level of operations.

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# Expectations over Sectors

Collection started in April; nine weeks for each of three Phases.

Outlook of the businesses of time until return to normal level of operations.

Responses include little/no effect, already back to normal), to varying durations (1 month or less up to 6+ months), to never and closed.

Figures are stacked from more positive (little/no effect, already back to normal), to varying durations (1 month or less up to 6+ months), to never and closed.



Expected Time Until Return to Normal Level of Operations
Data Collected September 6-12
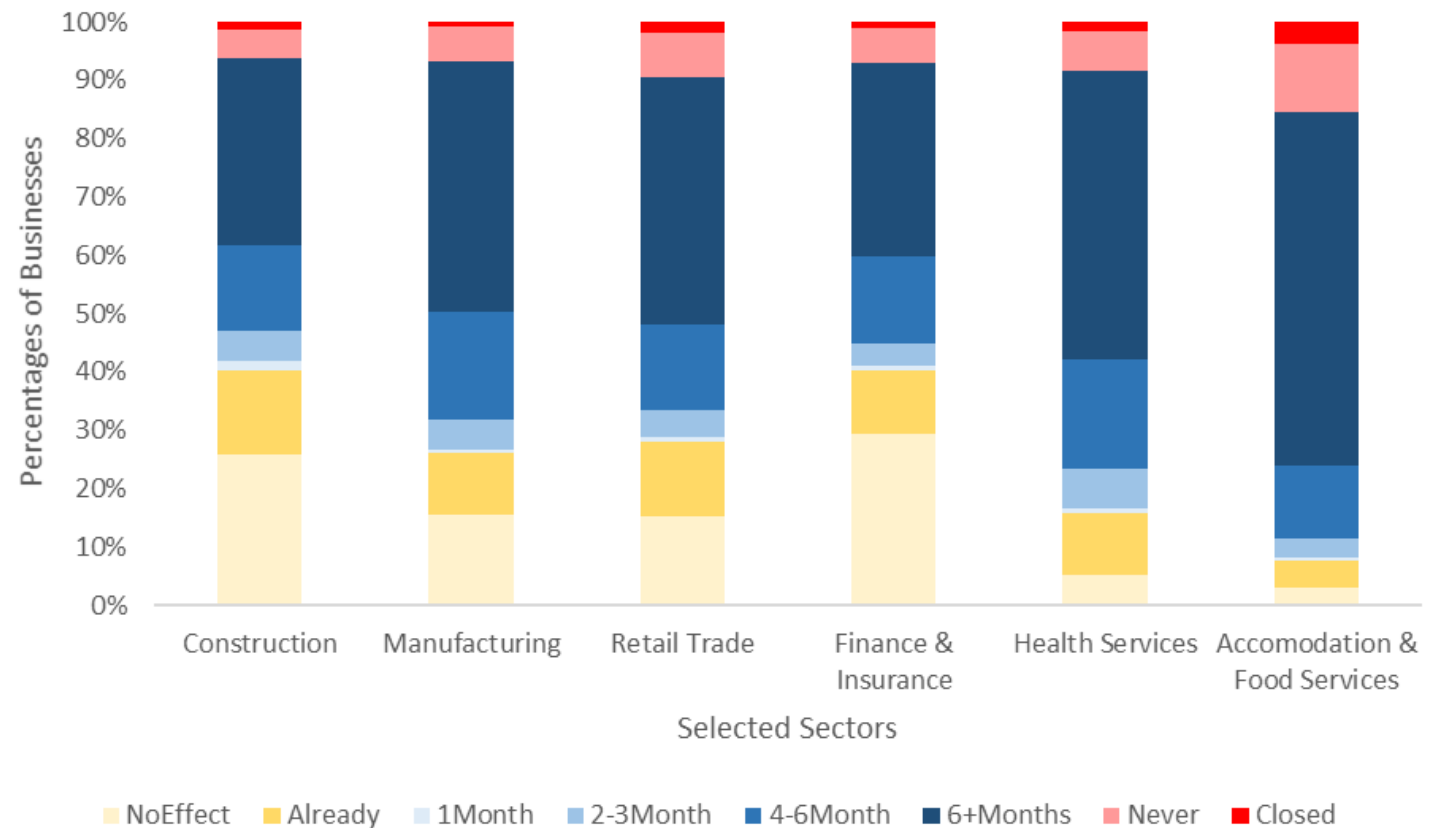
# Business Formation Statistics

## Goal

An experimental, public-use data product designed to fill a gap in the availability of high frequency, timely data on new business formation in the U.S. The quarterly BFS provide information on business applications and business formations 2 weeks after the close of a quarter. Weekly BFS is released approximately 5 days after week's end.

## Process

The Census Bureau receives weekly information on applications for Employer Identification Numbers (EINs) on form SS-4 through the Internal Revenue Service. We clean these according to criteria.

## Partners

Economists at Board of Governors of the Federal Reserve System, Federal Reserve Bank of Atlanta, University of Maryland, and University of Notre Dame.

## Content

### Business Applications
Excludes applications for tax liens, estates, trusts and for certain industries (private households, etc.).

### High Propensity Business Applications
Business applications with a high-propensity of turning into a business with payroll (based upon a number of factors on the application such as sector).

### Business Applications with Planned Wages
Applications that are high-propensity and that indicate a planned data for paying wages.

### Business Applications from Corporations
Applications that are high-propensity and that come from corporations or personal service corporations.

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# High Propensity Business Applications

First release of weekly data on April 8 for data covering March 30-April 4. (Historical data available as well.)

In regular times, more than one-third of HPBA transition to employer status.

Prior to pandemic declaration (vertical line), BA2020 (red) tracking BA2019 (gray).

Steep drop followed by an unprecedented rise before moving closer to 2019 levels.



Weekly High Propensity Business Applications
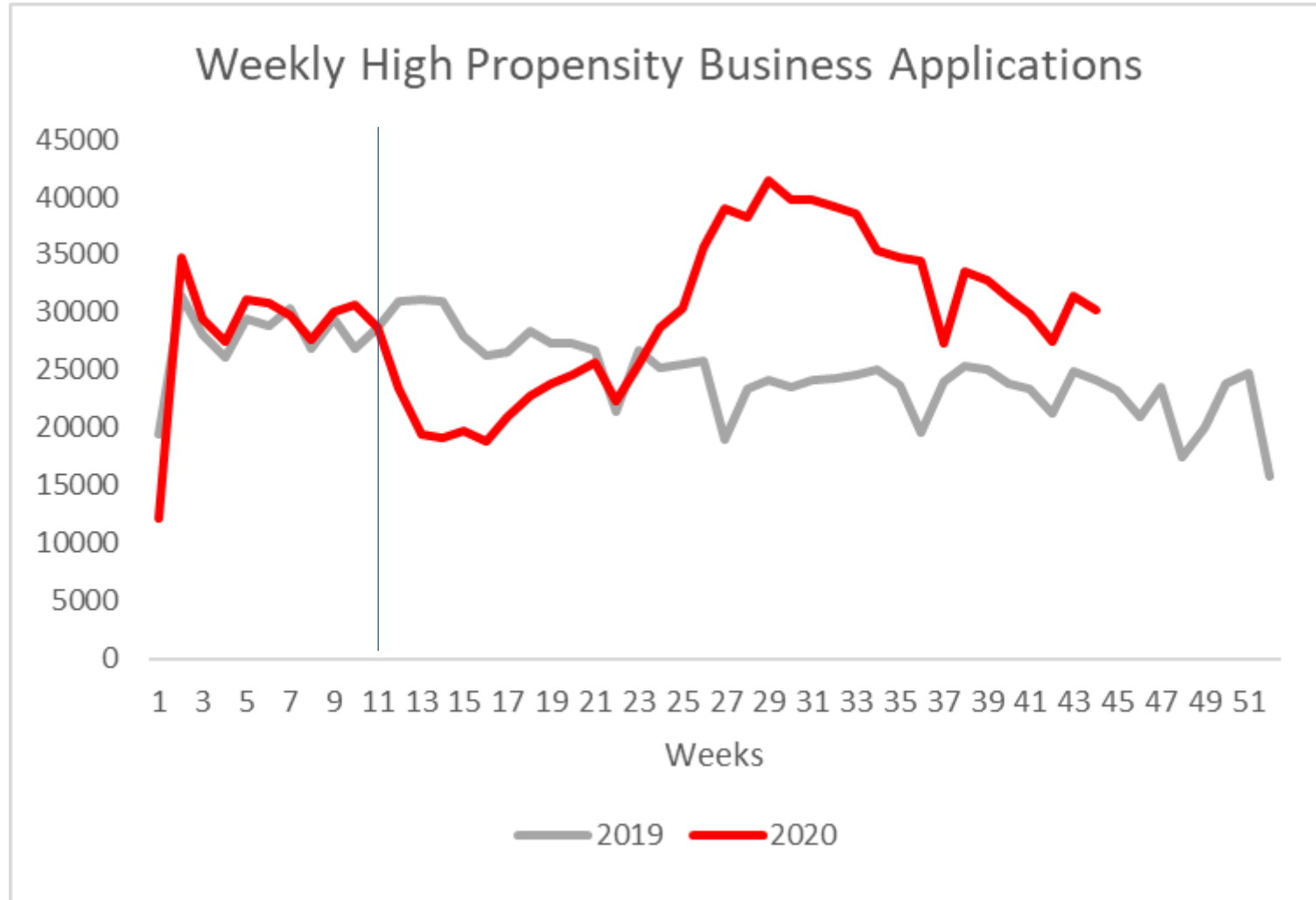
# Other Business Surveys and Economic Indicators

## Annual Business Survey

- ABS 2019: ability of workers to work from home and factors affecting this ability.
- ABS 2020: effect of the pandemic on sales, federal assistance.

## Annual Capital Expenditure Survey

- Receipt of, and uses of, federal assistance
- Impact to payroll.

## Annual Survey of Manufactures

- May ask days closed due to pandemic.
- May ask additional detail for products related to pandemic (N95 respirators).
- Donation of products.

## Service Annual Survey

- May ask telemedicine revenue estimates for hospitals and nursing homes.

## Economic Indicators

- To assess impact on quality of responses, questions added temporarily to five economic indicator programs.
- Questions asked whether changes in employment, temporary closures, or delays in the supply chain had an impact on reported revenues, sales, or inventories.

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# Household Pulse Survey

## Goal

Deploy quickly and efficiently, collecting data on a range of ways in which people's lives have been impacted by the pandemic. Since the environment and circumstances are rapidly changing, designed to be able to quickly assess and report on critical issues.

## Process

Qualtrics platform. Used existing email and cell-phone contact frames. Matched to Master Address File (MAF) records. Emails and phone numbers from respondent contacts and from third party vendors.

## Partners

Bureau of Labor Statistics; National Center for Health Statistics; Housing and Urban Development; National Center for Education Statistics; USDA Economic Research Service; Office of Management and Budget; Bureau of Transportation Statistics; Social Security Administration.

## Content

### Employment

Expected loss of employment income, …

### Food Security

Past and current food sufficiency, …

### Health

Health and mental health, delays in getting care, …

### Housing

Confidence about paying rent/mortgage next month, …

### Education

Hours householder spent on educational activities, …

### Program Use

Social Security Programs, Unemployment Insurance

### Spending

Series on expenditures.

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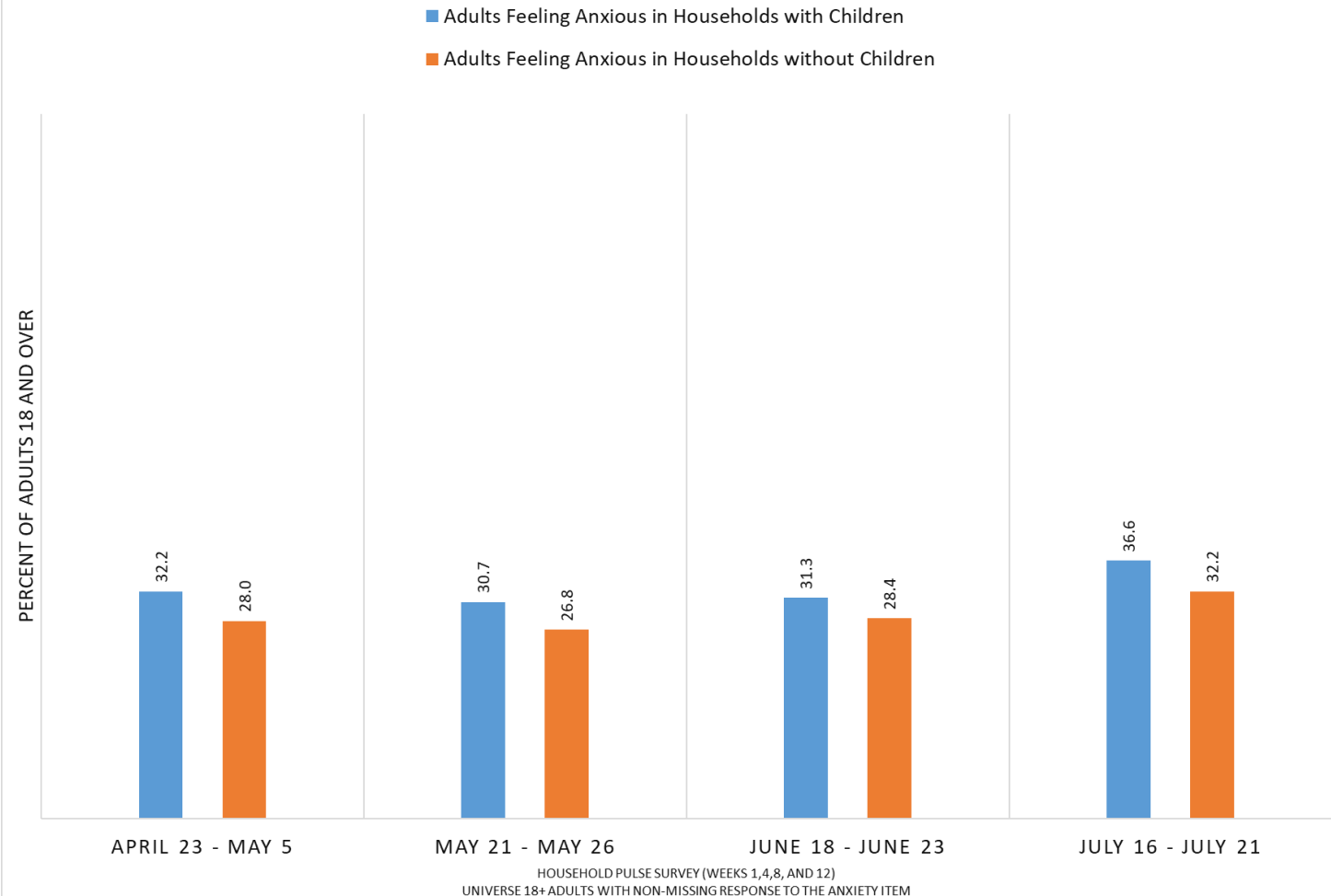START HERE >

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# Mental Health, Anxiousness

Collection started in April. Weekly, then biweekly publication schedule over three phases.

Statistics produced at national and state levels and for 15 largest MSAs.

Example: feelings of anxiousness for adults. Households with children (blue) and households without children (orange).

**FEELINGS OF ANXIOUSNESS FOR ADULTS 18+ BY PRESENCE OF CHILDREN**

■ Adults Feeling Anxious in Households with Children

■ Adults Feeling Anxious in Households without Children

PERCENT OF ADULTS 18 AND OVER

| APRIL 23 - MAY 5 | MAY 21 - MAY 26 | JUNE 18 - JUNE 23 | JULY 16 - JULY 21 |
|---|---|---|---|
| 32.2 / 28.0 | 30.7 / 26.8 | 31.3 / 28.4 | 36.6 / 32.2 |

HOUSEHOLD PULSE SURVEY (WEEKS 1,4,8, AND 12)
UNIVERSE 18+ ADULTS WITH NON-MISSING RESPONSE TO THE ANXIETY ITEM

# Community Resilience Estimates

### Goal

Provide tract-level and county-level information on a community's ability to withstand the health, social, and economic impacts of a disaster (such as the pandemic or a hurricane).

### Process

Model combines individual and household characteristics from the American Community Survey with publicly available data from the National Health Interview Survey.

### Example

Prince George's County, Maryland (where headquarter for the Census Bureau is located). Figure shows some of the tract estimates (on website, the user can scroll down to see all tracts).
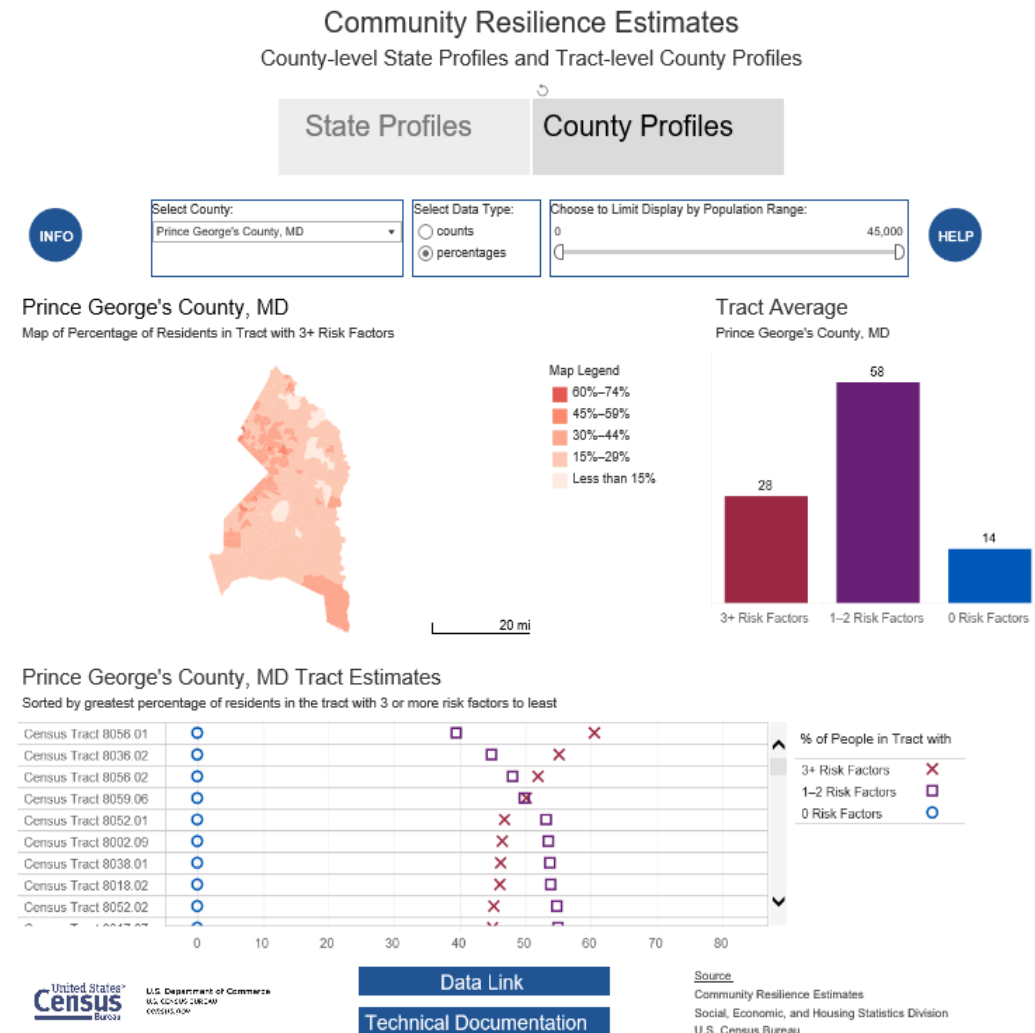
# Other Household Surveys

## American Community Survey

- Revised messaging.
- Altered mail out strategy.
- Sampling adjustments.
- Contact strategy shifted to telephone.

## Current Population Survey

- At request of the National Center for Education Statistics, added 7 questions about pandemic impact on schooling at individual child level (for example, availability of computers or other digital devices for educational purposes).
- Concerns about the coronavirus added as an answer category to two questions in the November Voting Supplement.

## Survey of Income and Program Participation

- Contact strategy shifted to telephone.
- Answer lists and help text modified in various sections to specify how pandemic reasons should be handled.
- New content added on the receipt and use of economic stimulus payments.
- New content added on how the following were impacted by the pandemic: unemployment compensation, school meals, retirement planning, and missed or deferred rent or mortgage payments.

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# Lessons Learned

- High frequency data becomes even more important in crisis.

- Existing data assets are invaluable (frames, benchmarking).

- Partnerships with other statistical agencies and outside stakeholders provide critical expertise (especially for content and design).

- Flexible platforms whose use can continue beyond the pandemic.

- Resilient and innovative staff.

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# Thank you!!

**Small Business Pulse Survey:**

https://www.census.gov/data/experimental-data-products/small-business-pulse-survey.html

**Business Formation Statistics:**

https://www.census.gov/econ/bfs/index.html

**Household Pulse Survey:**

https://www.census.gov/data/experimental-data-products/household-pulse-survey.html

**Community Resilience Estimates:**

https://www.census.gov/data/experimental-data-products/community-resilience-estimates.html

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