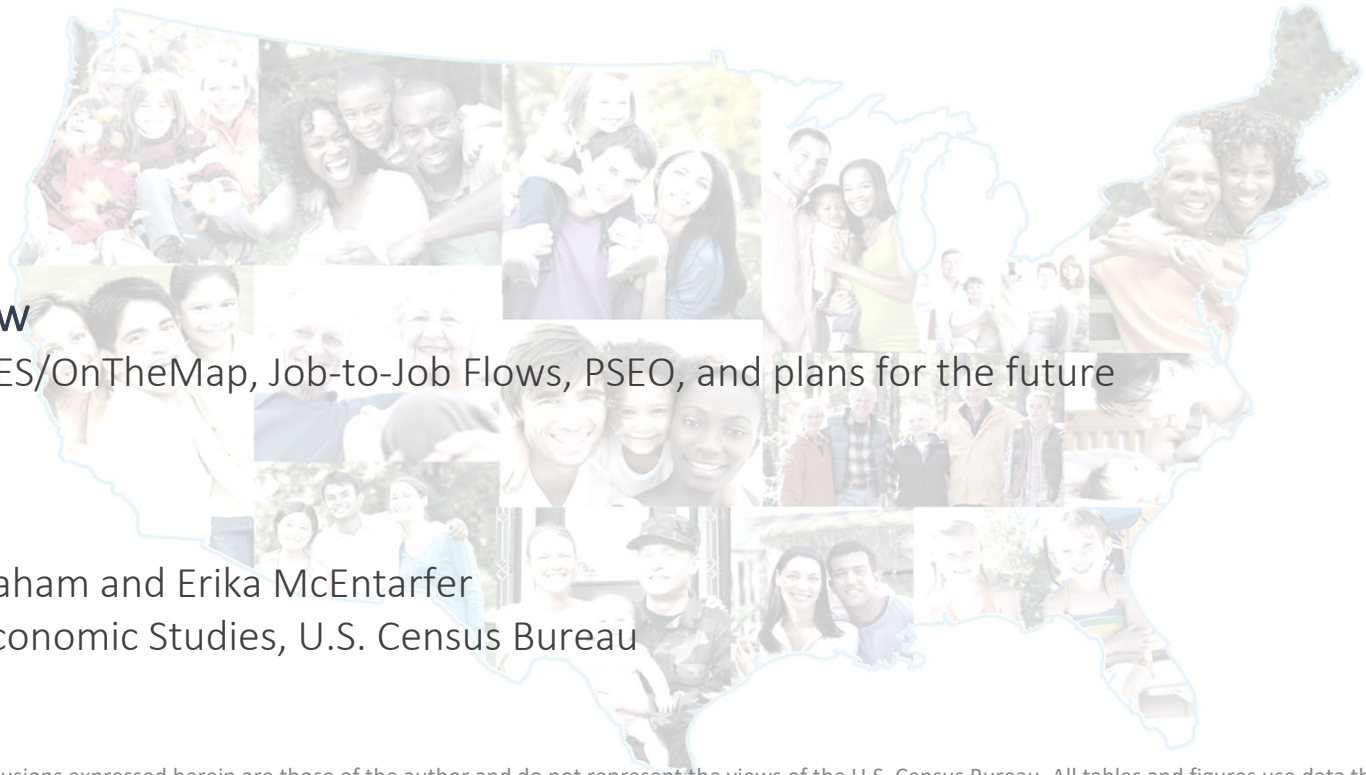

What's New

In QWI, LODES/OnTheMap, Job-to-Job Flows, PSEO, and plans for the future

March 2022

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United States Census Bureau | U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Structure of this talk:

Product & application updates

New LED initiatives (Frames & improving timeliness)

PSEO data expansion: new partners, more coverage

Product & Application Updates

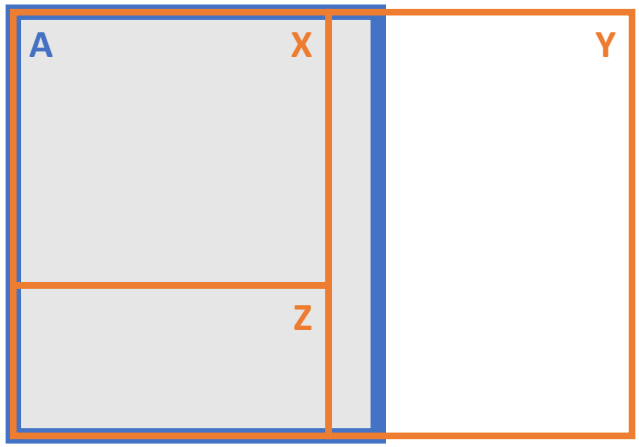
LEHD Updates – LODES/OnTheMap

- Last Year
  - 2019 LODES was released; 2019 TIGER; Firm age/size data backfilled
  - LODES is being included in the criteria for defining urban areas
- This Year: 2020 LODES
  - Planned for Summer 2022
  - 2020 data will be produced using 2020 census blocks
    - Currently LODES is baselined to 2010 census blocks
  - OnTheMap will be updated to new geography as well (2021 TIGER)
  - Historical LODES data will be converted from 2010 to 2020 census blocks
- Looking into the future…

Converting LODES to New Census Blocks

- Using the same method as we did for 2000→2010
  - For each 2010 block, and calculate the % of areal intersections with 2020 blocks
  - For each job in the 2010 block, we randomly choose an intersecting 2020 block using the areal share as a weight.
  - Repeat for residence and employment locations, for all years of data

2010 Census Block "A": 5 jobs



2020 Census Blocks "X", "Y", and "Z"

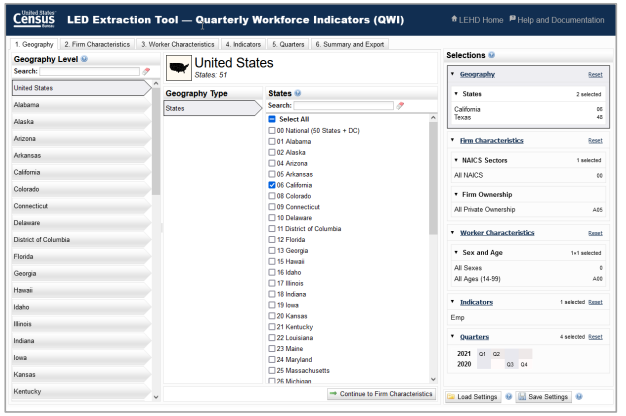
2020 Block	Areal Intersection of A [%]
X	56%
Y	13%
Z	31%

Job	Random Draw	Assigned 2020 Block
"1"	0.35	X
"2"	0.37	X
"3"	0.68	Y
"4"	0.92	Z
"5"	0.23	X

X: 3 jobs
Y: 1 job
Z: 1 job

Other Application Updates

- LED Extraction Tool
  - Recent release that added a “shopping cart” view for QWI data
  - Preparation for adding J2J data (coming later this year) and LODES data (likely next year)
- Continuing with regular data updates in the other applications
- BDS Explorer
  - Create a new exploration tool for Business Dynamics Statistics (BDS), which are a product created by another part of the Center for Economics Studies
  - bds.explorer.ces.census.gov

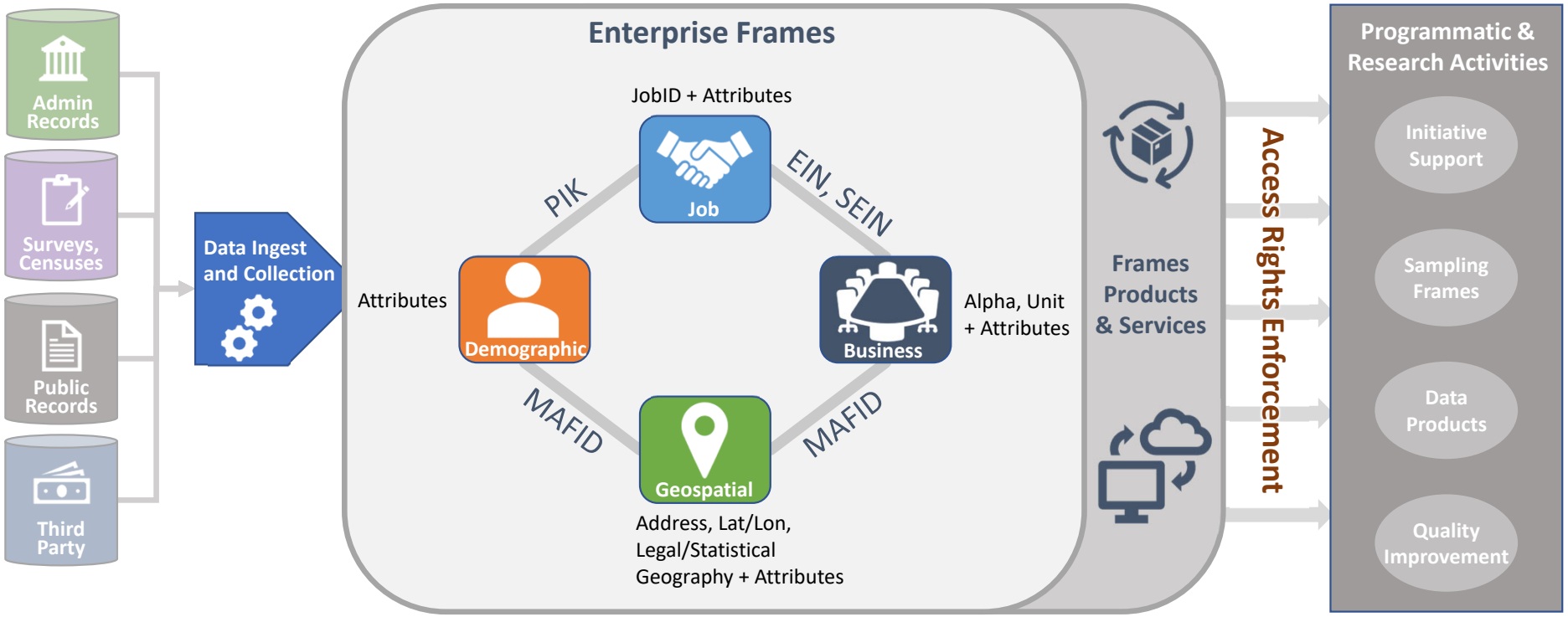


Frames

Vision of the Frames Program

To create Enterprise-wide frames linkable in nature, agile in structure, accessible for production or research on a need-to-know basis, and that adhere to best practices in terms of technology usage, data management, and methodology.

Frames: Macro Perspective



New LED Initiatives:

Improving/stabilizing jobs data coverage:

- Census Frames Initiative

Improving data timeliness:

- Can we improve on current 9-month lag?

Can we improve the stability/coverage of the current LEHD jobs frame?

Census Bureau Frames Initiative

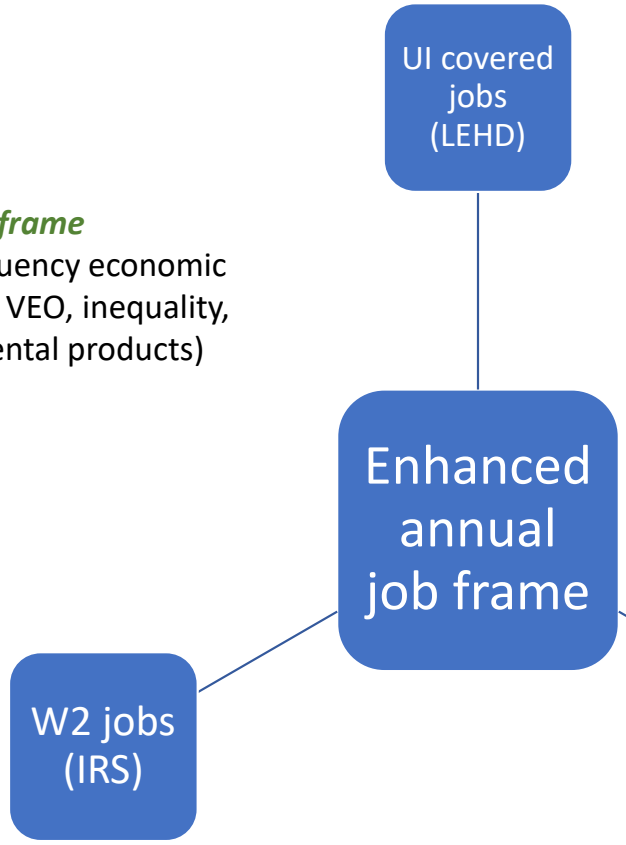
To achieve broader use of the jobs frame for enterprise statistical use it will help strengthen the stability and coverage of the current frame

Shortcomings of the current frame:

- *Coverage*: state UI jobs only, no federal workers, no self emp
- *Voluntary data provision*: states can withdraw participation at any time
- *Delays in MOU renewals*: agreements can lapse even when both parties intend to renew

Enhanced Job Frame

Overall Design:



LEHD jobs (state UI)
For quarterly-frequency economic statistics, point-in-time employment, job-to-job transitions (QWI, J2J) and FSRDC research

Combined jobs frame
For annual-frequency economic statistics (PSEO, VEO, inequality, future experimental products)

W2 jobs
For jobs not covered in state UI or states missing in LEHD frame

SE jobs (IRS 1040 C)
Not covered in either W2 or UI are 1099 gig jobs and self-employed workers

Enhanced Job Frame

Future anticipated use cases

Fully national jobs frame covering all wage & salary jobs + gig and self-employment:

- New input data for statistical products like PSEO
- True metro-area statistics (difficult with voluntary state frame as many metro areas cross state boundaries)
- Stable provision of national employment indicators (avoid data delays when many MOUs expire at once)

Better business list comparisons:

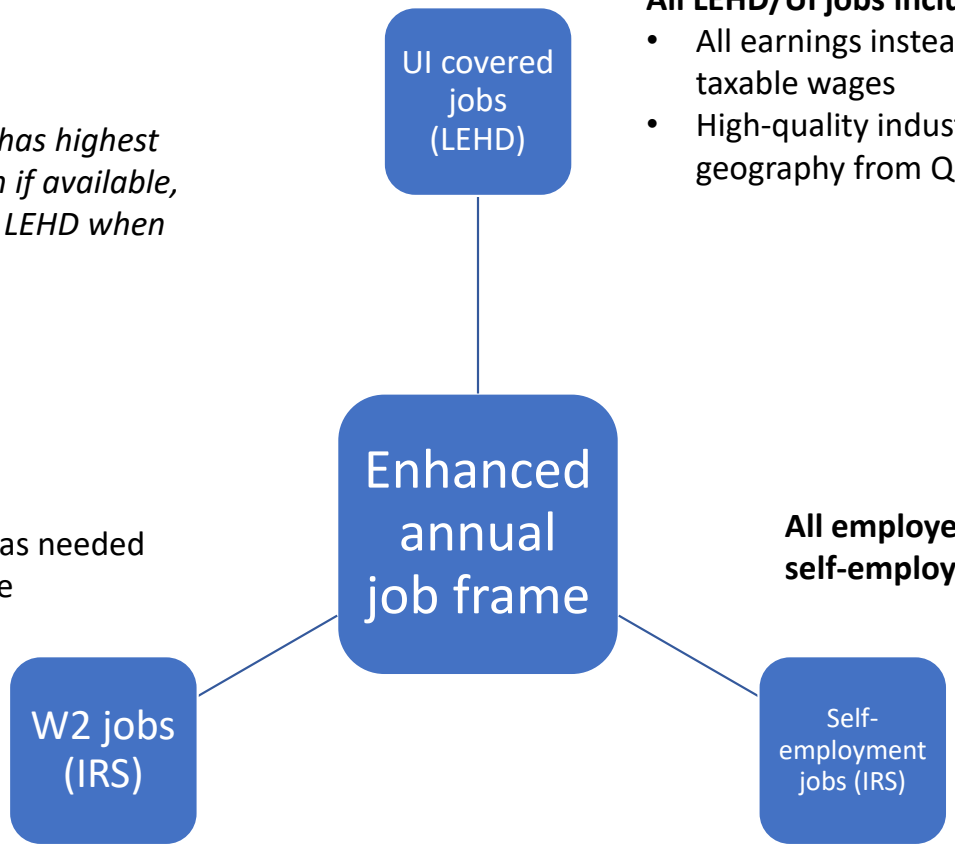
- Use W2-UI links to improve Census Business Frame, with more timely QCEW information

Could potentially create a quarterly combined frame, allowing for more high-frequency statistics:

- 90% of wage and salary jobs can be matched to quarterly LEHD, could impute the rest

Enhanced Job Frame

Our approach:
Because LEHD usually has highest quality job information if available, our approach is to use LEHD when can, W2 job otherwise

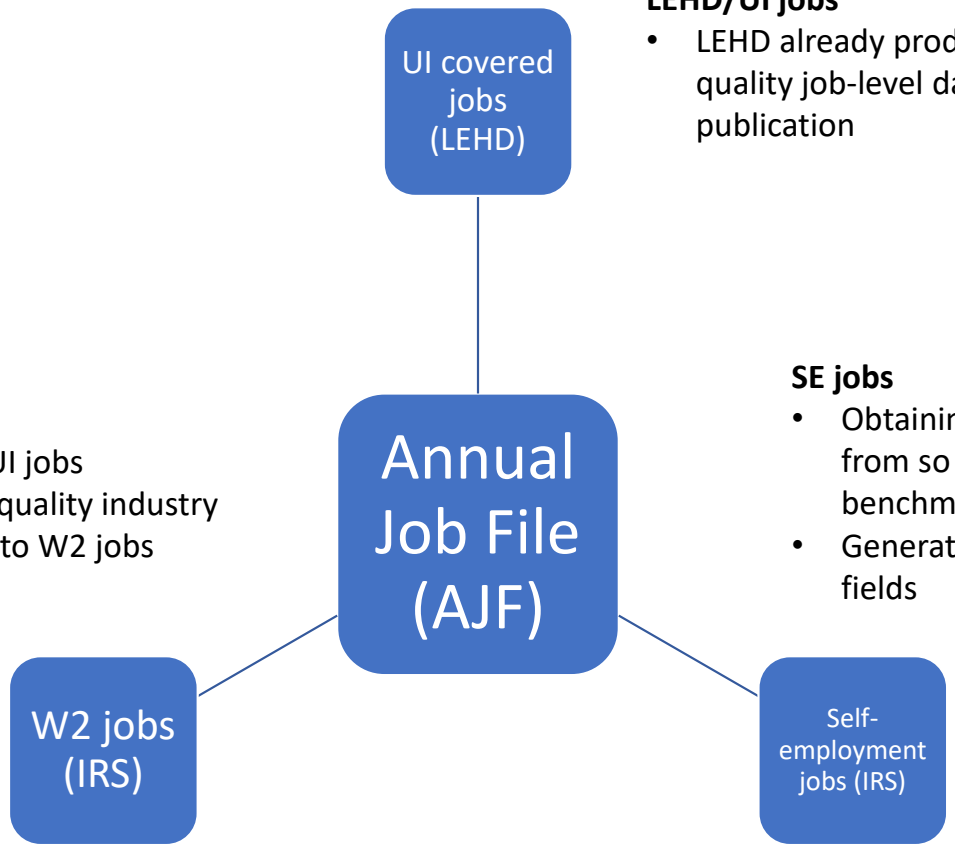


All LEHD/UI jobs included
- All earnings instead of federal taxable wages
- High-quality industry and geography from QCEW/U2W

W2-only records only
- Add W2 records only as needed to complete the frame

All employer and non-employer self-employment jobs included

Key Challenges



LEHD/UI jobs

- LEHD already produces high-quality job-level data for publication

W2 jobs

- Matching W2/UI jobs
- Attaching high-quality industry and geography to W2 jobs

SE jobs

- Obtaining consistent input data from so can match published benchmarks
- Generating SE earnings from tax fields

Can we develop an economic indicator from LEHD data?

Do any current QWI/J2J statistics meet the criteria?

An economic indicator is a statistic that measures current economic performance or predicts future economic performance.

Requirements for new indicators:

- *Timely*: trade-off between accuracy and timeliness
- *Cyclical*: coincident, leading, or lagging indicators
- *Useful to policymakers*: Needs to fill an unmet need for information

Quarterly Workforce Indicators (QWI) and Job-to-Job Flows (J2J)

Strength and weaknesses as an indicator

	Quarterly Workforce Indicators (QWI)	Job-to-Job Flows (J2J)
Timeliness ✗	National data: 1 year lag, state and sub-state: 9 month-1 year lag	9 month-1 year lag
Cyclicality √	Employment, net job growth, hires, separations, earnings	Job-changing rate, employment flows
Unique usefulness for policymakers	Unique indicators: stable jobs, new hire earnings.	Unique national indicators: job-changing rate, detailed employment inflows/outflows and flows across industries

Can the timeliness of the data be improved?

Three ways we can improve timeliness:

- Improved processes: 2 months
- Earlier wage record data submission: 3 months
- Changes to QWI national modeling to eliminate add. 1 qtr. lag

These steps could reduce data lag from **9-12 months** to **4-7 months**.

To reduce lag further, would need to model indicators, potentially feasible

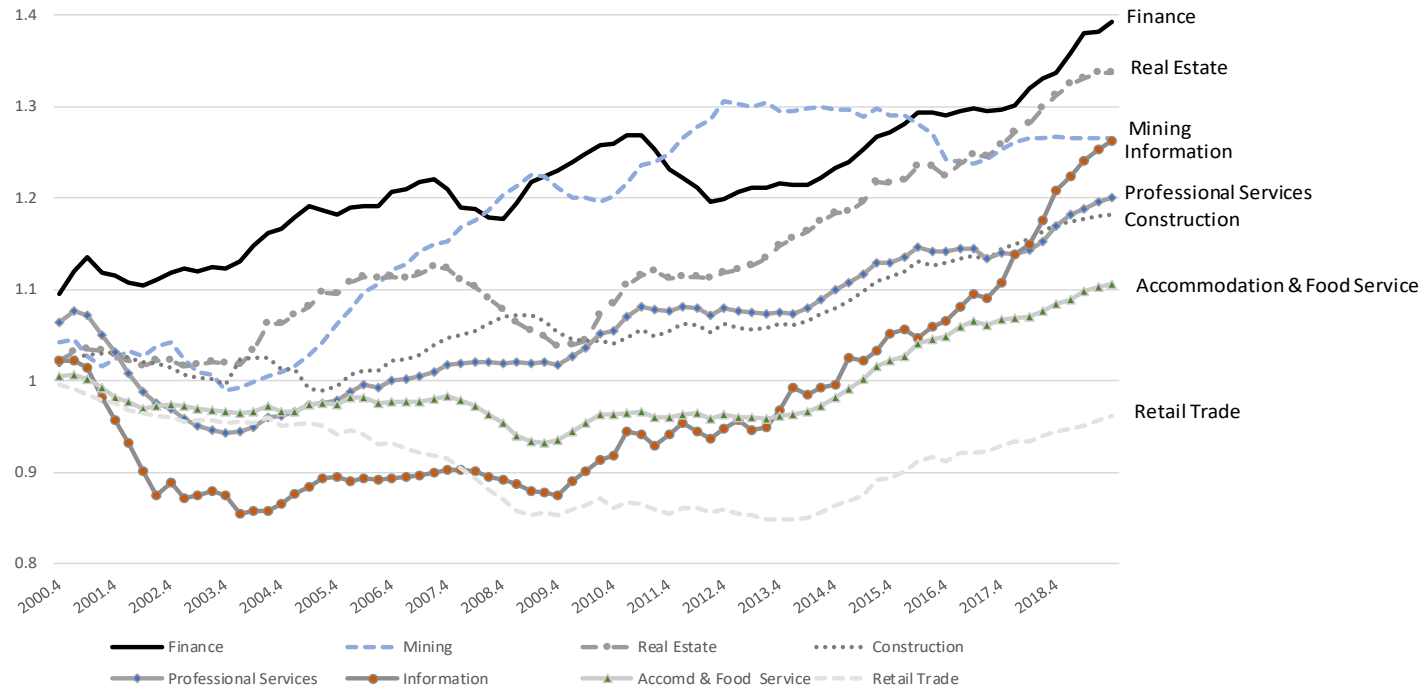
Most promising variables for national indicators on uniqueness:

LEHD national indicator possibilities

Indicator	Product	Variable	Time-liness*	Cyclicality	Case for uniqueness
Job to job moves	J2J	EEHire/EESep	t	Highly procyclical	Shows what share seps are job moves
Hires, jobless at start of qtr	J2J	NEHire	t	Procyclical	Flows into employment (less noisy than CPS)
Hires, jobless < 3 months	J2J	AQHire	t	Procyclical	Attached worker re-entry
Hires, jobless >= 3 months	J2J	NEPersist	t	Procyclical	Marginal worker entry
Separations, jobless at end of qtr	J2J	ENHire	t	Mixed	Flows out of employment (less noisy than CPS)
Separations to joblessness < 3 months	J2J	AQSep	t-1	Procyclical	Worker separations to short nonemp.
Separations to joblessness >= 3 months	J2J	ENPersist	t-1	Countercyclical	= entry into retirement for older workers
Stable employment	QWI	EmpS	t-1	Procyclical	Employment growth stable jobs
New hire earnings	QWI	EarnHirNS	t-1	Procyclical	Early indicator of wage pressure?

QWI: New Hire Earnings

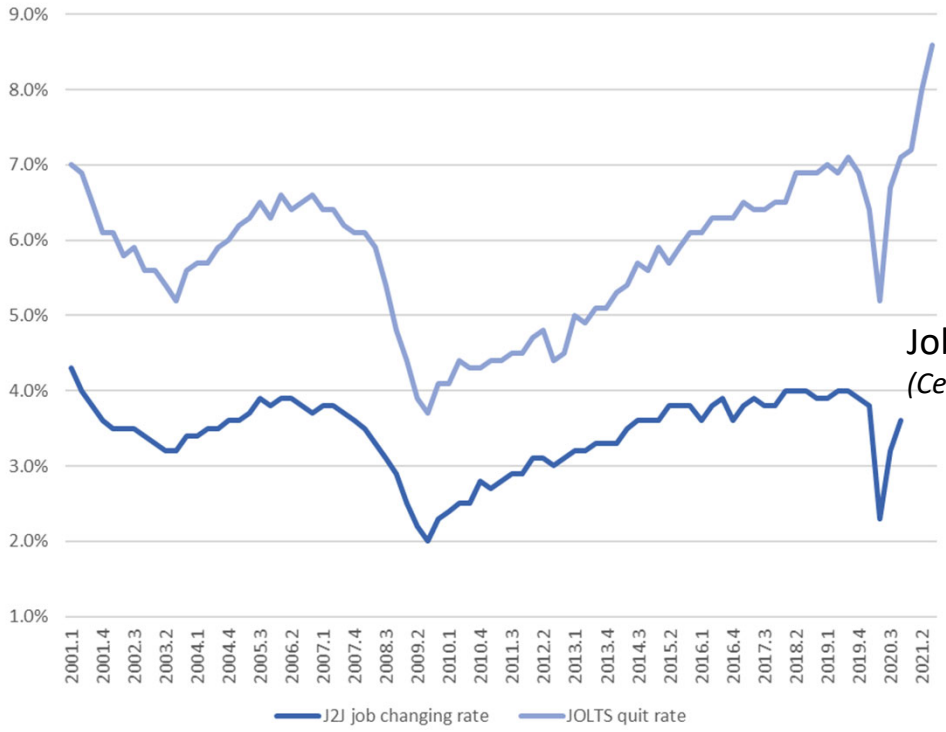
New Hire Wage Pressure Index: New Hire Wages by Industry, 2000 Q1 = 1 (selected industries)



Source: US Census Bureau Quarterly Workforce Indicators. Data are seasonally adjusted using X12 and earnings deflated using CPI-U. Index is a centered moving 5 quarter average.

The Great Resignation

Job switching and the pandemic recovery



Quits *(BLS: JOLTS)*

Job switching
(Census: Job-to-Job Flows)

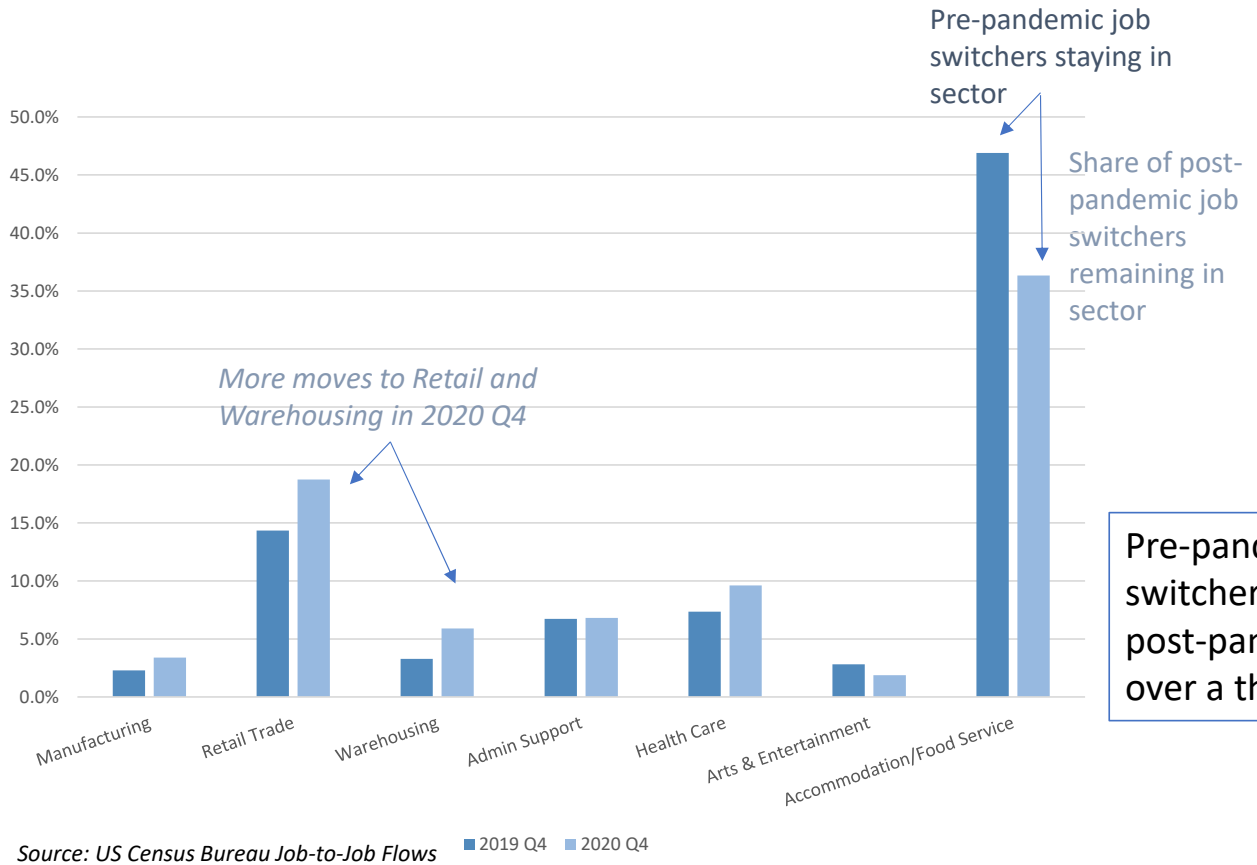
JOLTS tells you workers quit but not why:

- J2J: did workers leave for new jobs?
- J2J: if so, where did they go?

Source: US Census Bureau Job-to-Job Flows and BLS JOLTS

The Great Resignation

Job Switchers in NY's Restaurant and Hotel Industries: 2019 vs 2020



Pre-pandemic, almost ½ of job switchers remained in the sector, post-pandemic this fell to just over a third.

Source: US Census Bureau Job-to-Job Flows

Economic indicators: where we are:

- Improvements of QWI/J2J processing currently in production will shave 1-2 months off data lag

- Beginning talks with LED partners about experimental early delivery of wage data

Existing Product Updates:

In regular production:
- QWI, J2J, LODES

New experimental products:
- Post-Secondary Employment Outcomes (PSEO) expansion

Data updates for QWI, J2J, and LODES:

Quarterly Workforce Indicators (QWI):

- New weights improve time-series consistency, improvements to disclosure avoidance

Job-to-Job Flows (J2J):

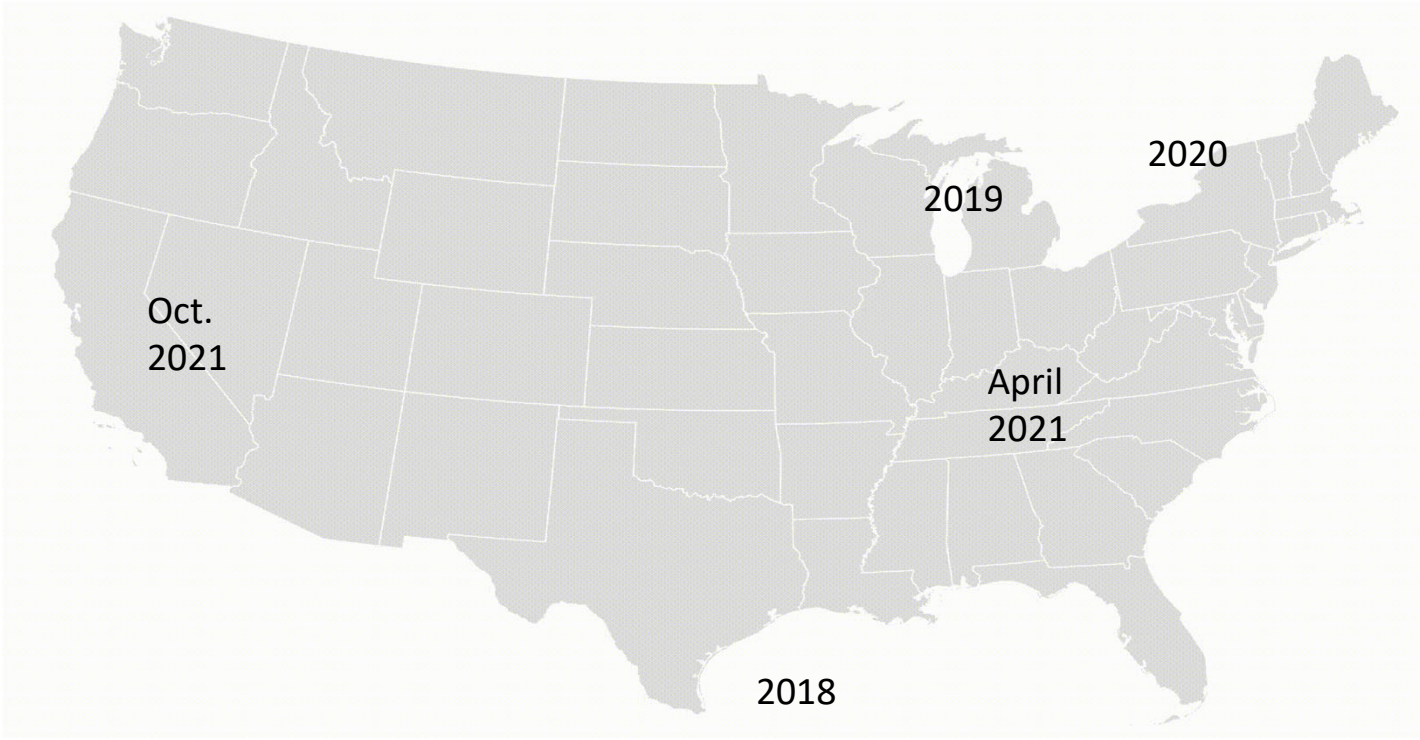
- New experimental NAICS-3 origin-destination flows to be released this summer

LEHD Origin-Destination Employment Statistics (LODES):

-2019 LODES released November 2021

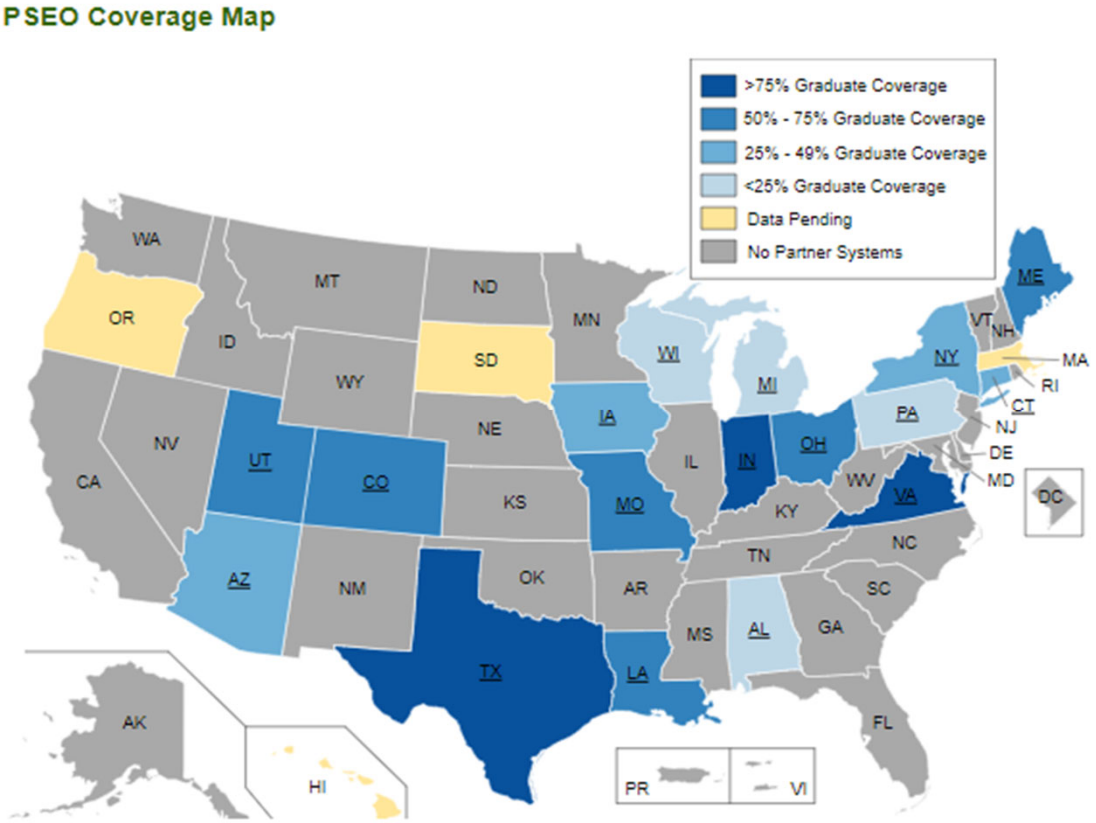
-2020 LODES to be released this year

Post-Secondary Employment Outcomes: 2018-2021 expansion



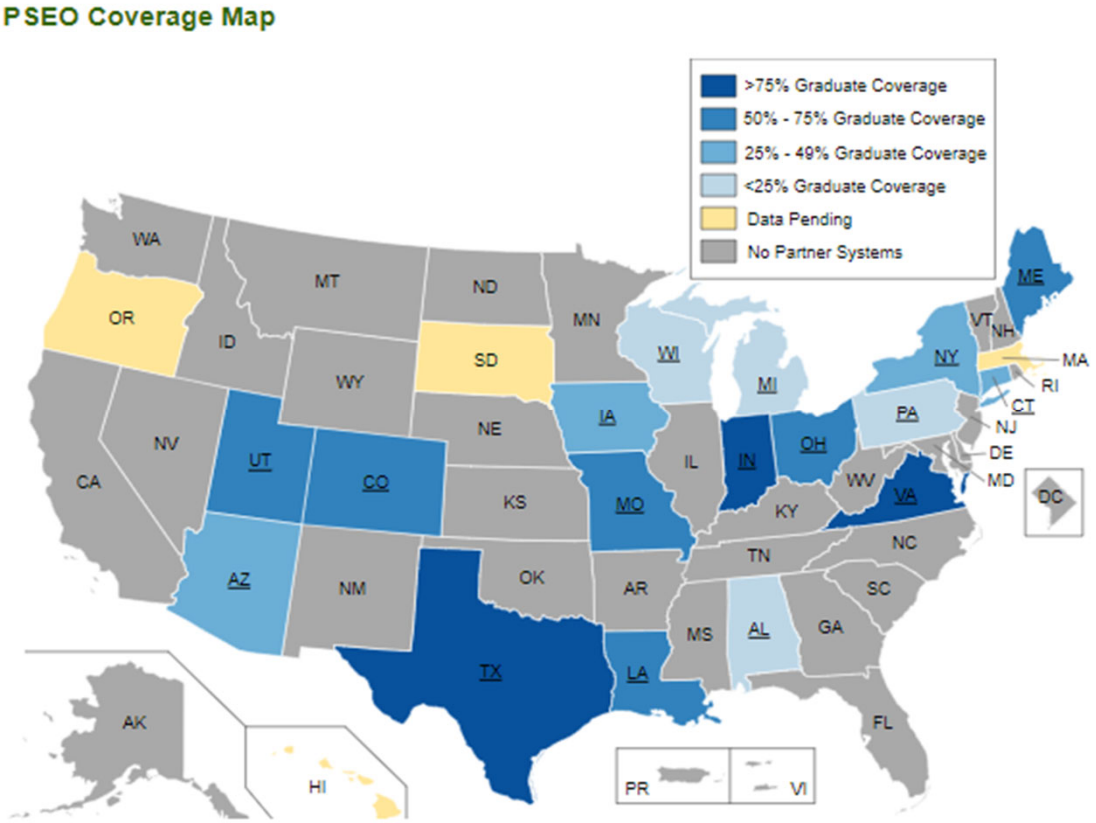
New PSEO releases in Oct. 2021

- University of **Alabama** system
- **Arizona** Board of Regents
- **Iowa** Board of Regents
- University of **Maine** system
- **Missouri** Department of Higher Education and Workforce Development
- **Utah** System of Higher Education
- State Council of Higher Education for **Virginia**



Upcoming PSEO release June 30, 2022, includes:

- University of **Connecticut**
- **Connecticut** Consortium of Independent Colleges
- University System of **Georgia**
- University of **Hawaii** system
- **Iowa** Community Colleges
- **Massachusetts** Department of Higher Education
- University of **Montana** System
- **Oregon** Higher Education Coordinating Commission
- **South Dakota** Board of Technical Education



To sum up, new and future efforts:

Continued expansion and enhancement to existing products and tools:
- PSEO coverage expansion, new J2J experimental tabs, new data tools

Improve timeliness and stability of jobs data:
- can with partner help reduce data lags
- use of FTI to improve and stabilize coverage