

# JOLTS

## Job Openings and Labor Turnover

### Overview

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# Agenda

- Background
- Data Elements
- Sample Design
- Data Collection
- Estimation
- Concepts and analysis



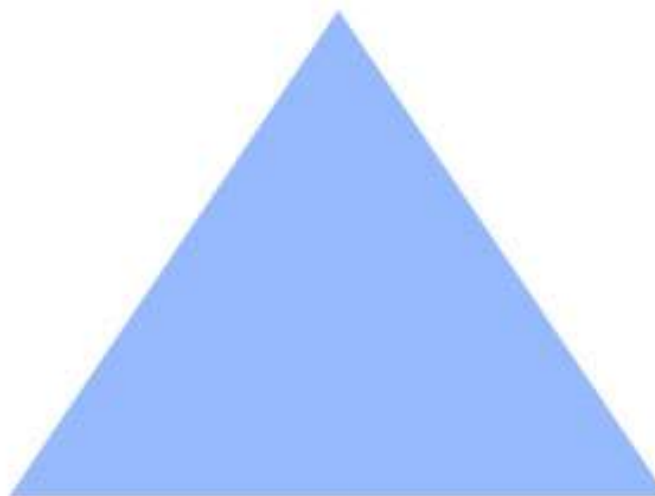
# JOLTS Overview

- The Job Openings and Labor Turnover Survey (JOLTS) program produces monthly estimates by data element:
  - ▶ Job Openings, Hires, and Separations including Quits, Layoffs & Discharges, and Other Separations.
- These measures are provided for the:
  - ▶ Nation and Region
  - ▶ Industry super-sector levels
  - ▶ Establishment size classes
  - ▶ 50 State and the District of Columbia



# JOLTS Role in Labor Market Data

CES Employment:  
matched labor supply/demand



CPS Unemployment:  
excess supply of labor

JOLTS Job Openings:  
excess demand for labor

# Background

- JOLTS data series began in December 2000
- In 2002, the first experimental national estimates were released to the public
- JOLTS national estimates became official BLS series in 2004
- In 2005, experimental size class estimates were created
- In 2019, the first experimental state estimates were released
- JOLTS establishment size class estimates were officially published in 2020
- Official publication of JOLTS state estimates began in October 2021



# Data Elements



# Data Element: Job Openings

- Definition: A job opening requires that:
  1. a specific position exists and there is work available for that position,
  2. work could start within 30 days whether or not a suitable candidate is found, and
  3. the employer is actively recruiting outside the establishment to fill the position.
- ▶ Definition includes full-time, part-time, permanent, short-term, seasonal, salaried, and hourly employees.
- Reference Period: Last Business Day of the Month

# Data Element: Hires

- Definition: The total number of additions to the payroll occurring at any time during the reference month.
  - ▶ Includes: New hires, rehires, recalls from layoffs, and transfers from other locations.
- Reference Period: Entire month





# Data Element: Separations

- Definition: The total number of terminations of employment occurring at any time during the reference month.

## **Total Separations = Quits + LD + OS**

- Quits: Voluntary separations initiated by the employee (excluding retirements)
- Layoffs & Discharges (LD): Involuntary separations initiated by the employer
- Other Separations (OS): Retirements, transfers to other locations, and separations due to death or disability
- Excluded: transfers within a location or strikes.

# Data Element: Employment

- Definition: Employment includes persons on the payroll who worked or received pay for the pay period that includes the 12<sup>th</sup> day of the reference month.
- Includes: Full-time, part-time, permanent, short-term, seasonal, salaried, and hourly employees.
- Employment is not published but is used to compare reported hires and separations during data review.



# Sample Design



# Sample Design

- JOLTS sample size = 21,000 units
- Establishments are stratified by:
  - ▶ Ownership (private or public),
  - ▶ Region (Northeast, Midwest, South, and West),
  - ▶ Industry subsectors for private and public establishments,
  - ▶ Six size classes: 1-9; 10-49; 50-249; 250-999; 1,000-4,999; and 5,000 or more.



# Sample Rotation

- Establishments are in sample for 36 months. They are then rotated out of the sample for at least 3 years.
- All establishments with 5,000 or more employees are included in the sample with certainty and remain in the sample as long as the employment level remains at or above 5,000 employees.



# What is the scope of JOLTS?

- JOLTS is an Establishment-based survey
- In-Scope Establishments:
  - ▶ Total nonfarm establishments (nonagricultural industries)
  - ▶ All 50 states and the District of Columbia
  - ▶ Private sector and government
  - ▶ All size classes



# What is the scope of JOLTS? (cont)

## ■ Out-of-Scope Establishments

- ▶ Agricultural workers
- ▶ Self-employed
- ▶ Unpaid family workers
- ▶ Private household employees

**NOTE:** The JOLTS scope is consistent with the survey scope for the Current Employment Statistics (CES) survey.



# Data Collection





# Data Collection Process

- System: Microdata are collected by a data collection center (DCC) in Atlanta, GA via computer assisted telephone interview (CATI).
- Communication: During this process, the establishment address is determined and a contact person is obtained. Establishments are sent an enrollment package.
- Participation: Microdata are collected from participating establishment using CATI for 6 months. Then, the majority of reporters are moved to web reporting.



# Estimation



# Estimation Overview

- 1) Adjust weights for establishment nonresponse
- 2) Impute for missing data elements in responding establishments
- 3) Outlier adjustment: Detection of extreme values & manual outlier selection
- 4) Align JOLTS employment to CES employment at the industry level; apply adjustments to remaining data elements
- 5) Calculate JOLTS levels
- 6) Calculate JOLTS rates
- 7) Apply seasonal adjustment factors to not seasonally adjusted estimates



# Concepts and Analysis

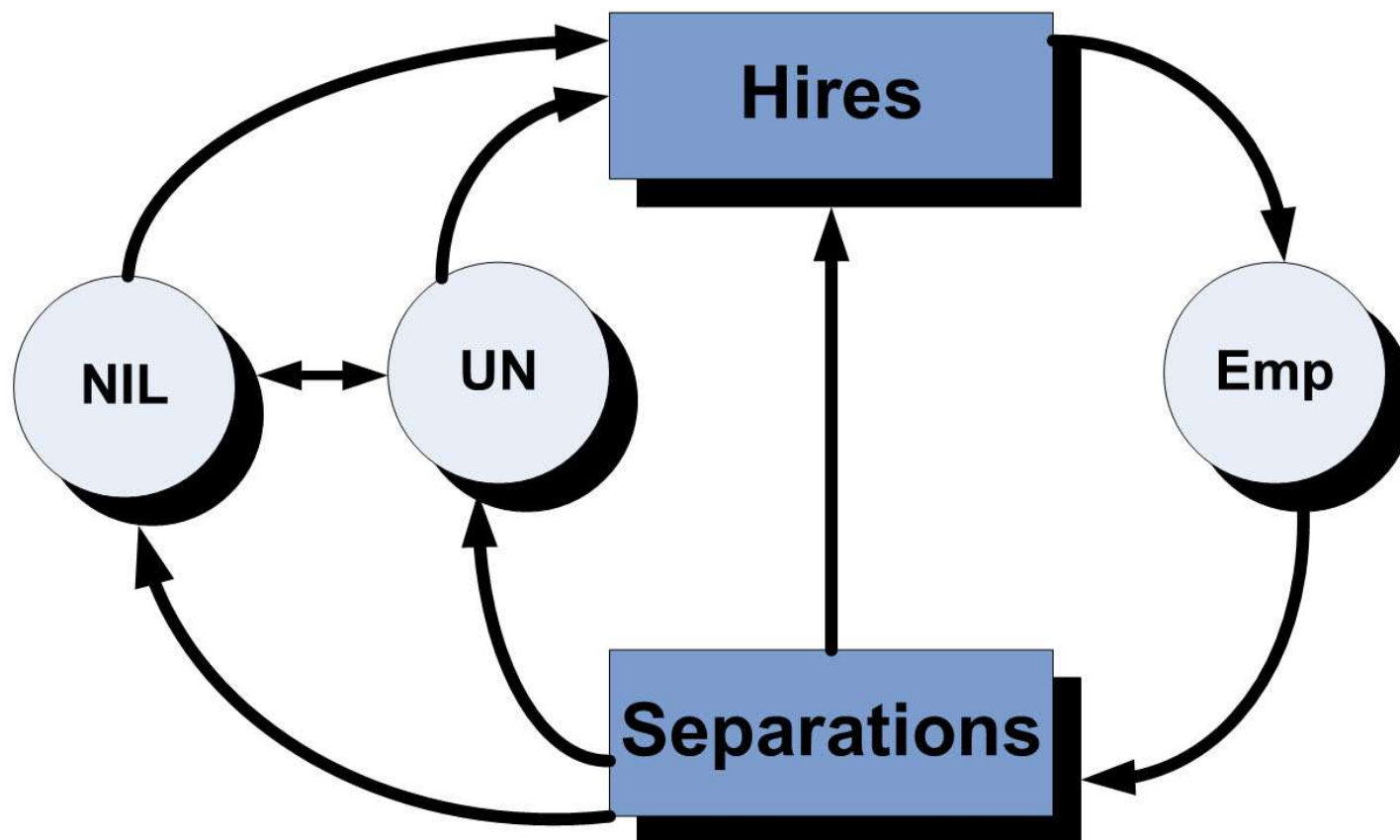


# Analysis of JOLTS data

- JOLTS estimates are considered Labor Demand data.
- Hires and Separations are part of the flows of labor demand and labor supply.
- Job Openings represent Unmet Labor Demand.



# Concepts: Labor flows

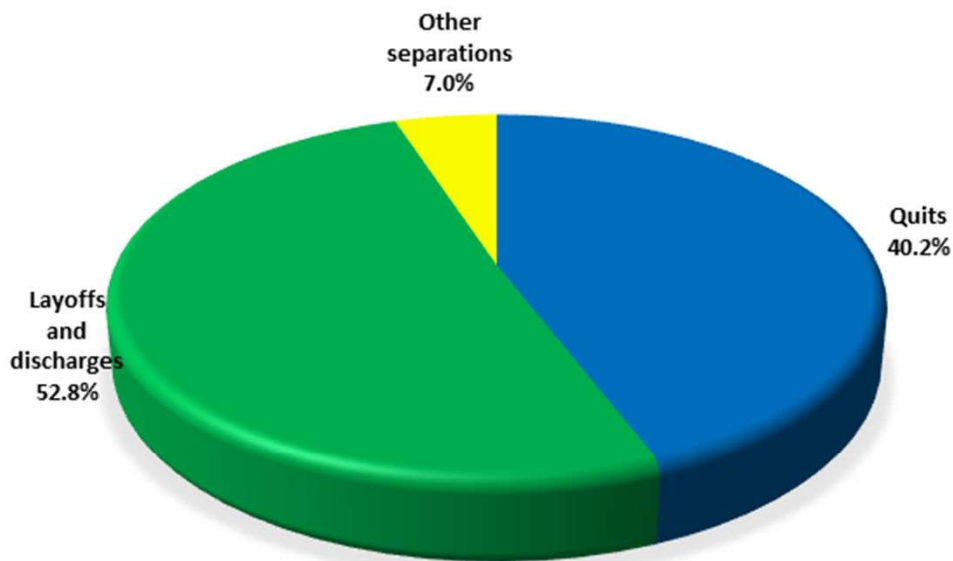


UN Unemployed  
NIL Not in the Labor Force

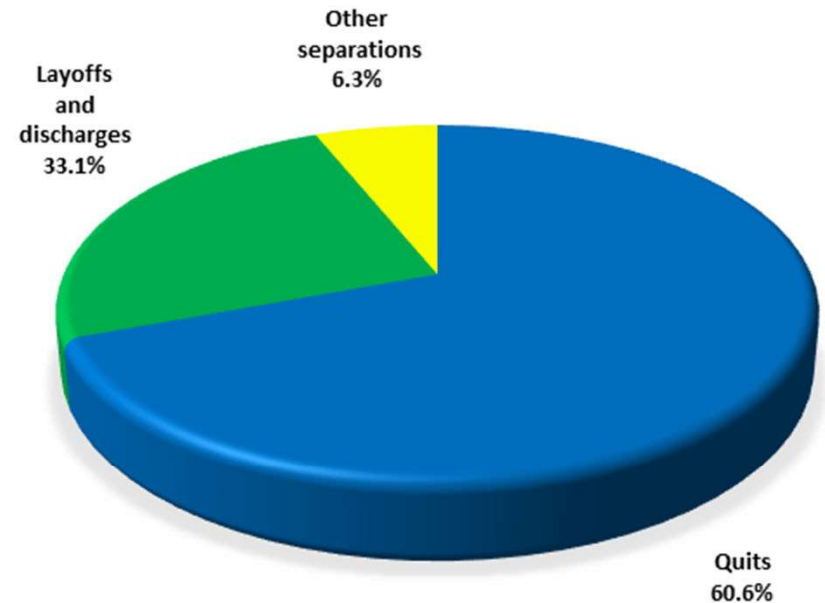
# Analysis: Components of Total Separations

- Total Separations = Quits + LD + OS
- Quits vs. LD – the percent contribution to TS can vary while OS generally does not change much over time

COMPOSITION OF TOTAL SEPARATIONS IN 2020

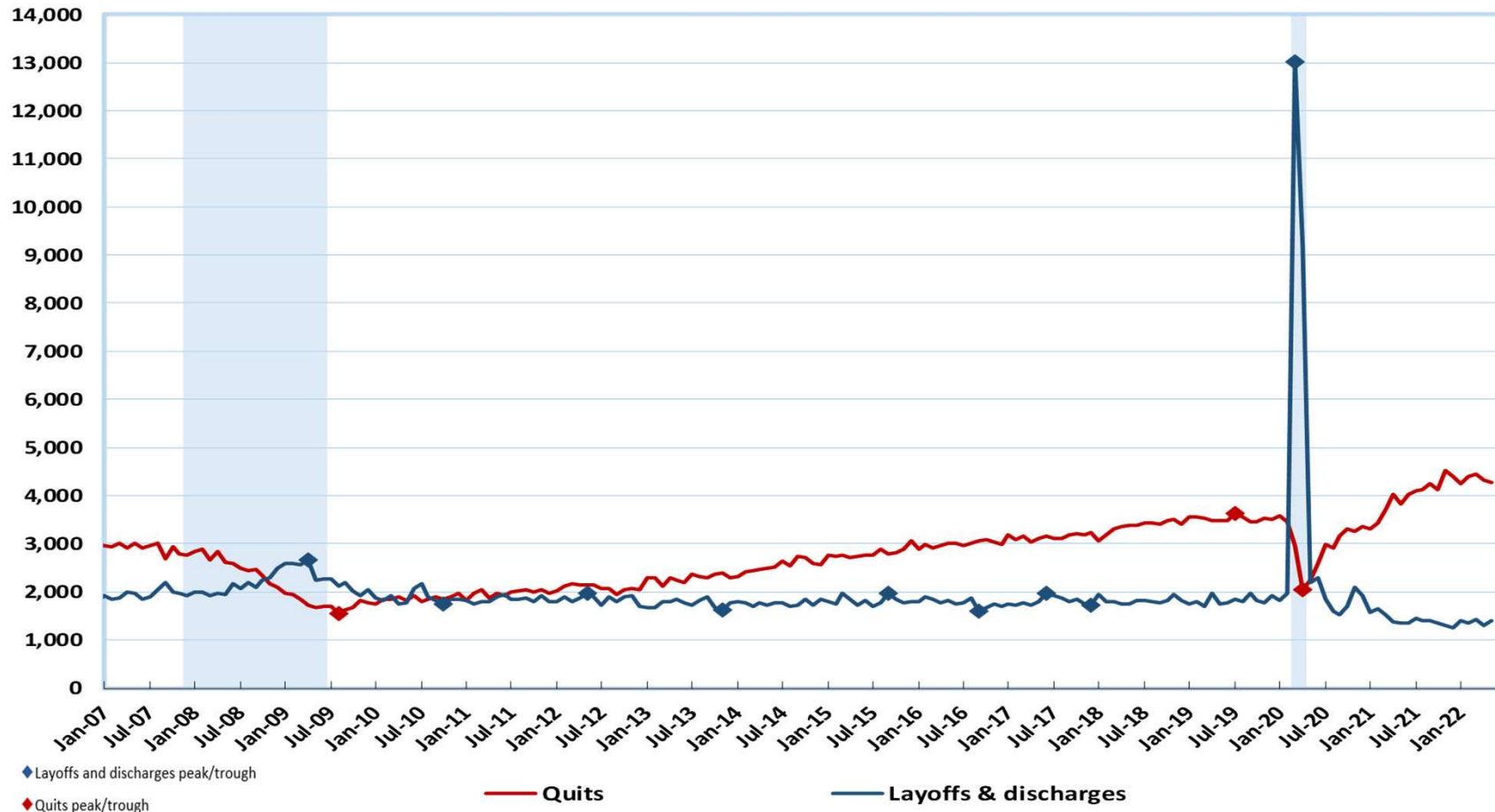


COMPOSITION OF TOTAL SEPARATIONS IN 2021



# Analysis: Quits and Layoffs and Discharges

**Quits and layoffs & discharges, total nonfarm**  
**January 2007 - May 2022**  
Seasonally adjusted, in thousands





# Analysis: Job Openings

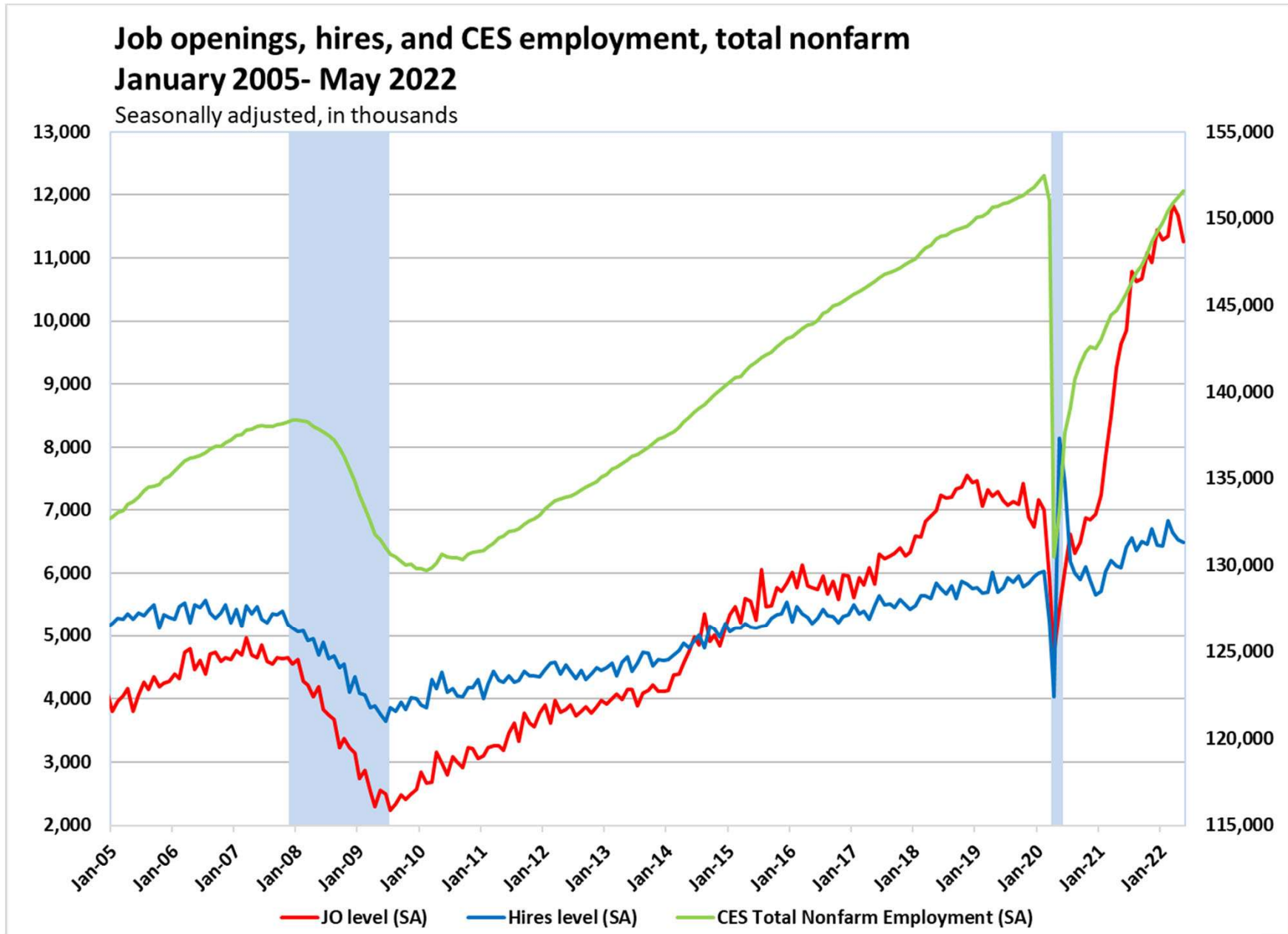
- Job openings are considered unmet Labor Demand
- Number of Unemployed Persons is considered Labor Supply
- To gauge Labor Demand vs. Labor Supply we can look at Job Openings level (JOLTS) compared to the Unemployment level (CPS)
- One way to analyze this relationship:
  - ▶ Number of unemployed persons per job opening



# Analysis: Unemployed per Job Opening



# Analysis: Job Openings & Hires



# Articles and Sources

- JOLTS Handbook of Methods for detailed program information: <https://www.bls.gov/opub/hom/jlt/home.htm>
- JOLTS webpage, publications, for more articles related to the JOLTS program: <http://stats.bls.gov/jlt/publications.htm>
- Structural/Frictional vs. Deficient Demand Unemployment: Some New Evidence, by Katharine Abraham, *American Economic Review*, Vol. 73, No. 4 (Sep., 1983), pp. 708-724.
- Larry Akinyooye and Eric Nezamis "[As the COVID-19 pandemic affects the nation, hires and turnover reach record highs in 2020](#)"



# Contact Information

Job Openings and Labor Turnover Program

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