Center-based child care providers rely on parent fees

Reduced revenue during economic downturns may lead to program closures or staff lay-offs

Changes in economic conditions may also alter the composition of the child care teacher workforce, possibly affecting teacher quality
  - Turnover
  - Amount of experience and education
  - Compensation

Changes in availability, stability, and quality of child care may have implications for parental labor force and child development
Some Background

- Understanding the effect of macroeconomic conditions on the child care market is especially important in the current context.

- Demand for child care has declined:
  - 81% of open programs report a decrease in enrollment (NAEYC, 2020a)
  - Attendance is currently at 49% of pre-pandemic levels (ProCare Solutions, 2021)

- Supply is also significantly reduced:
  - 60% of parents in March: child care provider closed (Bipartisan Policy Center, 2020)
  - Child care employment was down 166k in December 2020 (BLS, 2021)

- Providers are taking on personal debt (NAEYC, 2020a)
Some Background

Total Child Care Employment 2019 and 2020

Source: Occupational Employment Statistics (OES)
How do macroeconomic conditions influence:
- child care availability? (measured by employment & establishments)
- child care stability? (measured by staff turnover)
- teacher composition/quality? (measured by experience & education)
- parent satisfaction? (measured by Yelp consumer reviews)
Our analysis relies on several datasets, each one providing 20 to 30 years of data on the child care industry:

- Quarterly Census of Employment & Wages (QCEW): 1990-2019
- **Quarterly Workforce Indicators (QWI): 2000-2019**
- American Community Survey (ACS): 2001-2019
- Yelp consumer reviews of child care programs: 2005-2017
Data: QWI Database

- Set of economic indicators derived from the Longitudinal Employer-Household Dynamics (LEHD) microdata
  - Employment levels, new hires, and separations
  - Earnings

- Linked employer-employee data provides many opportunities for disaggregation by firm and worker characteristics
  - Firms: location, industry, ownership, and size
  - Workers: gender, age, race/ethnicity, and education level

- Data are available on a quarterly basis
  - States began participating in this data sharing arrangement in different years
  - By 2005, all but one state was participating

- Powerful geographic flexibility
  - Data are available at the national, state, and sub-state (i.e., county) levels
Utilize the online QWI Extraction Tool
  - State-level and quarterly

Indicators: total employment, separations, new hires, turnover rate, and average monthly earnings

Industries: child day care services (NAICS: 6244), private household services (8141), ele/sec schools (6111), clothing stores (4481), food services and drinking places (722)

Disaggregation: by education level of employees (note: no disaggregation by firm ownership or worker gender and race/ethnicity)

Merge state-by-quarter unemployment rates to the dataset of QWI economic indicators
Empirical Analysis

- **Paper**
  - Estimate regressions of each economic indicator on the unemployment rate (in state s and quarter t), controlling for state and quarter-year fixed effects

- **Today**
  - Present **graphical evidence** showing how recessions and recoveries influence the child care industry
  - Total employment, composition of employment (new hires, separations, and turnover), and skill levels
  - Q1 2000 to Q4 2019
Results

Total Employment: Child Day Care Services Industry

Number of Employees in Quarter

Quarter

2000 q1, 2002 q1, 2004 q1, 2006 q1, 2008 q1, 2010 q1, 2012 q1, 2014 q1, 2016 q1, 2018 q1

70000, 80000, 90000, 100000

Child Day Care Services, Seasonally Adjusted
Results

Composition of Employment: **New Hires** as a Share of Total Employment in the Child Day Care Services Industry
Results

Composition of Employment: **Separations** as a Share of Total Employment in the Child Day Care Services Industry
Results

**Turnover Rate: Child Care versus Similar Industries**

![Graph showing turnover rates for different industries over time. The x-axis represents quarters from 2000 q1 to 2018 q1, and the y-axis represents turnover rates ranging from 0.05 to 0.2. The graph compares Child Day Care Services, Elementary/Secondary Schools, Retail, Accommodation/Food Services, and Manufacturing. The graph highlights specific quarters with darker shading.](image-url)
Worker **Skill Level**: Share of **Workers** (Ages 25+) with Some College or More

![Graph showing the fraction with some college or more (age 25+) over time for different sectors](image)
Worker **Skill Level**: Share of **New Hires** (Ages 25+) with Some College or More

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**Fraction of Hires with Some College or More (Age 25+)**

- Accommodation/ Food Services
- Retail
- Manufacturing
- Child Day Care Services
- Ele/Sec Schools

**Quarter**

- Child Day Care Services
- Elementary/Secondary Schools
- Retail
- Accommodation/Food Services
- Manufacturing

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Child Care and the Business Cycle

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Advantages of the QWI: long time series of many economic indicators disaggregated by industry and worker characteristics

Child care employment falls immediately during recessions
- Required ~3 years post-Great Recession for employment to grow again
- And ~7 years for employment to fully recover to pre-recession levels

Recessions also change the composition of employment
- New hires: fell from 18%-12% of workforce; has not fully recovered
- Turnover: Falling turnover may be good for child development

Recessions and child care teacher education levels
- Recoveries see child care employees lose ground relative to those in other low-wage industries (e.g., retail and food services)
- Recessions arrest the fall in education levels