

Child Care Over the Business Cycle

Prepared for:
Local Employment Dynamics (LED) Partnership Annual Workshop

Jessica H. Brown
Darla Moore School of Business
University of South Carolina

Chris M. Herbst
School of Public Affairs
ASU and IZA

April 30, 2021

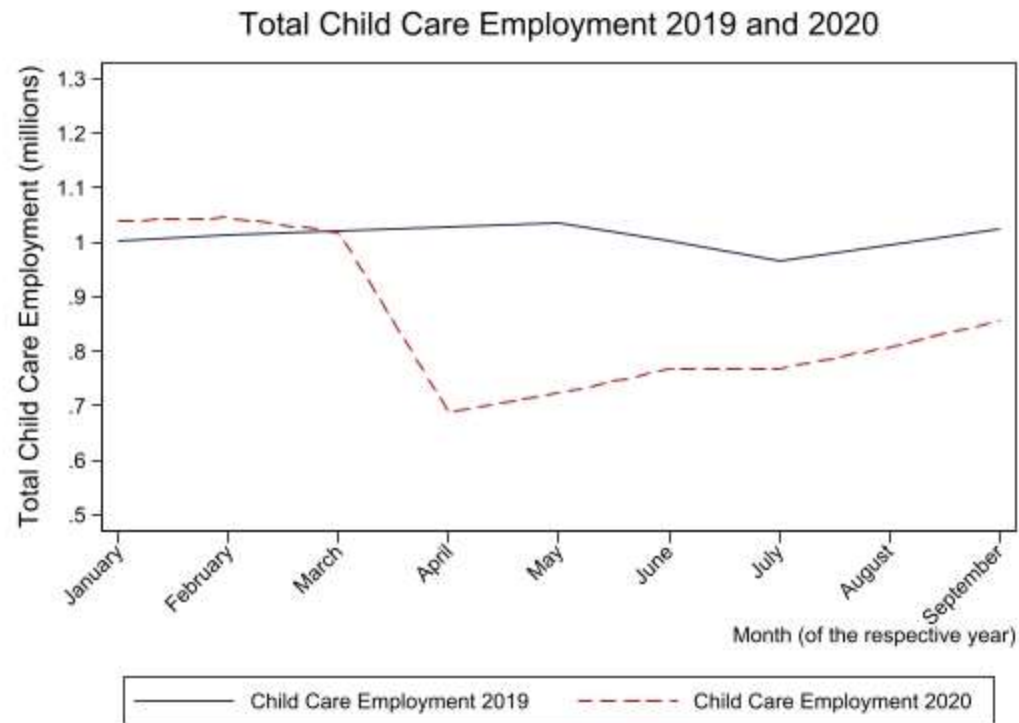
Some Background

- 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



Source: Occupational Employment Statistics (OES)

This Paper

- 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)

This Paper

- 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

Data: Constructing Our QWI Dataset

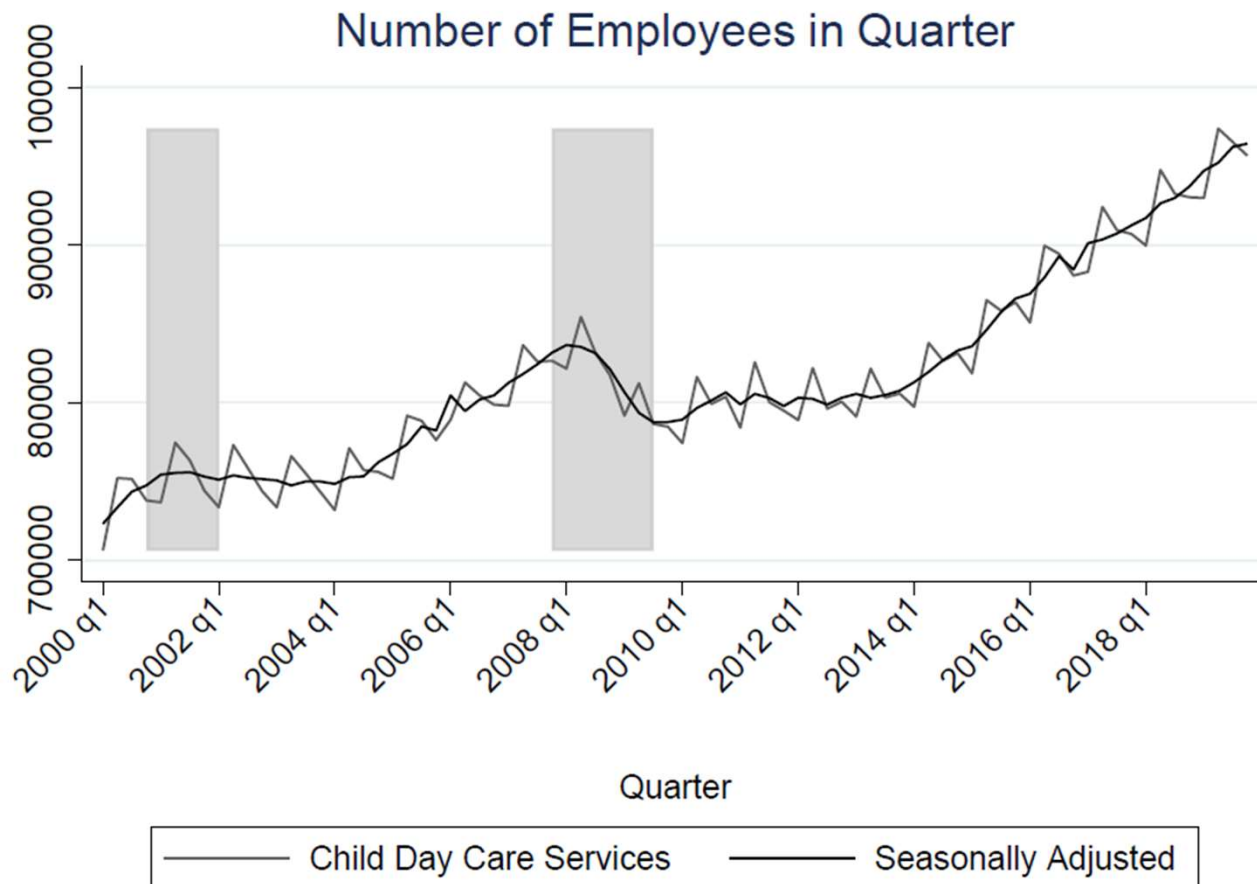
- Utilize the online QWI Extraction Tool
 - State-level and quarterly
 - Indicators: total employment, separations, new hires, turnover rate, and average monthly earnings
 - Industries: child day care services (NAICS: 6244), private household services (8141), ele/sec schools (6111), clothing stores (4481), 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

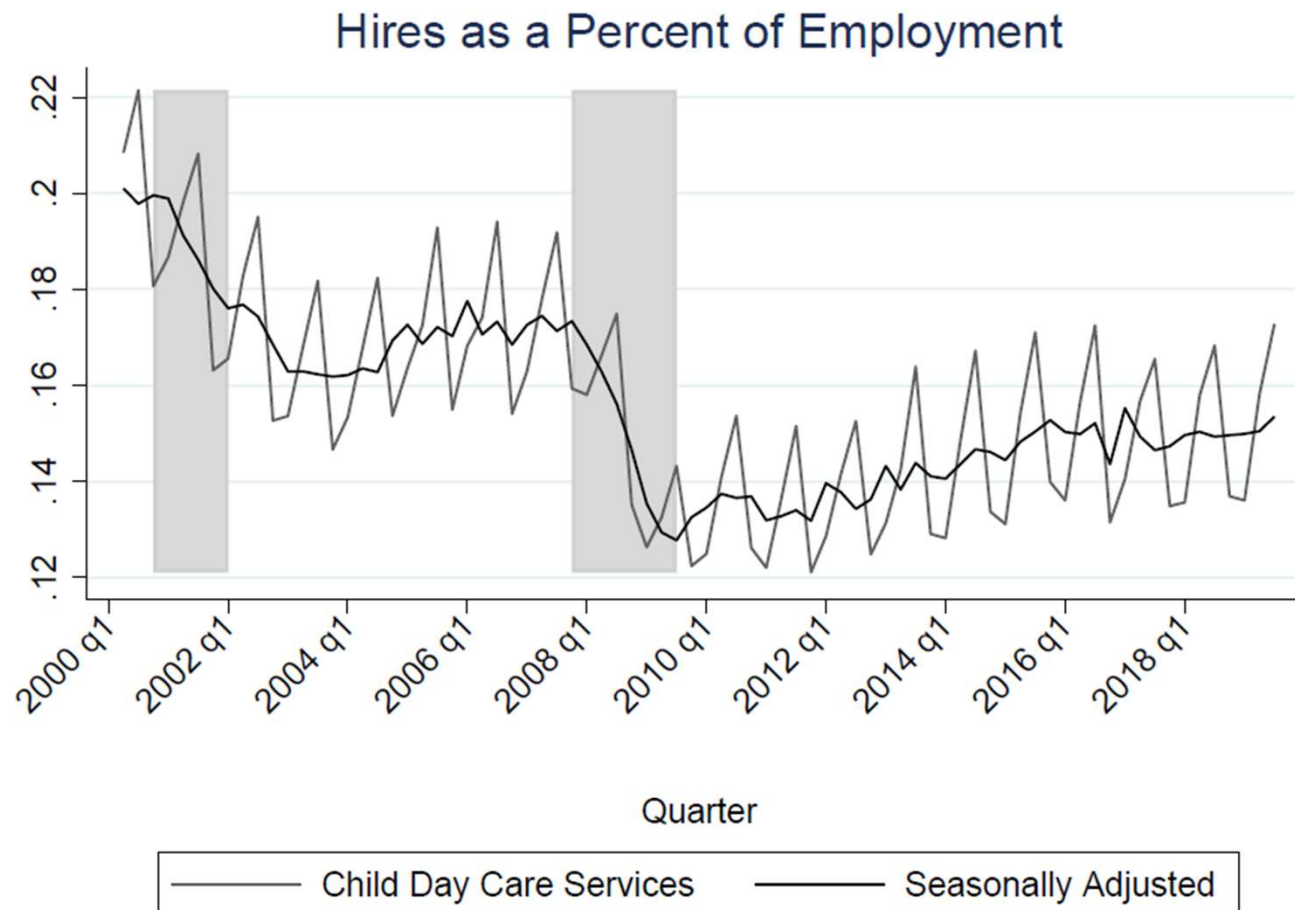
Results

Total Employment: Child Day Care Services Industry



Results

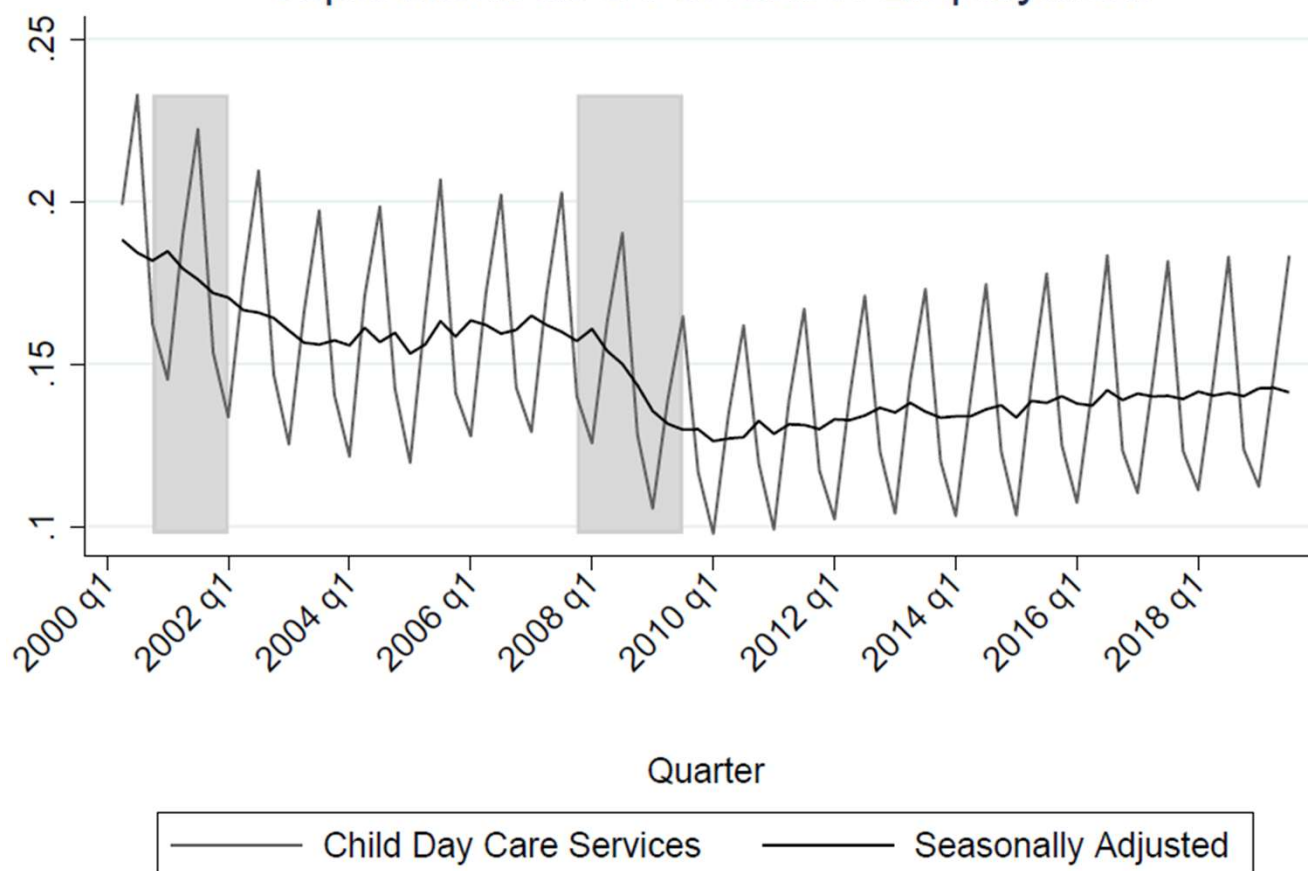
Composition of Employment: **New Hires** as a Share of Total Employment in the Child Day Care Services Industry



Results

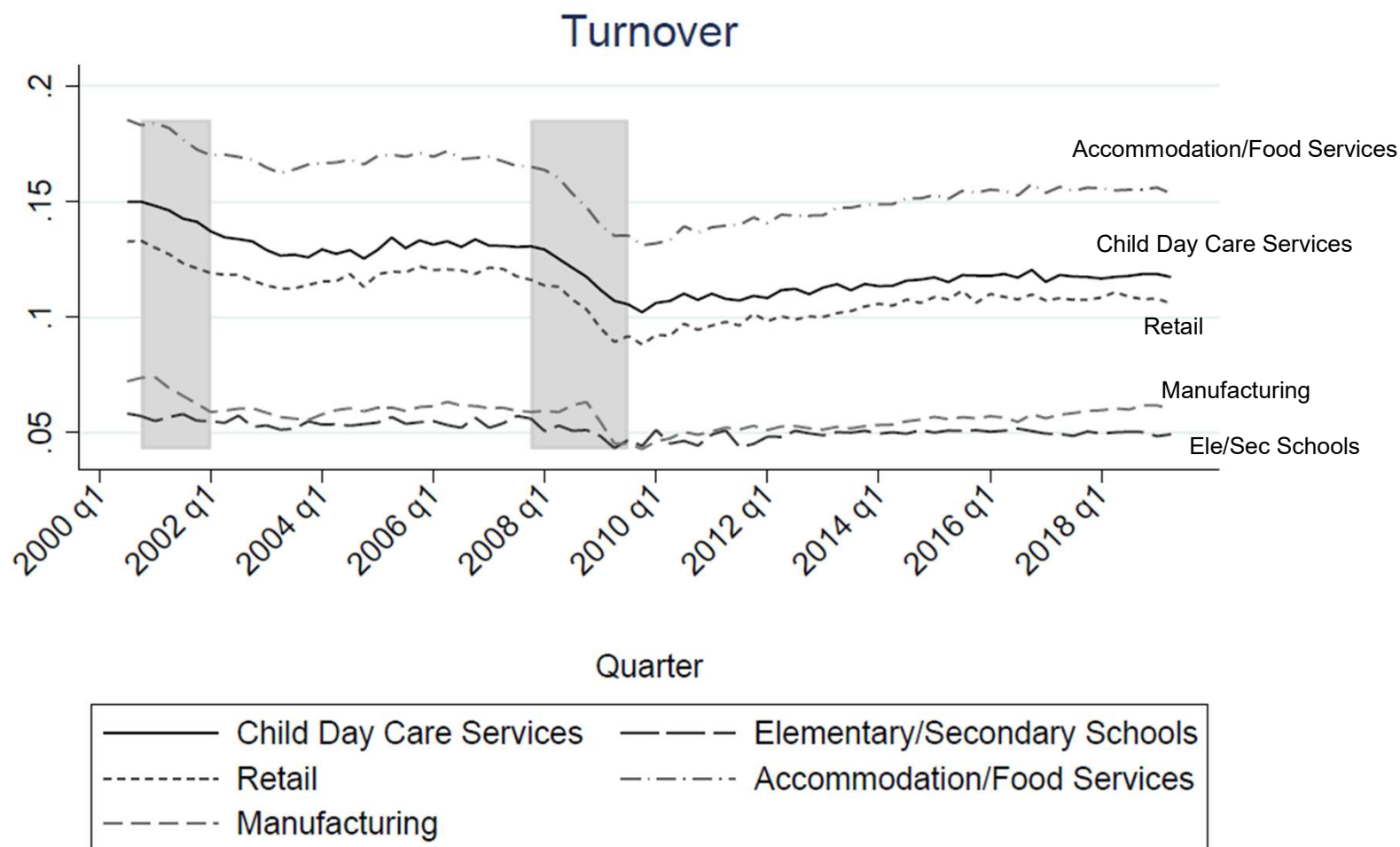
Composition of Employment: **Separations** as a Share of Total Employment in the Child Day Care Services Industry

Separations as a Percent of Employment



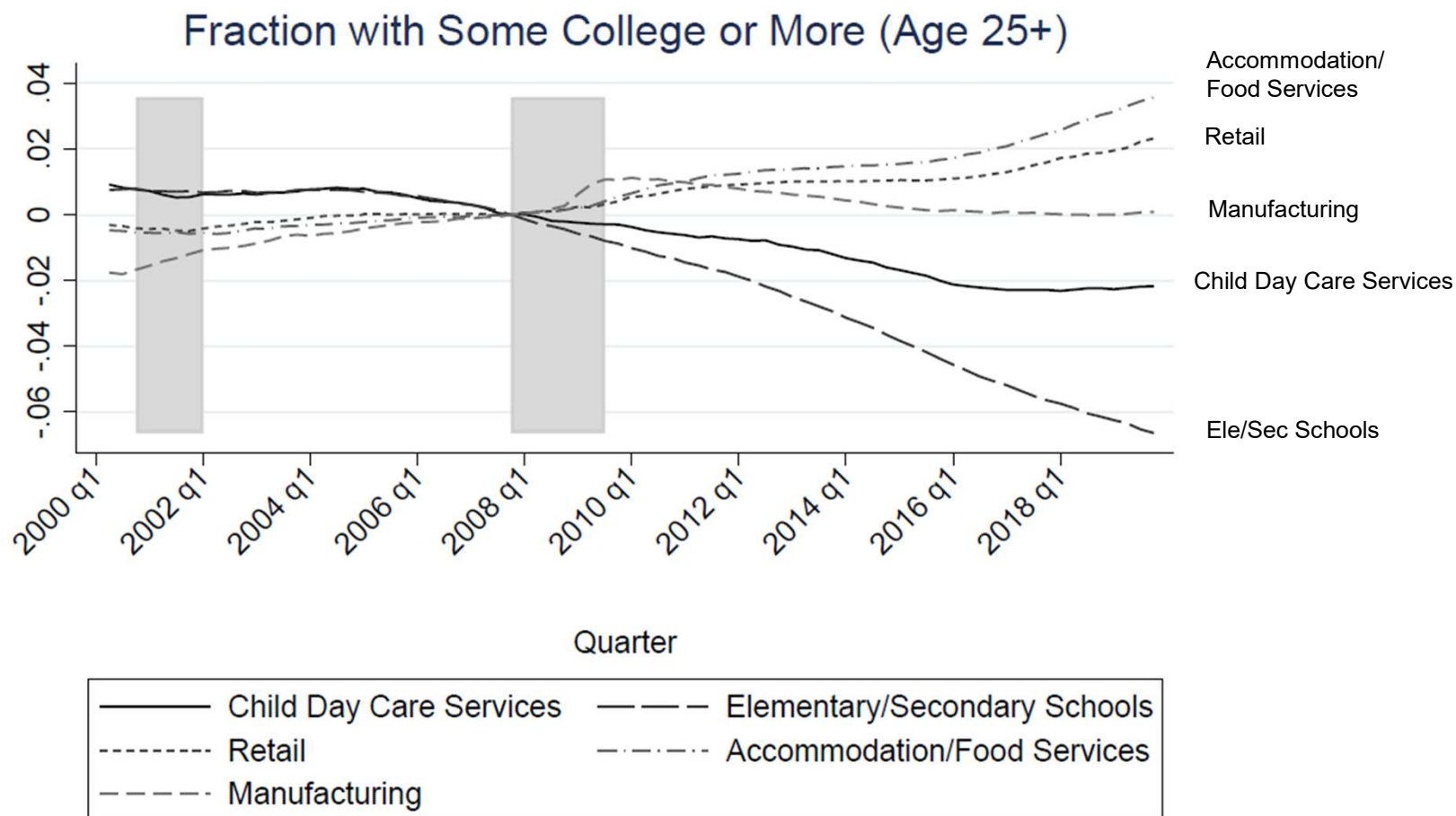
Results

Turnover Rate: Child Care versus Similar Industries



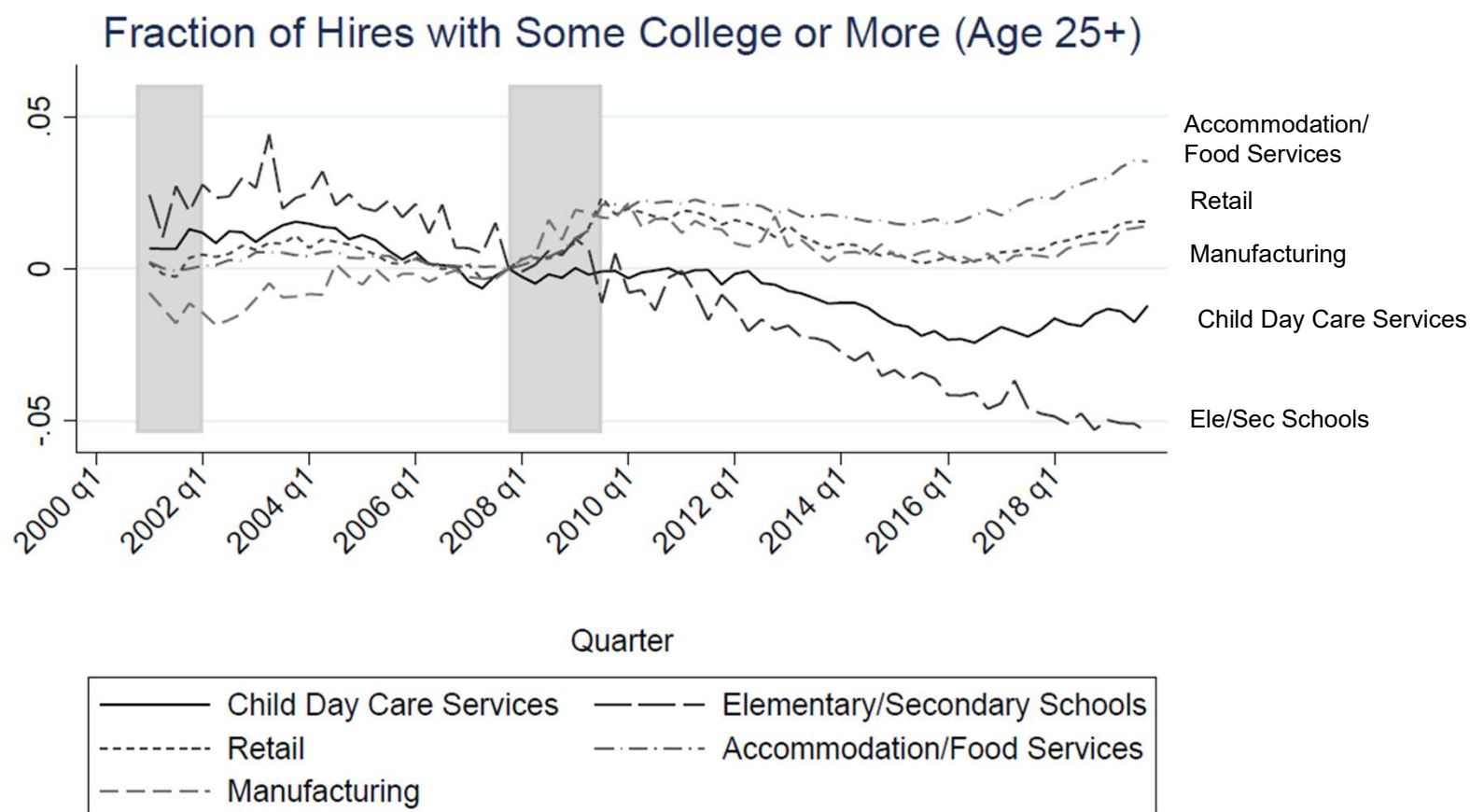
Results

Worker **Skill Level**: Share of **Workers** (Ages 25+) with Some College or More



Results

Worker **Skill Level**: Share of **New Hires** (Ages 25+) with Some College or More



Discussion

- 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