

Pandemic Pushed the U.S. into Recession ... and Hourly Wages Rose?

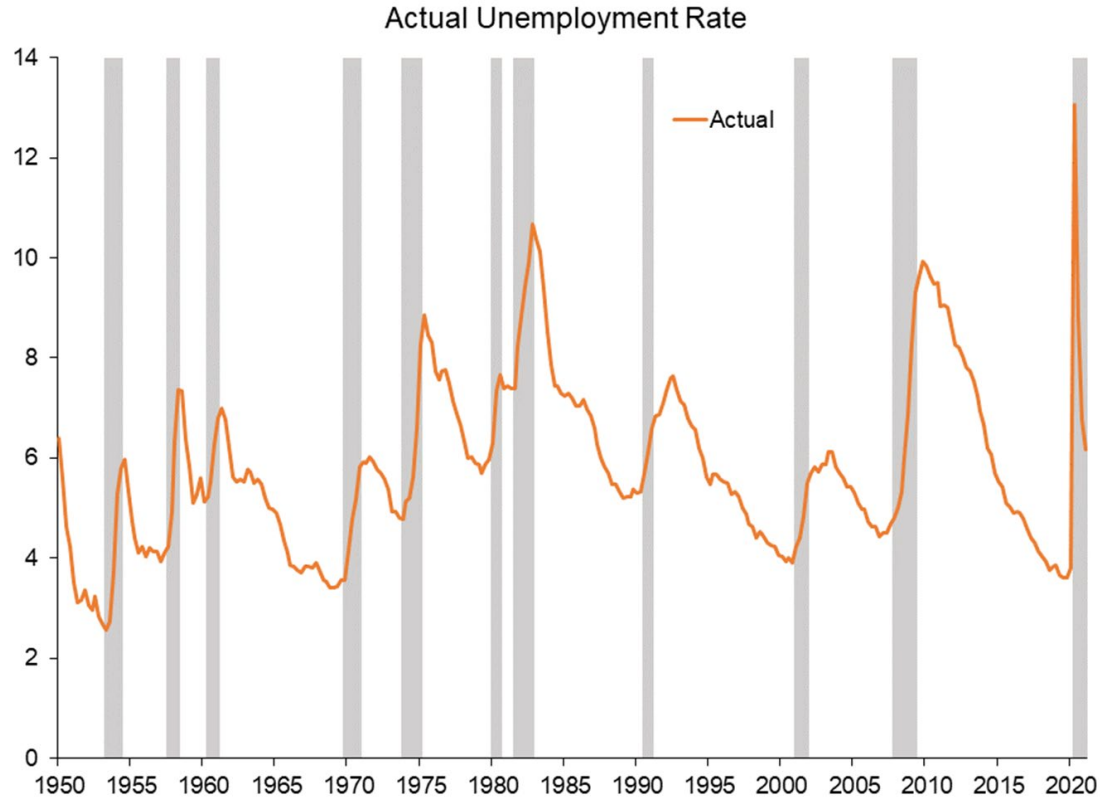
Economic Education Summer Professional Development for Educators



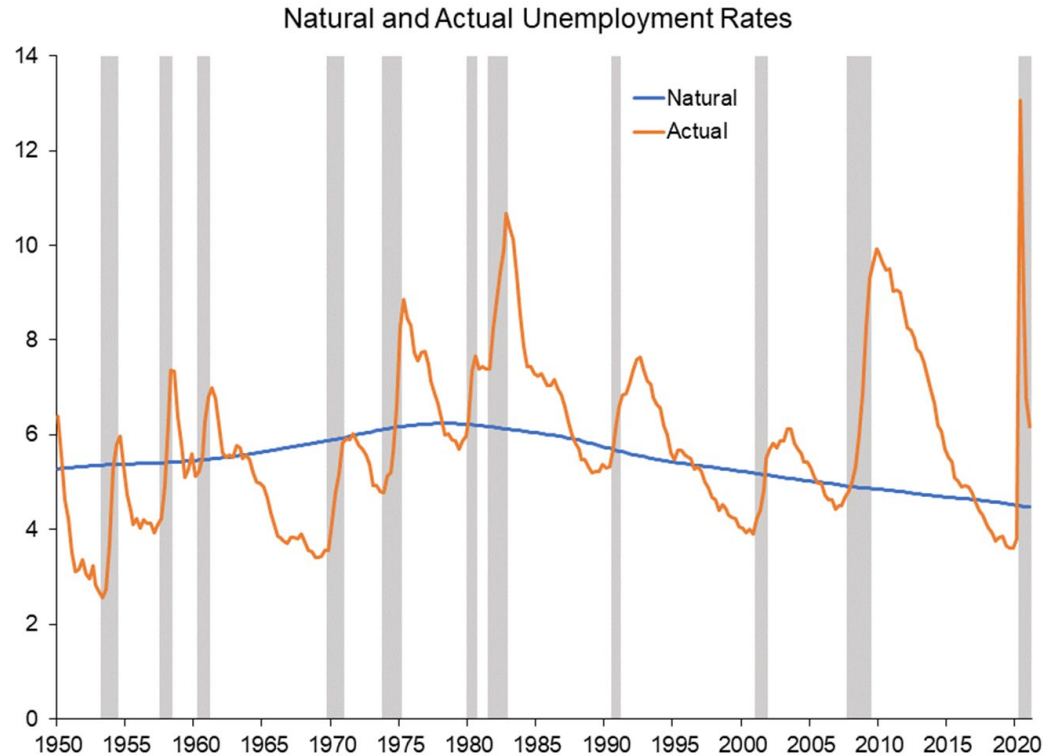
Federal Reserve
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Joe Tracy
Research
June 22, 2021

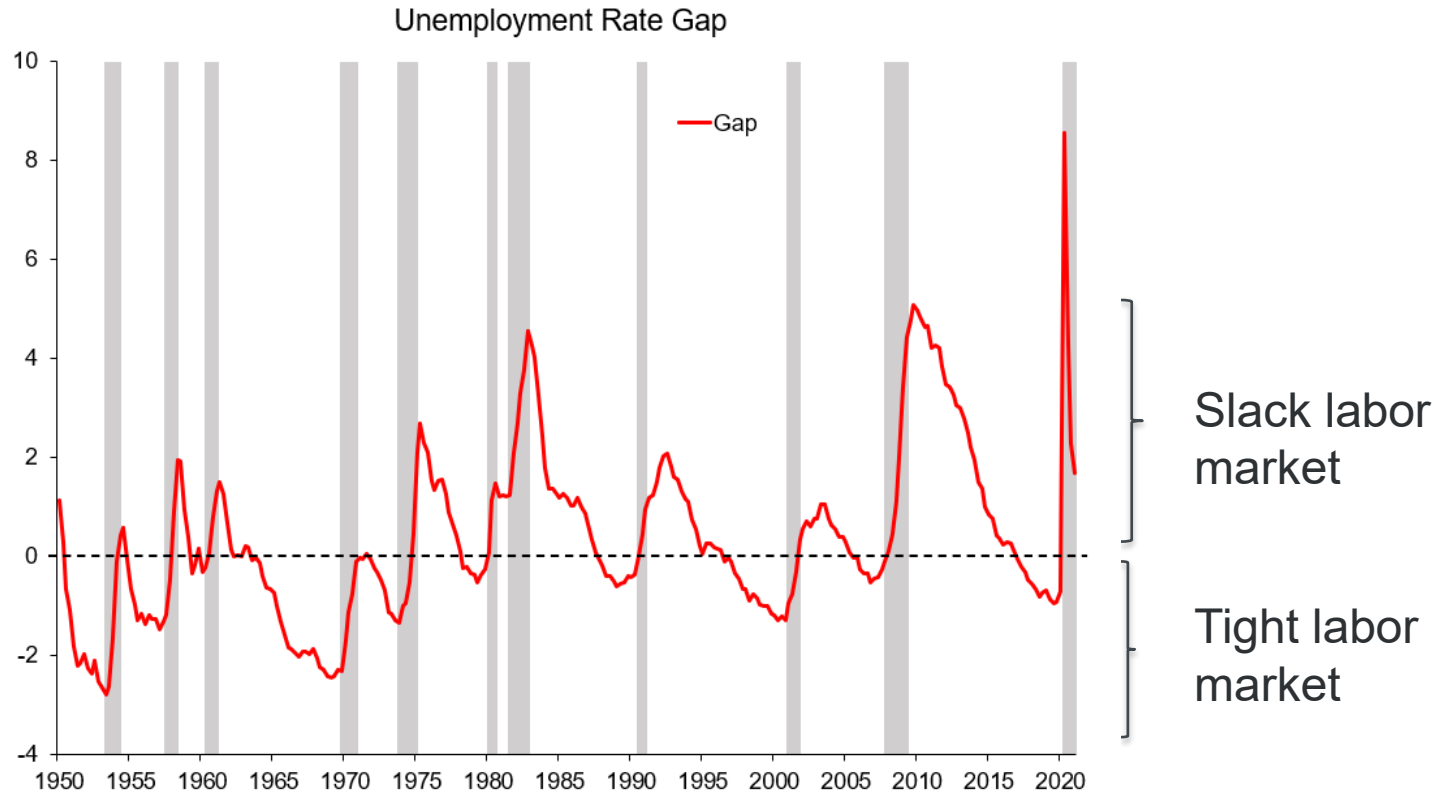
Unemployment rate is highly cyclical-2020 a 70+ year high



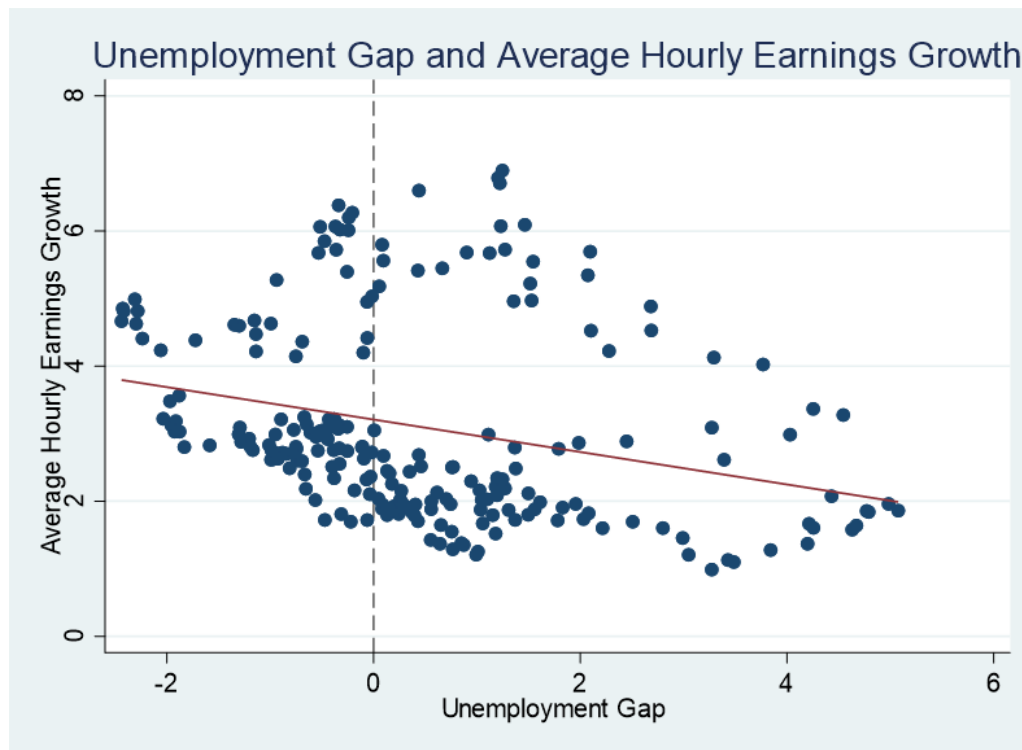
Slack labor market when actual unemployment rate > “natural” rate of unemployment



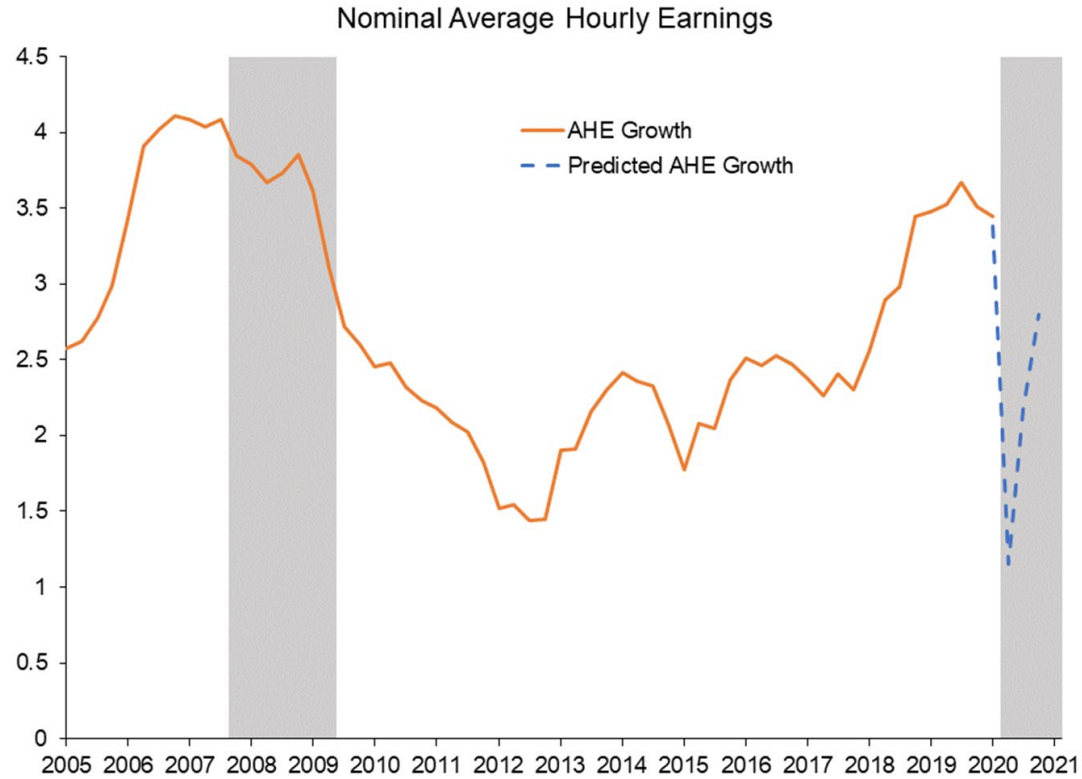
Labor slack increased dramatically in 2020 Q2



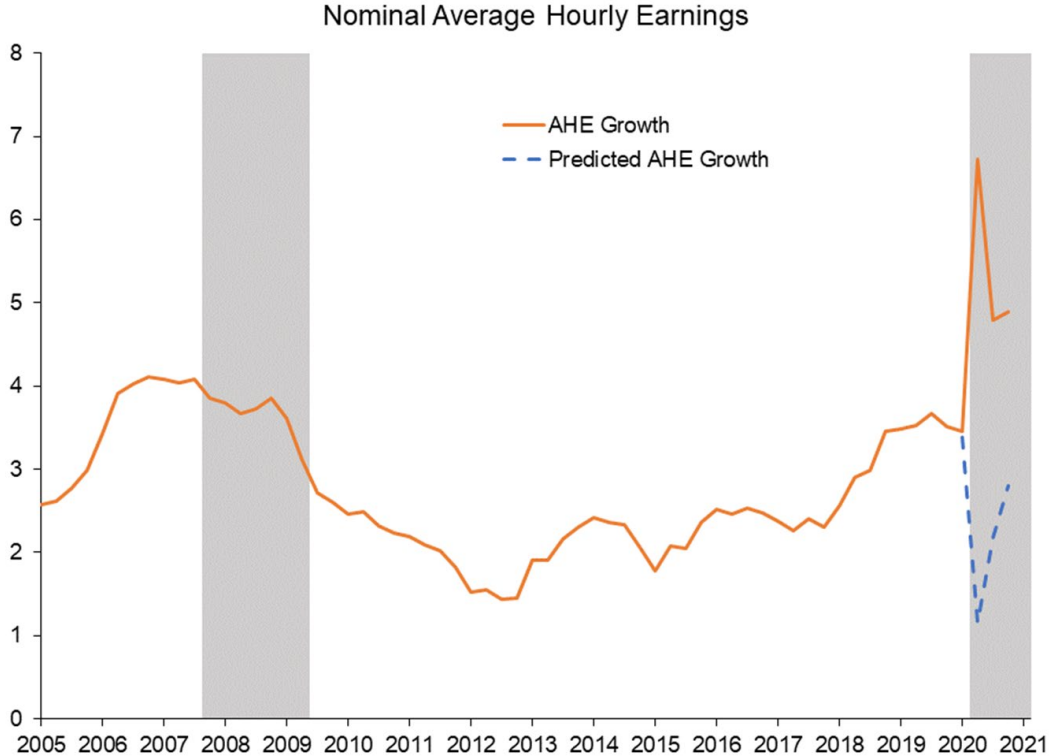
Wage growth slows in slack labor markets



Covid-19 should have significantly slowed wage growth



AHE growth increased significantly instead – why?



Understanding AHE growth

- AHE = aggregate wages / aggregate hours, ie “average wage”
- Growth in AHE has two components
 - *Aggregation effect* reflecting an earnings weighted average of individual wage growth
 - *Composition effect* reflecting the difference in average wages of individuals starting jobs vs leaving jobs
- Important point:
 - Growth in an average wage is **not** the same as average wage growth
 - Average wage growth equally weights individual wage growth
 - Average wage growth has no composition effects

How “composition effects” can impact AHE growth

Dollars per hour; average hourly earnings (AHE) based on 40-hour workweek					
Year	Sally	Frank	Bob	AHE	AHE growth
2018	\$20.00	\$18.00	\$10.00	$\$1,920.00/120 = \mathbf{\$16.00}$	

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- 2019 AHE growth of 3.79% < average wage growth of 4%

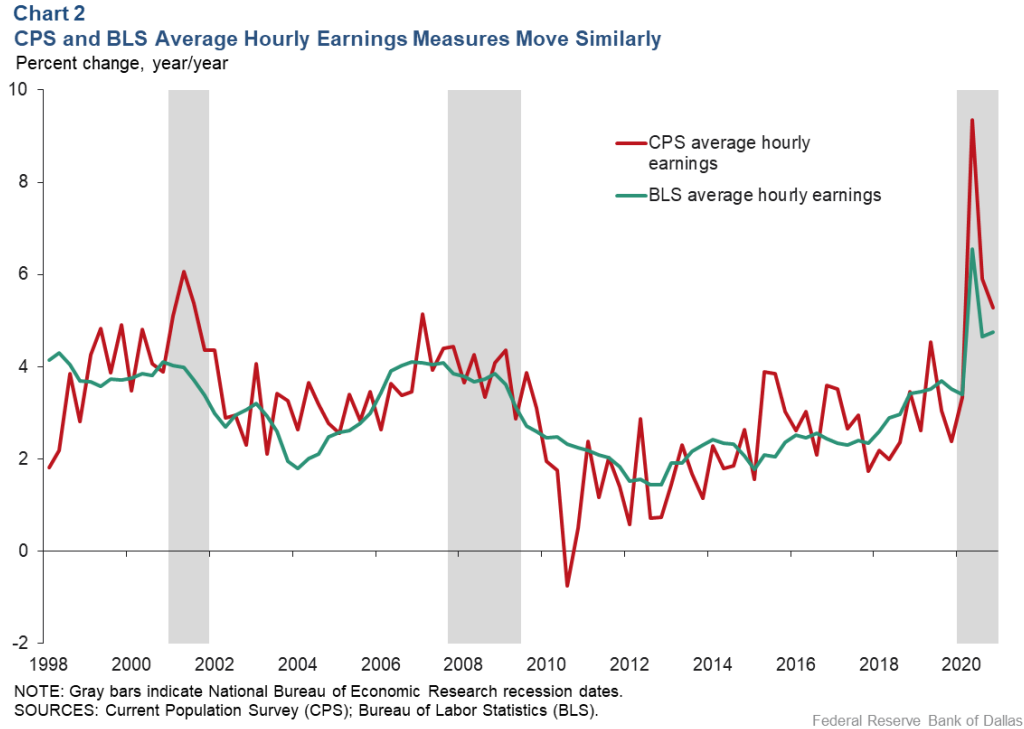
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2020	\$20.60	\$18.72	—	$\$1,572.80/80 = \mathbf{\$19.66}$	18.36%

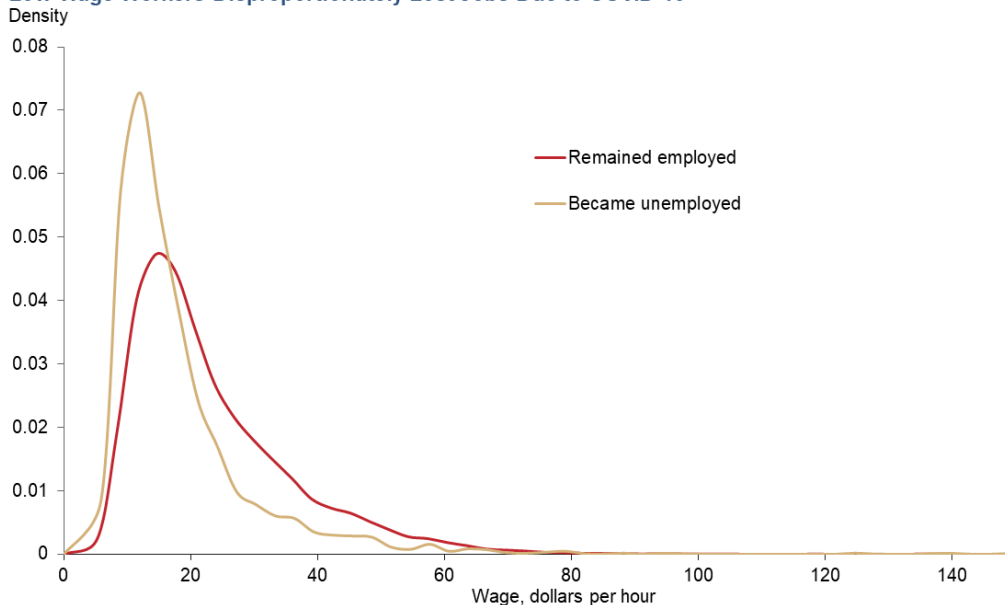
- Bob’s job loss leads to a higher AHE and consequently positive composition effect

CPS data reproduces (with noise) AHE growth



Covid-19 job losers tended to have lower wages

Chart 3
Low-Wage Workers Disproportionately Lost Jobs Due to COVID-19



NOTES: Employed means an individual reported working in 2019 and 2020. Unemployed means an individual reported working in 2019 but lost work in 2020. Density refers to the proportion of individuals in a category with the corresponding hourly wage. The area under each line sums to 1.

SOURCE: Current Population Survey.

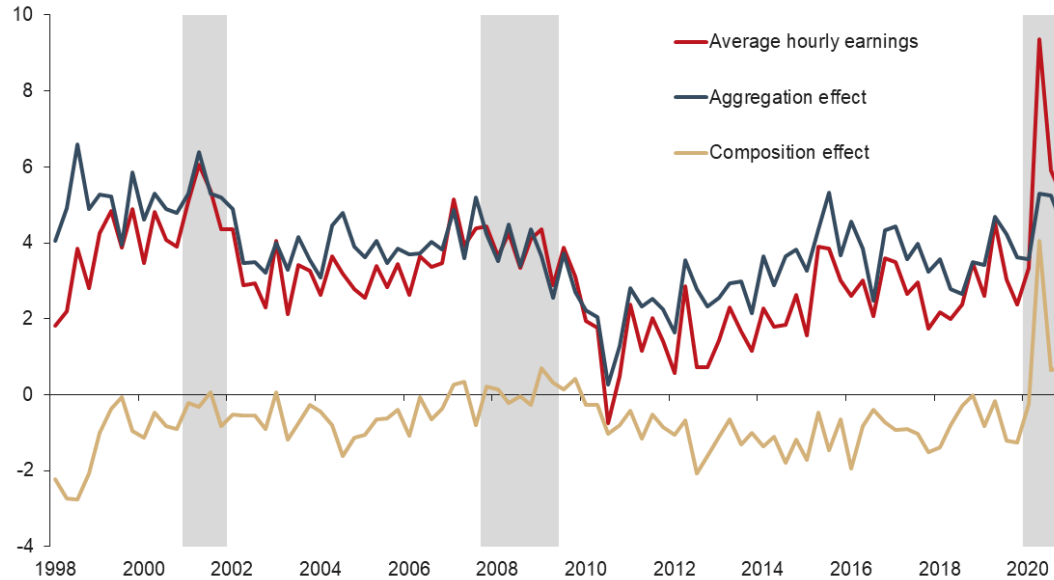
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Composition term of CPS AHE growth spiked during Covid-19

Chart 4

Composition Effect Accounts for Much of CPS Average Hourly Earnings

Percent change, year/year



NOTES: Gray bars indicate National Bureau of Economic Research recession dates. The aggregation effect refers to the contribution of already employed workers to wage growth. The composition effect is the contribution of workers entering or leaving jobs to wage growth. Average hourly earnings equals the sum of the aggregation and composition effects.

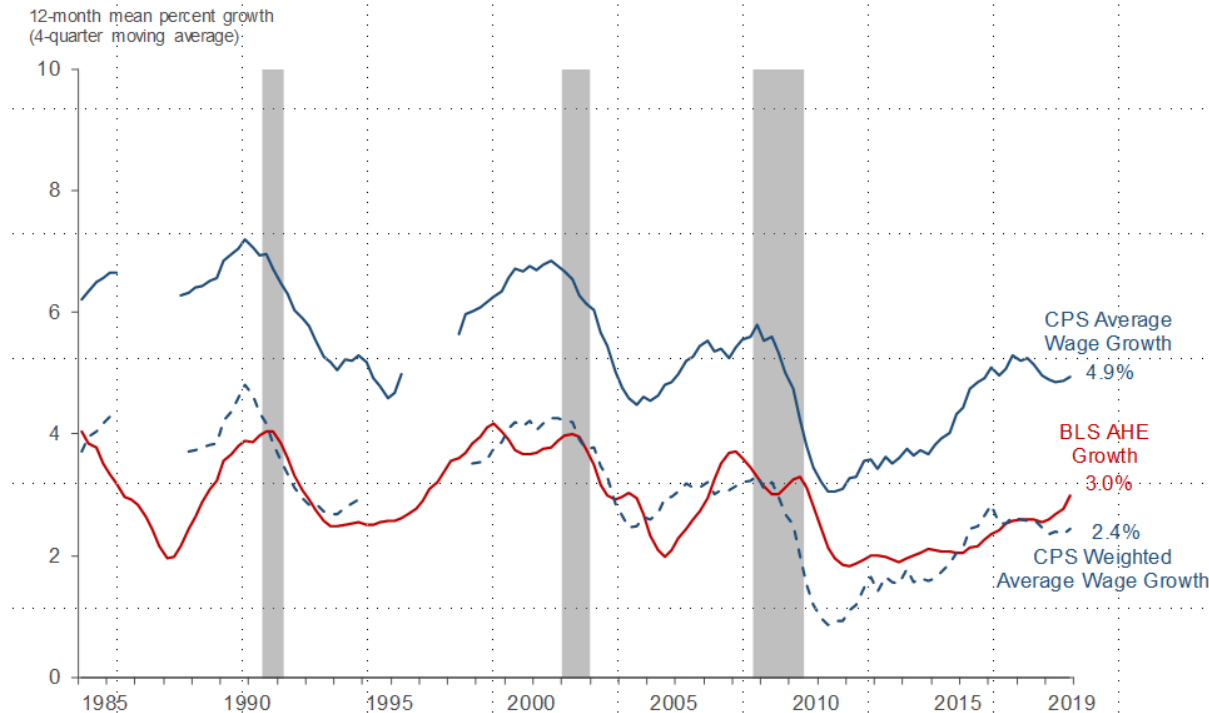
SOURCE: Current Population Survey.

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Implications

- AHE growth is a common measure of wage growth
 - Generally lower than average wage growth due to weighting individual wage growth by relative earnings
 - Fastest wage growth tends to occur early in careers when individuals still have relatively low earnings
- Composition effects typically push down AHE growth
 - Composition effect is generally negative reflecting higher wages for those leaving jobs as compared to starting jobs
 - Covid-19 caused a large positive composition effect as low wage workers lost their jobs at much greater rate

Comparing average wage growth to AHE growth



NOTES: Gaps in series result of time between survey administration. Gray bars indicate National Bureau of Economic Research (NBER) U.S. recessions.

SOURCES: Census Bureau, Current Population Survey (CPS); Bureau of Labor Statistics (BLS); St. Louis Federal Reserve Economic Data (FRED).

Connections In the Classroom: Unemployment Paradox



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Economic Education
Advisor



Connections In the Classroom: Embed

- **Discussion:** Explore the implications of career pathways with discussion questions.
 - What is the perceived impact that education has on the unemployment paradox?
- **Graphic Organizer:** Revisit four types of involuntary unemployment
 - Demonstrate how paradox fits into each type.

 Architecture and Engineering Drafters <p>Drafters use software to convert the designs of engineers and architects into technical drawings and plans. Workers specialize in architectural, civil, electrical, or mechanical drafting and use technical drawings to help design everything from microchips to skyscrapers.</p> <p>Entry-level Education: Associate degree Median Income: \$49,630</p>	 Arts and Design Industrial designer <p>Industrial designers develop the concepts for manufactured products, such as cars, home appliances, and toys. They combine art, business, and engineering to make products that people use every day. Industrial designers focus on the user experience in creating style and function for a particular gadget or appliance.</p> <p>Entry-level Education: Bachelor's degree Median Income: \$59,610</p>
 Architecture and Engineering Environmental engineering technicians <p>Environmental engineering technicians carry out the plans that environmental engineers develop. They test, operate, and, if necessary, modify equipment used to prevent or clean up environmental pollution. They may collect samples for testing, or they may work to mitigate sources of environmental pollution.</p> <p>Entry-level Education: Associate degree Median Income: \$45,350</p>	 Arts and Design Interior designer <p>Interior designers make interior spaces functional, safe, and beautiful by determining space requirements and selecting decorative items, such as colors, lighting, and materials. They read blueprints and must be aware of building codes and inspection regulations.</p> <p>Entry-level Education: Bachelor's degree Median Income: \$47,600</p>
 Architecture and Engineering Electrical engineer <p>Electrical engineers design, develop, test, and supervise the manufacturing of electrical equipment, such as electric motors, radar and navigation systems, communications systems, and power generation equipment. Electronics engineers design and develop electronic equipment, such as broadcast and communications systems—from portable music players to global positioning systems (GPS).</p> <p>Entry-level Education: Bachelor's degree Median Income: \$89,630</p>	 Business and Financial Cost estimators <p>Cost estimators collect and analyze data to estimate the time, money, materials, and labor required to manufacture a product, construct a building, or provide a service. They generally specialize in a particular industry or type of product.</p> <p>Entry-level Education: Bachelor's degree Median Income: \$58,860</p>



Connections In the Classroom: Extend

- **Opportunity Occupations:**

The Federal Reserve System initiative facilitated by Kansas City Fed and others to examine jobs that don't require a bachelor's degree but pay above national annual median wage.

[Opportunity Occupations: Good pay; no degree required - Federal Reserve Bank of Kansas City \(kansascityfed.org\)](https://www.kansascityfed.org/opportunity-occupations)

- **Navigate:**

The Dallas Fed's College and Career Readiness publication that can be used to predict careers that will have growth and to reevaluate career pathways.

[Opportunity Occupations Monitor - Federal Reserve Bank of Atlanta \(atlantafed.org\)](https://www.federalreserve.org/atlanta/opportunity-occupations-monitor)

[Navigate — Exploring College and Careers workbook \(dallasfed.org\)](https://www.dallasfed.org/outreach/college-career-readiness)

