

Talent “pipeline,” audit quality, and other research topics of interest

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Disclaimer

The views expressed herein are my own and are not necessarily the views of the PCAOB, the Chair, Board Members, or other PCAOB staff.

... including David Colino and Harsha Samaraweera – although I would like to acknowledge they contributed a lot to this presentation.

Thank you!

OVERVIEW

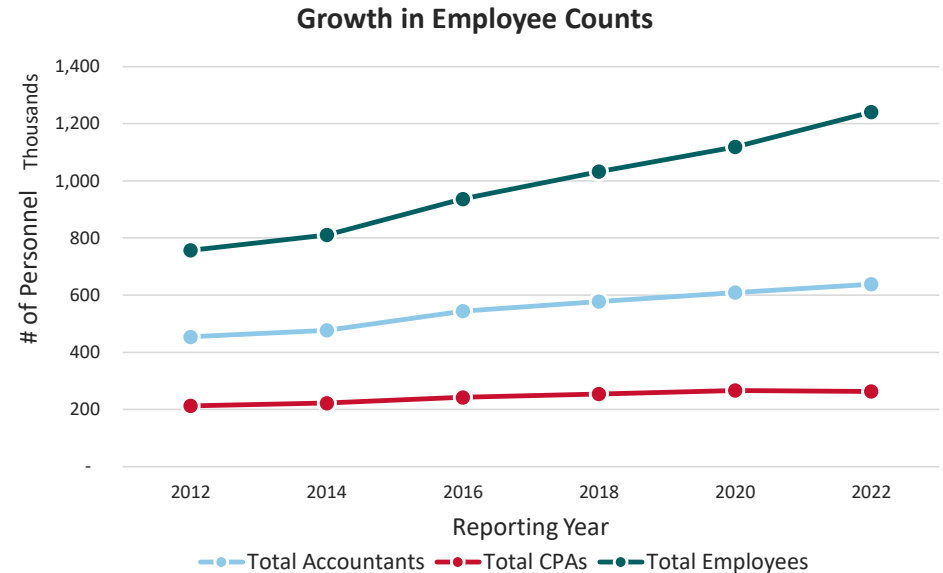
1. Which theories can explain the concurrent trends of
 - a) Declining audit quality as measured by audit deficiency rates
 - b) "Talent crisis"
 - Which theories can we test against each other with available data?
 - Which ones remain open research topics?
2. Other research priorities of academic and OERA interest

RECALL BI FUN FACT #1: DECLINING # OF YOUNG AUDITORS

Recall:

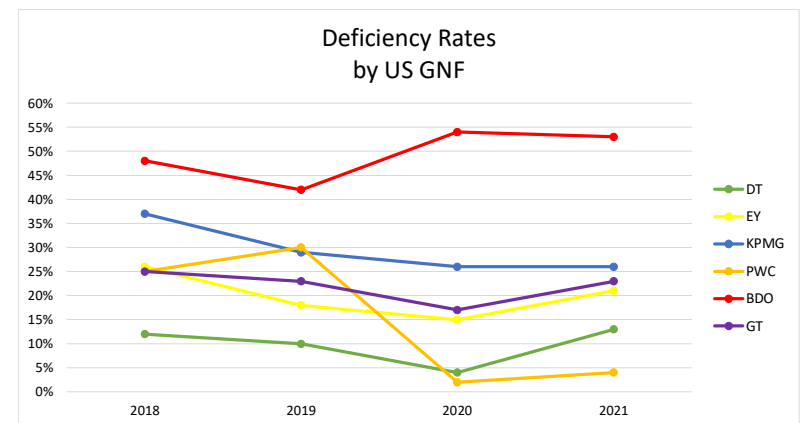
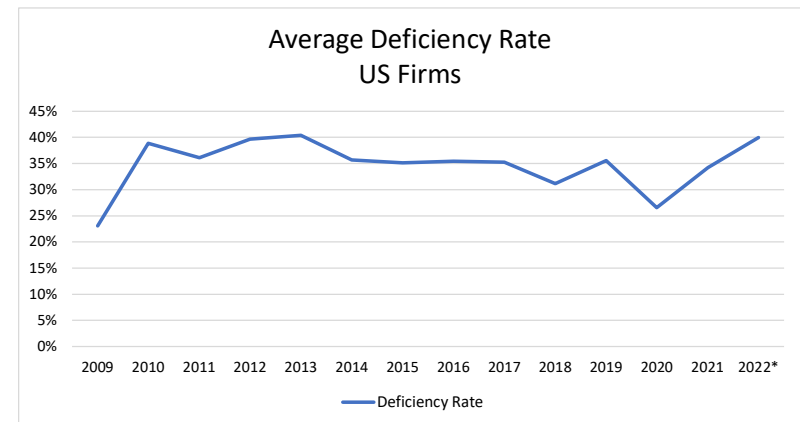
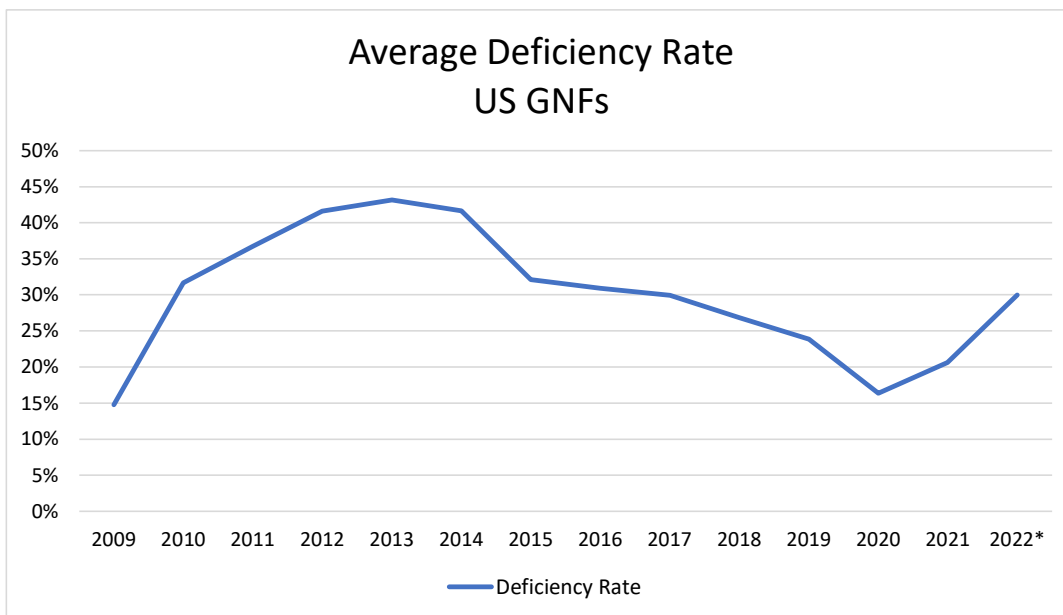
- # of CPAs at firms growing more slowly than # of other employees
- 17% decrease in CPA exam candidates

(Sources: PCAOB Form 2 data; 2021 AICPA Trends Report.)



- Could a changing composition of audit teams help explain a decline in audit quality?
 - Fewer CPAs, more other employees, more employees per partner

"TALENT SHORTAGE" AND LOW AUDIT QUALITY CORRELATE



- Lots of things correlate in the time-series
 - Limited data to measure cross-sectional correlations
- Still attractive to find a joint explanation?

Deficiency rate defined as share of audits reviewed with one or more Part I.A deficiency.
 Sources: PCAOB Inspections Report data; PCAOB Staff Update and Preview of 2022 Inspection Observations.
 * 2022 data is based on staff expected value for the year.

"TALENT CRISIS": NARRATIVE WITH A COMMON THEME

Job Security Isn't Enough to Keep Many Accountants From Quitting

Auditors and tax accountants are moving on—or considering quitting the profession—citing other available options at a time of an already widening shortage

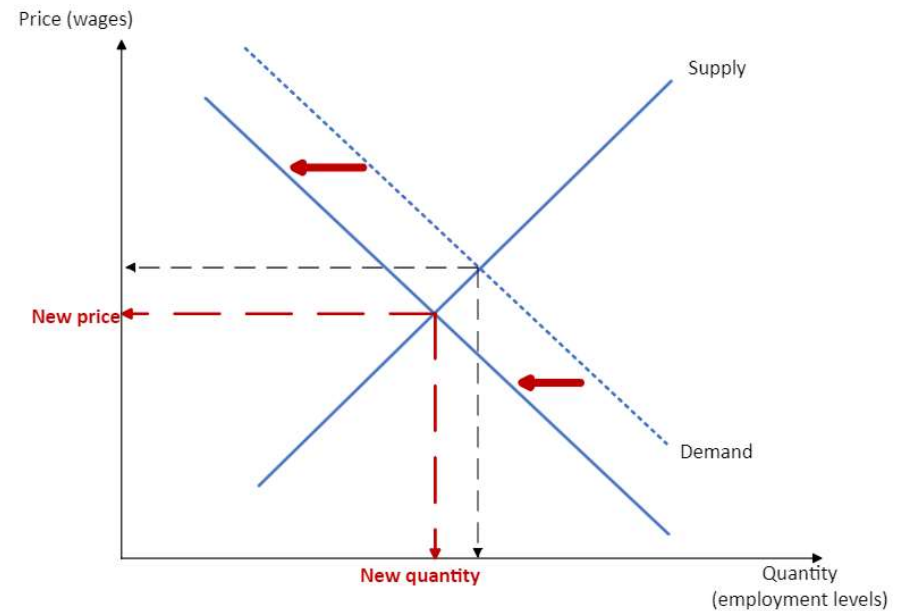
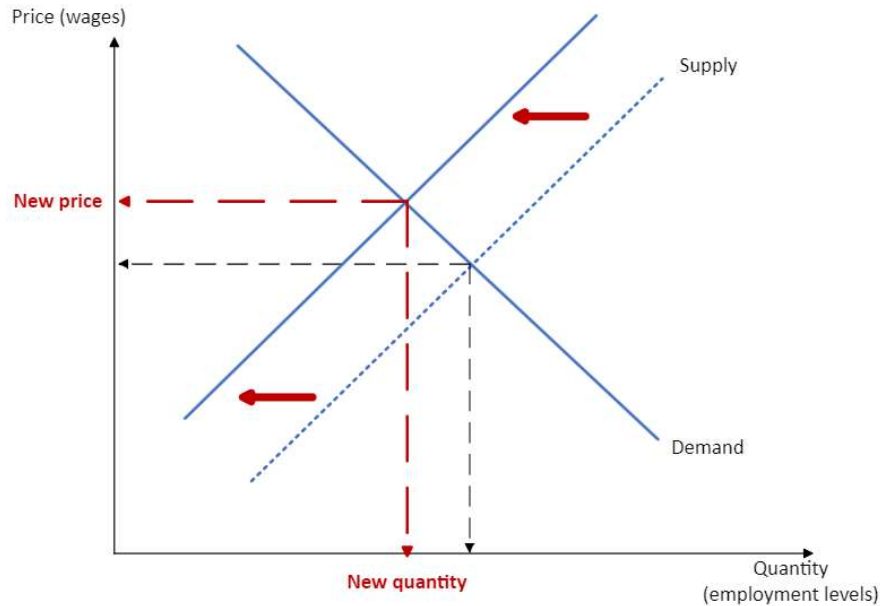
Struggling to Find Accountants, Businesses Boost Salary Offers, Hire Temporary Workers

MANAGING YOUR CAREER Why So Many Accountants Are Quitting Even some accounting majors don't want accounting jobs

Sources: "Why so many accountants are quitting," WSJ, 12/28/2022; "Struggling to find accountants, businesses boost salary offers, hire temporary workers," WSJ, 12/19/2022; "Job security isn't enough to keep many accountants from quitting," WSJ, 9/22/2023.

- **Common theme: labor *supply* explanations – people lost the taste for work in auditing**
 - But the outcome is an *equilibrium* phenomenon. Are we sure demand was held constant?
 - All we know is: fewer people want to work in auditing *given wages firms choose to set*.

DECLINE IN AUDITORS CAN BE CAUSED BY SUPPLY OR DEMAND SHIFTS



- Declining demand for auditors: firms choose to hire fewer auditors at prevailing prices
 - E.g. To reduce wage costs, b/c of automation, market power, a "leaky talent pipeline" etc.
- Which one is it? Difference is in prediction on price (i.e. salaries): up vs down

WHAT HAPPENED TO AUDITOR SALARIES IN RECENT YEARS?

- We don't precisely know – firm-level salary data not easily accessible.
 - Proxy: median real earnings for **accountants** (vs **financial analysts** vs **financial managers**)



Source: BLS data, retrieved from FRED, Federal Reserve Bank of St. Louis.

- Real wage *decline* in 2021 (audit quality drop), catch-up in 2022 (1.9% p.a.)

AUDITOR WAGES

- Anecdotal evidence that auditor wages, worldwide, are not competitive with alternatives outside the industry, and may not have increased fast enough

EY audit pay rates stay the same despite inflation

Max Shanahan
Professional services reporter

Aug 15, 2023 - 12:42pm

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The starting pay for most auditing staff in parts of EY's financial services division will not increase this year, at the same time the firm has told clients that "significant wage inflation" had forced it to increase its audit fees.

Only graduate pay will increase for auditing staff in the division, with new starters set to earn \$66,500, including superannuation, an increase of less than 1 per cent from last year's starting pay of \$66,000.

KEY POINTS

- Why it matters: EY has increased audit fees but kept most starting pay rates static
- Context: EY's staff, including those in audit, have complained about long hours
- What next: The pressure is now on EY to improve pay and conditions for its auditors

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Students want to make [more money up front](#) than many accounting firms are paying—and they are finding it in other industries, according to professors. The expanded opportunities have come during a decadelong economic boom that has created new roles in sectors from banking to tech. Top students straight out of college can make significantly more going to work for [consulting outfits and banks](#), rival fields that are drawing quantitatively minded students, according to recruiters.

The 30-year-old isn't alone in his discontent with the industry. Accountants have long been viewed by people in the profession as underpaid and undervalued compared with positions in tech and banking. Now the foot soldiers of the profession are leaving the field in droves. Accountants cite low salaries, mundane tasks, burnout and the threat of new technology like generative AI as reasons for considering other industries.

Sources: "EY audit pay rates stay the same despite inflation," Financial Review, 8/15/2023; "Why so many accountants are quitting," WSJ, 12/28/2022; "Job security isn't enough to keep many accountants from quitting," WSJ, 9/22/2023.

INTERIM SUMMARY

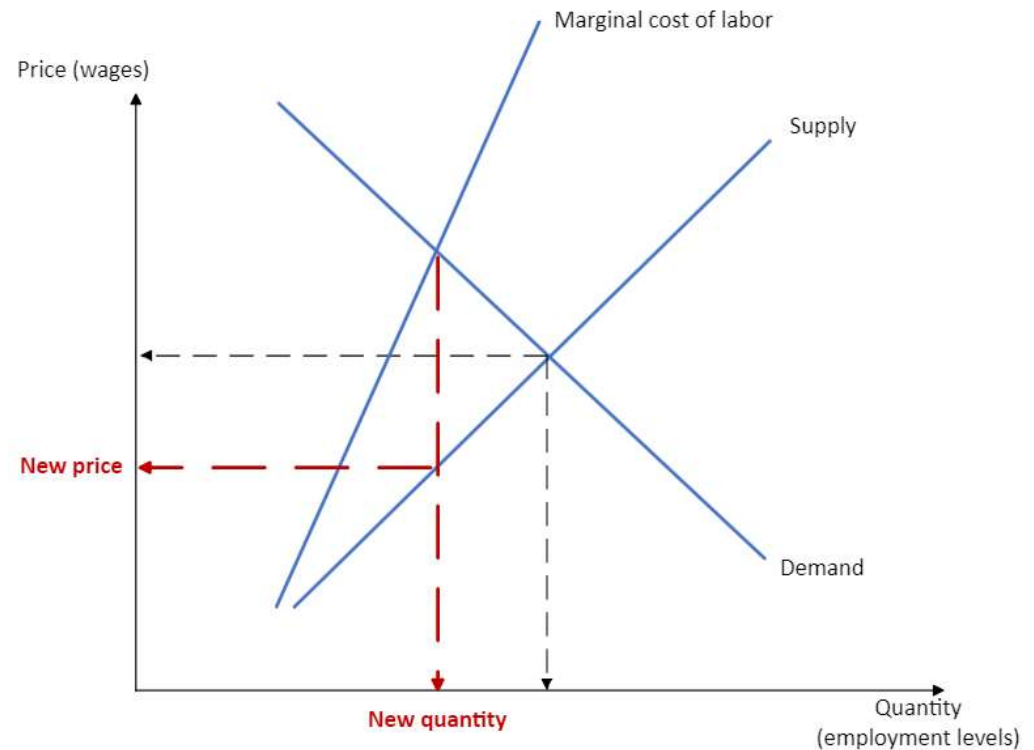
- Hard to know whether demand or supply explanation at this stage
 - Unlikely to be supply alone, because wages would have increased a lot *more*
 - If labor supply in auditing decreased relative to finance (news stories), we should see auditing wages increase by *more* than finance wages. But we don't.
- Either way, a drop in labor supply (i.e. loss of taste for accounting) is not obviously **The Only Explanation** for the reduction in the number of CPAs, aka the "talent crisis"
- Better wage data would be an important step to understand the "talent crisis"!
 - Perhaps progress can be made investigating various mechanisms
 - Why is this important?

IMPORTANCE OF DISENTANGLING SUPPLY & DEMAND EXPLANATIONS

- Different causes call for different remedies, and by different actors.
- Potential supply explanations
 1. Juniors skipping auditing as "first step"; jump straight to higher-paying "next step"?
 - Perhaps to industries not requiring 150 credit hours
 2. Changing working conditions post-pandemic, relative to other industries?
 3. Less valuable training, perhaps in response to leaky talent pipeline? Fear of automation?
 - Parallel to credit-ratings industry 15 years ago? (Bar-Isaac, Freixas & Shapiro 2011)
- Potential demand explanations
 1. Leaky talent pipeline reduces optimal training, which reduces productivity & quality
 2. Automation: reduces cost, but also quality?
 3. Monopsony power in the labor market?

DEEP DIVE: MONOPSONY POWER IN THE LABOR MARKET

- Monopsony power in the market for auditors
 - Wage and # auditors are set by firm equating marginal cost of labor with marginal revenue of product
- Equilibrium quantity and wage are lower than the competitive wage and quantity



DEEP DIVE: MARKET POWER IN THE LABOR MARKET FOR AUDITORS

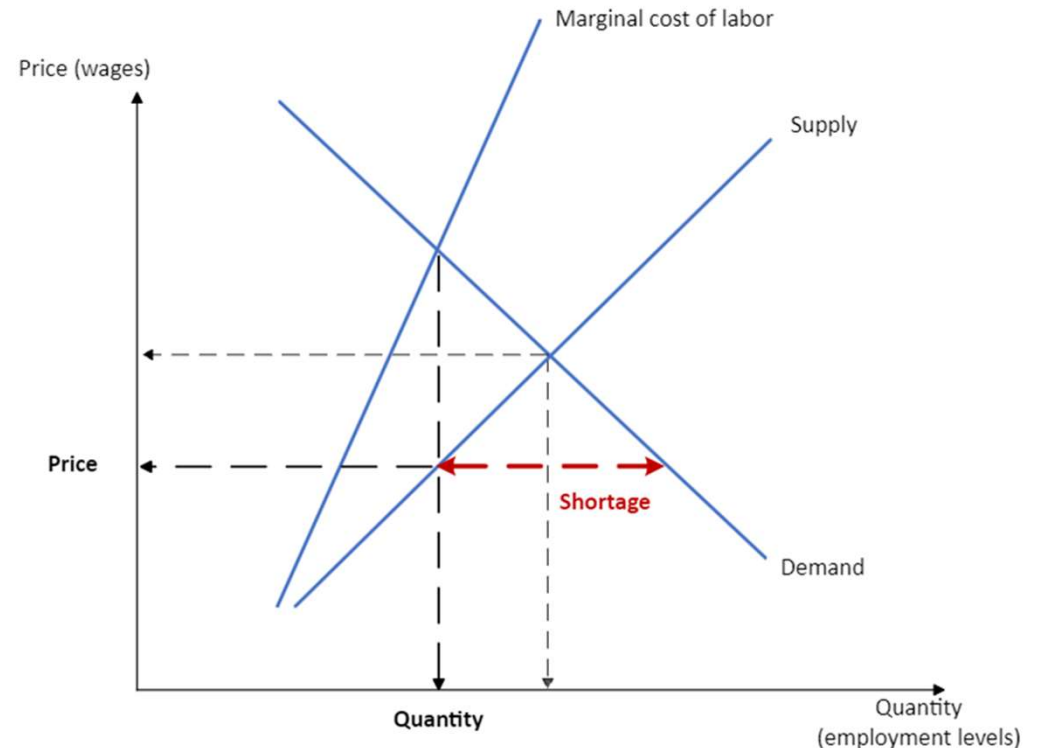
- Monopsony power can lead to perceptions of “shortage”: for prevailing wages, demand is higher than supply.
- It explains imbalance—for any given wage level—between # of auditors hired and # of auditors required by auditing needs.

- "Pay them more"

To retain people, firms don't just need to raise salaries and offer training in new capabilities. More accounting firms in recent years have been willing to allow managers to remain at the same

falls on deaf ears: firms already do what is optimal to maximize profits by paying apparently "too low" wages.

- Decline in quality natural consequence of under-staffed teams?



Source: “Job security isn’t enough to keep many accountants from quitting,” WSJ, 9/22/2023.

MONOPSONY DEEP DIVE: TIMING

- Did labor market concentration increase through remote work?
 - More centralized wage-setting decision-making by firms resulting in fewer “competing” hiring centers?
 - Potential for less competition, more coordination, and thus lower wages
- Also: *increased* competition from *outside* auditing?

Pay is another issue. Starting salaries in accounting tend to be lower than other financial careers — according to the Bureau of Labor Statistics, the median salary for accountants and auditors is \$77,250, compared to \$95,570 for financial analysts and \$131,710 for financial managers. CPAs typically earn more, but obtaining a license requires 150 semester hours of education (more than a typical bachelor's degree) and passing the CPA exam.

- Research opportunity: how quantitatively important is monopsony power to explain the "talent crisis" and its timing?

Source: “A shortage of accountants is pushing the industry to reboot its image to win over young talent: 'You have to sell them,’” Business Insider, 2/2/2023.

EFFECT OF REDUCED LABOR MARKET COMPETITION ON AUDIT FEES

- Theory and evidence predicts that increased labor market power will reduce prices in the audit market (Aobdia et al. 2020)
 - Anecdotal evidence (Sep. '23)



Source: "US audit fees that lag inflation squeeze accountants," FT, 7/5/2023.

FINALLY, LICENSING RULES

- Licensing can restrict entry for workers without quality benefit (Friedman, 1962)
 - Theory predicts industry will set licensing requirements "too high" (Leland, JPE 1987)
 - Indeed, "150-hour rule" set by state standards boards, not PCAOB
 - Evidence (Barrios, JAR 2021):
"findings ... consistent with ... licensing requirements restrict the supply of entrants and do little to improve quality in the labor market"

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Occupational Licensing and Accountant Quality: Evidence from the 150-Hour Rule

JOHN M. BARRIOS 

ABSTRACT

I examine the effects of occupational licensing on the quality of certified public accountants (CPAs). I exploit the staggered adoption of the 150-hour rule, which increases the educational requirements for a CPA license. The analysis shows that the rule decreases the number of entrants into the profession, reducing both low- and high-quality candidates. Labor market proxies for quality find no difference between 150-hour rule CPAs and the rest. Moreover, rule CPAs exit public accounting at similar rates and have comparable writing quality to their nonrule counterparts. Overall, these findings are consistent with the theoretical argument that increases in licensing requirements restrict the supply of entrants and do little to improve quality in the labor market.

CAN *HYPOTHETICALLY* HIGHER COMPLEXITY OF RULES EXPLAIN THE DATA?

- No. (Or: not immediately and obviously.)
- Increased complexity, if it existed, would predict an *increase* in labor demand
 - Predicts higher q (# auditors) and higher p (higher wages)
 - At least the first prediction is contradicted by the data.
- Increased auditor responsibilities could make job more interesting, increase supply
 - *Also* predicts increase in # auditors, which is contradicted by the data.

anymore. Repetitive tasks, long hours and high pressure around tax work led Fu to look elsewhere, he said.

“I definitely do not want to do repetitive work,” said Fu, who has an enrolled-agent designation from the Internal Revenue Service that supported his tax work.

Jordan Pixley put his attention to detail and love of numbers into his Clemson University accounting classes. But in internships, he felt bogged down by the repetitive tasks of accounting—such as balancing cash sheets—and the work proved less interesting than the college class he enjoyed most—data analysis.

- Higher complexity is unlikely to be The Explanation for the "talent shortage"

Sources: “Why so many accountants are quitting,” WSJ, 12/28/2022; “Job security isn’t enough to keep many accountants from quitting,” WSJ, 9/22/2023.

CONCLUSION ON THE "TALENT PIPELINE"

- The “talent crisis” can, in theory, have both labor supply and/or demand explanations
 - Sole focus on labor *supply* fails to explain mostly stagnating real wages
 - Labor demand – for a variety of possible reasons – is likely an important factor
- None of the factors that *can* explain the talent crisis fall under the remit of the PCAOB
 - Distinguishing these explanations presents important areas for future research, and can have impact elsewhere

ADDITIONAL RESEARCH TOPICS OF INTEREST TO OERA

1. Audit demand modeling and estimation
 - Helps predict effect of supply-side changes of audit market (incl PCAOB rules & standards)
2. Investor demand for inspections, PCAOB data, enforcement
 1. Firms use PCAOB label for marketing. **How** valuable is PCAOB oversight to audit firms?
 2. There is demand for PCAOB information on web, via vendors. **How** valuable?
 3. Issuer market reactions to disclosures of the inspections results and enforcement actions
 - a. Estimation of the *direct* value of PCAOB inspection & enforcement (public data!)
 - (Indirect value likely much bigger, and much harder to measure)
 - b. Estimating the marginal benefit of an inspection & optimal number of inspections?
3. Auditor incentives. In particular: incentives to compete on quality (theory, empirics)
 - Is there a segmented "market for bad audits"? What are the consequences for firms, partners, issuers?