

Independence at What Cost? Regulation, Accounting Careers, and Human Capital

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October 14, 2025

We thank several current and former partners at the Big Four accounting firms for their valuable insights and discussions. For their helpful feedback, we thank Salman Arif, John Barrios, Thomas Bourveau, Jim Brickley, Junggho Choi (discussant), Christine Cuny, Mark DeFond, Stephanie Dong, Atif Ellahie, Elia Ferracuti, Jamie Flannick, Pingyang Gao, Ray Gao, Nick Guest, Bill Holder, Tim Hungerford, Andy Imdieke, Mike Iselin, Sudarshan Jayaraman, Mark Lang, Clive Lennox, Grace Li, Yukun Liu, Mark Ma, Dawn Matsumoto, Alan Moreira, Valeri Nikolaev, Elena Prager, Daniel Rabetti, Sugata Roychowdhury, Gurpal Sran, Suhas Sridharan, Xinyi Wang, Yuanzhe Zhang, Frank Zhou, seminar participants at the University of Rochester (Simon), University of Rochester (Economics), and conference participants at 2025 HEC Paris Financial Accounting Conference, HKU Summer Accounting Conference 2025 at HKU, Minnesota Accounting Empirical Research Conference 2025 at the University of Minnesota, NYU Big Apple Accounting Conference 2025 at NYU, and Annual Telfer Conference in Accounting, Auditing and Accountability 2025 at the University of Ottawa. We are grateful to our respective schools for financial support.

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ABSTRACT

On-the-job training is a key driver of human capital development (Becker, 1962). We argue that the Sarbanes-Oxley Act (SOX), aimed at strengthening auditor independence, changed the economics of public accounting and unintentionally reduced opportunities for accountants to invest in their human capital on the job. SOX barred public accounting firms from offering consulting services to audit clients and introduced barriers to accountants transitioning to client firms. This weakened opportunities for collaboration between audit and consulting, limited accountants' exposure to addressing clients' business problems, and reduced networking. This diminished opportunities for accountants to gain broad experience, develop skills, and grow professional networks, making the accounting profession less attractive, especially to top talent. Using individual-level data, we compare accountants (treated group) and consultants (benchmark group) before and after SOX, within the same public accounting firm, time, and location. After SOX, accountants were less likely to move into consulting roles or to clients of their audit firms, and their wages declined. Consistent with reduced career opportunities discouraging accounting education, we find a drop in the quality of students declaring accounting majors after SOX. Importantly, to more directly connect career opportunities to university accounting enrollments, we show that when university alumni transitions from public accounting to consulting decline, both the quantity and quality of subsequent accounting enrollments at their alma maters drop. We uncover a previously overlooked cost of regulations concerning the accounting profession.

JEL codes: M41, M42, M48, M50, I26, J24, J30, J44, G18, K22.

Keywords: Accounting, Regulation, SOX, Human capital, Labor market, Auditor independence.

“Many workers increase their productivity by learning new skills and perfecting old ones while on the job.”
— Gary S. Becker (1962, Journal of Political Economy)

1. Introduction

Individuals invest in their human capital through schooling and on-the-job training, both of which enhance productivity.¹ We propose that the Sarbanes-Oxley Act (SOX), in an effort to strengthen auditor independence, reduced accountants’ opportunities for on-the-job human capital development, diminishing the attractiveness of the profession, especially for top-tier talent. We argue that SOX fundamentally altered the economics of public accounting and how accounting firms operate, inadvertently impairing public accountants’ human capital development.

Accountants play a critical role in facilitating capital formation and the efficient allocation of resources in the economy by producing and providing assurance of accounting information. Declining enrollments in university accounting programs, coupled with anecdotal reports of labor shortages among accountants, raise concerns that the accounting profession, and by extension, accounting education, may be losing its appeal. This study aims to provide a potential explanation for the current challenges facing the accounting profession.

The Sarbanes-Oxley Act (SOX) of 2002 aimed to restore the integrity of the U.S. financial reporting system by strengthening auditor independence. To that end, SOX prohibits public accounting firms from providing consulting services to their publicly traded audit clients and imposes a cooling-off period before an auditor can join a client they previously audited. We argue that these independence requirements fundamentally altered the accounting profession.

Before SOX, large accounting firms operated as “one-stop shops,” often offering both audit and consulting services to the same clients. Audit and consulting functions had strong incentives to collaborate. Auditors’ access to client leadership was often leveraged by consultants for both expertise and business development. Audit partners frequently brought consulting partners to client meetings to broaden discussions and identify new consulting opportunities. The collaboration deepened auditors’ understanding of clients’ businesses, strengthened client relationships by

¹Becker (1962) describes investing in human capital as “activities that influence future real income through the imbedding of resources in people” and on-the-job-training as “a process that raises future productivity and differs from school training in that an investment is made on-the-job, rather than in an institution that specializes in teaching.”

positioning auditors as strategic advisers, and increased their value within their firm by contributing to both audit and consulting growth. For individual accountants, such an environment provided opportunities to invest in their human capital development through broad experiences, collaboration with consultants, exposure to client issues, and networking.

We argue that SOX made the accounting profession less attractive, especially to top talent, by reshaping the economics of public accounting and curtailing accountants' opportunities to develop human capital. By prohibiting accounting firms from offering consulting services to audit clients, SOX reduced the likelihood that broader business opportunities would originate through the audit function and actively involve accountants. Consultants lost access to client leadership through auditors and auditors lost opportunities to identify and address business problems by cross-selling consulting services to audit clients. This limited incentives and opportunities for collaboration between audit and consulting functions, knowledge sharing, and joint business development, and limited individual accountants' exposure to clients' broader business issues.² Overall, it narrowed accountants' opportunities to develop human capital through broader experiences, skills, and networks.

We make three key predictions: (1) SOX reduced accountants' career opportunities; (2) as a result, SOX resulted in fewer high-quality students choosing accounting majors; and (3) speaking more directly to the underlying mechanism, we predict that reduced career opportunities for university accounting alumni discourage students from choosing accounting majors at their alma maters. Our findings support these predictions. First, after SOX, accountants were less likely to transition into consulting roles or move to their firms' audit clients and experienced wage declines. Second, after SOX, the share of high-quality students in accounting majors declined relative to other business majors at the same universities. Third, a drop in accounting alumni transitioning to consulting is associated with a subsequent decline in both the quantity and quality of accounting enrollments at their alma maters.

²SOX also narrowed the scope of services accounting firms could offer audit clients, extending beyond explicitly banned services. For example, a client pursuing an acquisition could only engage their accounting firm for due diligence, not post-merger integration services, weakening the firm's role as a comprehensive service provider and further reduced individual accountants' opportunities to build broader skills and networks.

We build a comprehensive individual-level dataset of accountants and consultants at the eight largest public accounting firms using detailed résumé data. Using nearly 130,000 position changes from 1997 to 2012, we compare accountants (treated group) and consultants (benchmark group) who worked at the same public accounting firm, in the same metropolitan statistical area (MSA), at the same time. While accountants were less likely than their consulting colleagues to transition into consulting roles before SOX, and this baseline gap remained stable in the years leading up to SOX, the gap widened significantly afterward, with accountants experiencing a sharp decline in the likelihood of moving into consulting roles. Our granular firm-MSA-year fixed effects mitigate concerns that unobserved time-varying differences across firm-locations may have differentially affected the two groups. Our estimates indicate a 5.4 percentage points decline in the probability of accountants transitioning to consulting roles after SOX, representing a 20.2% decrease relative to the sample mean.³ These results are also robust to controlling for other factors that may influence the accounting profession, including the 150-hour rule (Barrios, 2022; Sutherland, Uckert, and Vetter, 2024), exposure to SOX Section 404 internal control testing, GAAP restrictiveness (Le, 2024), and technological investments (Friedman, Sutherland, and Vetter, 2024). We also find that junior accountants are affected more than senior ones, suggesting that reduced human capital development after SOX had a particularly strong impact on early-career professionals.

We next document that accountants are less likely to move to their firms' audit clients after SOX (relative to consultants moving to their firms' consulting clients), with a 3 percentage points decline (62.5% relative to the sample mean). Two non-mutually exclusive channels may explain this finding. (1) The post-SOX cooling-off period imposes direct restrictions on auditors joining a client they audited in the prior twelve months. A violation would cause audit firm-client separation, creating strong incentives for both audit firms and clients to avoid such moves. (2) Accountants

³Before SOX's enactment in 2002, Ernst & Young, KPMG, and PwC divested their consulting practices in 2000, 2001, and 2002, respectively, largely in response to SEC pressure over auditor independence, a concern that also contributed to SOX's mandated separation of auditing and consulting services for audit clients (Dey, Robin, and Tessoni, 2012). When we restrict the sample to Deloitte, where no divestiture occurred, we still find a significant post-SOX decline in accountants' transitions to consulting (see Table 3). These career effects in accounting firms persist even in a sample that extends to the present, well after consulting practices were rebuilt after the initial divestitures (see Online Appendix Figure OA.1).

may develop narrower experiences and skills on the job after SOX, reducing their human capital and making them less attractive hires for clients (and non-clients). This broader channel reflects a shift in the nature of on-the-job learning opportunities available to accountants after SOX. Data limitations make it difficult to clearly disentangle the two channels. We observe audit clients of the accounting firm, but not the specific audit engagements of individual audit personnel, thus we cannot determine whether accountants were also less likely to move to clients they did not personally audit, which would support the broader second channel.

To explore these mechanisms, we first utilize the fact that the cooling-off period applies only to “financial reporting oversight roles” with the client, which are more likely to be held by senior employees. Consistent with the direct channel, we find that the decline in accountants moving to their firms’ audit clients is stronger for senior accountants relative to junior ones. Supporting the broader human capital channel, we also find a decline for junior accountants, who are less likely to be subject to the cooling-off period, although the effect is smaller in magnitude. We take the evidence for this second channel a step further. We show that, after SOX, the likelihood of accountants moving to audit clients of other accounting firms, rather than just their own firm’s audit clients, also declined (e.g., accountants at Deloitte moving to audit clients of PwC), for both junior and senior accountants, but especially for juniors. Because moves to clients of other audit firms are not subject to the SOX cooling-off period, this evidence supports the broader human capital channel: narrower experiences and skills after SOX make accountants less attractive hires to both clients of their audit firm and clients of other audit firms.

We next examine SOX’s impact on accountants’ wages. We compare wages paid by public accounting firms to individuals starting in accounting vs. consulting positions at the same firm-MSA in the same year. Reduced human capital development — narrower career paths, fewer transitions to consulting or client positions — and a decline in top talent, could contribute to lower wages. Furthermore, narrowed opportunities for accountants post-SOX may have reduced accounting firms’ demand for accountants with broader skills, such as generating consulting business, collaborating with consulting teams, or serving as strategic advisers to clients — skills perhaps reflected in

pre-SOX wages. We find that while accounting firms paid accountants 17.6% less than consultants before SOX, this wage gap widened by an additional 4.4 percentage points after SOX.

After documenting SOX's career effects, we examine whether it led to fewer high-quality students choosing accounting majors. This may occur if narrowing career opportunities discouraged top students or if firms reduced demand for accountants with the ability and skills to pursue broader pre-SOX opportunities. We compare the share of high-quality students (SAT scores of 1200 or above) among accounting majors relative to other business majors at the same university and time. We find that the fraction of high-quality students in accounting majors fell by 4.7 percentage points (a 26.1% decline relative to the sample mean) after SOX.⁴

We then explore the underlying mechanism through which students learn about changing career opportunities and make informed decisions about college majors. We argue that (a) students with greater access to economic and informational resources are better positioned to choose majors based on career prospects, and (b) students whose parents are employed in business occupations are more likely to be aware of career opportunities in professional business services such as accounting or consulting, and therefore more responsive to the narrowing opportunities in accounting. Consistent with this idea, we find that the post-SOX decline in high-quality accounting majors was stronger among students with higher parental income, those who are not first-generation college students, and those whose parents work in business occupations. We also find that universities with more selective admissions, as a proxy for those more likely to place students in large public accounting firms that offer both audit and consulting services, experience a stronger enrollment quality effect of SOX.

To further examine the mechanism by which reduced career opportunities discourage high-

⁴Although we focus on public accounting, the decline of sought-after career paths — such as transitions into consulting or client management — may have broader effects on the overall appeal of the accounting profession. As long as students perceive a non-zero chance of pursuing these paths, narrowing opportunities may lower the perceived value of an accounting major. Moreover, Big Four firms offer some of the highest wages in accounting, are highly visible on campuses, and are widely recognized brands, making public accounting a salient and important option for prospective accounting majors. Job placement estimates for top-30 accounting programs suggest that approximately 50% (67%) of accounting undergraduates (master's students) accept positions at Big Four firms upon graduation, and 58% (83%) accept positions in public accounting more broadly, upon graduation. For a wider set of accounting programs, the 2008 AICPA Trends Report indicates that 34% of bachelor's and 70% of master's accounting graduates enter public accounting (see footnote 22 for details).

quality students from majoring in accounting, we link university alumni careers to subsequent accounting enrollments at their alma maters. The idea is that alumni careers are key observable and salient signals that can inform and shape students' perceptions of the accounting profession. We model accounting enrollment as a function of alumni transitions from public accounting to consulting, which proxy for the breadth of experience, skills, and networks developed on the job. We find that lower alumni mobility into consulting is associated with subsequent declines in both the quantity and quality of accounting majors, in absolute terms and relative to other business majors.⁵

Our study makes several contributions. First, we contribute to the nascent but rapidly growing body of research examining challenges facing the accounting profession, as reflected in declining university enrollments and fewer entrants into the field (e.g., [Barrios, 2022](#); [Aobdia, Li, Na, and Wu, 2024](#); [Ball, 2024](#); [Choi, Choi, McNichols, and Zhou, 2024](#); [Friedman et al., 2024](#); [Le, 2024](#); [Sutherland et al., 2024](#)). Recent studies suggest that professional licensing requirements (e.g., the 150-hour rule) create barriers to entry without necessarily improving quality ([Barrios, 2022](#)); that accounting majors in industries with higher technological investment face weaker employment and wage growth ([Friedman et al., 2024](#)); and that more restrictive GAAP standards may stifle creativity and critical thinking, deterring students from majoring in accounting ([Le, 2024](#)). We offer a new and distinct perspective: In aiming to strengthen auditor independence, SOX altered the economics of public accounting, reduced opportunities for on-the-job human capital development, and narrowed accountants' career paths — making the profession and accounting education less attractive to top talent. Practitioners and regulators (PCAOB) regularly describe the auditing profession as an apprenticeship model in which on-the-job training is central ([Botic, 2024](#); [KPMG, 2024](#)). By reducing these on-the-job training opportunities, SOX may have inadvertently weakened a cornerstone of the profession.

Second, our study contributes to the broader discussion on auditor independence in capital

⁵Analysis linking alumni careers to subsequent student quality is at the state (not university) level because the HERI survey data (with SAT scores and college majors) does not report university names for privacy reasons. Since university locations are available, we link alumni from a state's universities to subsequent student quality by major within that state. See Sections 3 and 6 for details.

markets. Many regulations worldwide emphasize independence. Independence is not black and white but exists on a continuum. Achieving its optimal level requires weighing the associated costs and benefits. We do not question the need to protect auditor independence or suggest that compromised independence is costless.⁶ Rather, we aim to paint a more complete picture of the trade-offs involved. In doing so, we respond to the call in [DeFond, Li, Wong, and Wu \(2024\)](#) to better understand the boundaries of auditor independence.

Third, our study highlights the unintended consequences of regulations of the accounting profession. While well-intentioned and aimed at preserving auditor independence, SOX may have contributed to a decline in the profession's quality. Our findings align with a long-standing literature on the unintended consequences of regulation (e.g., [Merton, 1936](#); [Averch and Johnson, 1962](#); [Stigler, 1971](#); [Spatt, 2006](#); [Gao, Wu, and Zimmerman, 2009](#)).

Finally, we contribute to the literature on the effects of SOX provisions regarding non-audit services and auditor-client affiliations. Evidence on the link between non-audit services and auditor independence is mixed. Many studies find no significant association between non-audit services and audit quality (e.g., [DeFond, 2002](#); [Kinney Jr, Palmrose, and Scholz, 2004](#); [Larcker and Richardson, 2004](#)). Others report positive associations in certain contexts (e.g., industry specialists ([Lim and Tan, 2008](#))). Evidence on auditor-client employment ties is similarly mixed. Some studies find these ties reduce audit quality ([Menon and Williams, 2004](#); [Lennox, 2005](#)), while others find no negative effect ([Naiker and Sharma, 2009](#)) or positive investor reactions ([Geiger, Lennox, and North, 2008](#)). Interestingly, [Ahn, Bogdani, Hoitash, and Hoitash \(2025\)](#) find that non-executive audit firm alumni are linked to better audit quality. Our finding that SOX hindered junior accountants' transitions to client firms, despite them not being the regulation's intended targets, points to "collateral damage" to their careers and, perhaps by extension, client audit quality. Overall, the literature casts doubt on whether SOX Sections 201 and 206 could meaningfully improve auditor independence. We contribute to this literature by documenting a novel cost of these provisions.

We note that the global reach of the Big Four and the influence of SOX on similar auditor in-

⁶For example, [Lennox, Qi, and Wu \(2025\)](#) find that greater audit partner ownership in non-audit businesses reduces audit quality in China. For a comprehensive literature review, see [DeFond and Zhang \(2014\)](#).

dependence rules worldwide suggest that our findings likely extend beyond the U.S., consistent with anecdotal evidence of declining accounting enrollments internationally. Exploring this pressing issue further, both within and outside the U.S., is a promising direction for future research.

2. Institutional Background and Conceptual Underpinnings

In this section, we provide relevant institutional background on SOX, summarize insights from interviews with current and former partners at the Big Four accounting firms, and outline our key empirical predictions.

2.1. *Sarbanes Oxley Act of 2002*

In response to high-profile accounting scandals at the turn of the century, including Enron and WorldCom, the Sarbanes-Oxley Act (SOX) was enacted on July 30, 2002, to enhance auditor independence, promote corporate accountability, and restore confidence in the U.S. financial reporting system.⁷ Section 201 of SOX aimed to strengthen auditor independence by limiting the potential influence of consulting services on client audits. It explicitly prohibited auditors from providing a broad range of non-audit services to their audit clients, including consulting services and those related to internal accounting functions.^{8,9} The SEC summarized these restrictions under three guiding principles: (1) auditors must not assume management functions, (2) auditors must not audit their own work, and (3) auditors must not serve as advocates for their clients. SOX required all audit and non-audit services to be pre-approved by the client's audit committee.

Section 206 sought to reinforce auditor independence by addressing conflicts of interest

⁷<https://www.congress.gov/107/plaws/publ204/PLAW-107publ204.pdf>

⁸SOX, Section 201, subsection (g), lists the following prohibited non-audit services: “(1) bookkeeping or other services related to the accounting records or financial statements of the audit client; (2) financial information systems design and implementation; (3) appraisal or valuation services, fairness opinions, or contribution-in-kind reports; (4) actuarial services; (5) internal audit outsourcing services; (6) management functions or human resources; (7) broker or dealer, investment adviser, or investment banking services; (8) legal services and expert services unrelated to the audit; (9) any other service that the Board determines, by regulation, is impermissible.”

⁹Lisic, Myers, Pawlewicz, and Seidel (2019) note that the AICPA Code of Professional Conduct (Rule 101-3: Non-attest services) imposed similar restrictions on providing consulting services to private audit clients, akin to SOX's requirements for public clients. These requirements became effective in December 2003.

arising from affiliations between auditors and their clients. It established a one-year cooling-off period, prohibiting audit firms from auditing a company if a key employee of the client, such as the CEO, CFO, board member, or any senior officer responsible for financial oversight (i.e., in a “financial reporting oversight role”), had been part of the audit engagement team within the past year. This restriction applied to all audit team members, not just audit partners. The SEC clarified the rule, stating that it aims to “. . . prohibit an accounting firm from auditing an issuer’s financial statements if certain members of management of that issuer had been members of the accounting firm’s audit engagement team within the one-year period preceding the commencement of audit procedures.”¹⁰

2.2. *Insights from interviews with partners at the Big Four accounting firms*

We interviewed several current and former partners at the Big Four accounting firms. In this section, we summarize key institutional insights gathered from these discussions.

2.2.1. *Before SOX*

Before the enactment of SOX, large public accounting firms viewed themselves as a single “team” providing multiple services to clients, including audit, consulting, and tax. The business was largely built on developing and maintaining client relationships. For example, accounting firms commonly held client service meetings where professionals from all functions collaborated to plan how to address client needs across different areas. The audit and consulting functions were particularly complementary. Auditors, by design, frequently interacted with a client’s top management and board. These discussions extended beyond the audit itself, as clients often saw auditors as business advisors and sought guidance on broader business issues. Because these interactions went beyond financial reporting, accounting firms saw them as opportunities not only

¹⁰To illustrate, the SEC provided the following example: “If audit engagement person B provided audit, review, or attest services for Issuer A at any time during the 2003 engagement period (March 16, 2003 — April 5, 2004), and he or she begins employment with Issuer A in a financial reporting oversight role prior to March 11, 2005, the accounting firm would be deemed to be not independent with respect to Issuer A.”

to enhance audit quality through a deeper understanding of the client's business but also to secure lucrative consulting engagements. It was common for audit partners to bring along consulting partners to meetings with client leadership to provide additional perspective and to increase the likelihood of generating new consulting opportunities.

Both functions benefited from these practices — the consulting function benefited from lucrative consulting engagements, and the audit function gained a better understanding of the client's business, potentially improving its ability to perform audits, and strengthened client relationships by positioning auditors as strategic advisors. Additionally, securing consulting opportunities beyond its core audit business elevated the audit function's importance within the accounting firm.

These synergies created strong incentives and opportunities for collaboration between audit and consulting functions. They also allowed accountants to be involved in identifying and addressing business problems for clients. For example, an accounting firm might identify the need to implement a new information system at an audit client. If the client hired the firm for the project, accountants and consultants would work together on the implementation, giving accountants valuable experience and exposure beyond the audit. These opportunities also led to valuable networking with both consultants and clients.

The combination of a broad set of valuable experiences, skill development, and professional networks positioned accountants for success in multiple ways. Accounting firms often valued employees with broad exposure, often offering those performing well the flexibility to move into other roles, particularly in consulting. This was also seen as a way to retain top talent within the firm. These experiences, skills, and networks made accountants more valuable not only within their firms but also in the broader labor market. Close collaboration with clients also made transitions to client firms a natural career move. These transitions — whether into consulting or to client organizations — often came with significant pay increases, especially at junior and mid-levels. In our conversations, pay increases of 20 to 25 percent were common, and in some cases, salaries doubled. Some partners we spoke to attributed their career success, including making partner, at least in part to these opportunities to broaden their experience, skill sets, and networks.

2.2.2. *After SOX*

SOX prohibited public accounting firms from providing consulting services to their audit clients. This had several effects on the economics of public accounting business. A key driver of audit-consulting collaboration was the opportunity to cross-sell consulting services to audit clients. With consulting engagements off-limits for audit clients, the consulting function had reduced incentives to collaborate with the audit function. For example, it became far less common for audit partners to bring consulting partners to meetings with audit clients. The two functions continued to interact in the context of non-audit clients, such as to address accounting issues in an M&A consulting engagement, but one of the primary drivers of collaboration, cross-selling, was curtailed. This made the two functions more siloed and significantly reduced cross-functional collaboration.

The inability to offer consulting services to audit clients also reduced opportunities for accounting firms to identify and address broader business problems, as they could no longer address those through their consulting function to the same extent. While some consulting services not explicitly prohibited by SOX were allowed with audit committee approval, such engagements became less common. As a result, clients no longer viewed their auditors as business advisors to the same extent as before SOX.

SOX also significantly changed the extent and type of services clients purchased from their audit firms. Before SOX, clients seeking “one-stop” services often engaged the same firm for end-to-end support, such as both due diligence and integration in a large acquisition. After SOX, these clients were less inclined to hire their audit firm, knowing it would be allowed to offer only part of the services needed. For example, an audit firm could perform due diligence but not integration for an audit client under SOX. As a result, even for services allowed under SOX, the range of non-audit work purchased by audit clients narrowed considerably.

Accounting firms and their audit clients became highly sensitive to the risk of auditor-client separation due to independence violations under SOX. Under Section 206, a client would lose its audit firm if it hired an employee of the audit firm who audited it in the last twelve months (i.e.,

the “cooling-off period”) into a “financial reporting oversight role”. Because this outcome was costly for both accounting firms and their clients, both took steps to avoid it. Accounting firms and clients closely monitored audit personnel moving to client organizations, regardless of whether the move fell within the cooling-off period. Accounting firms required employees to disclose if they were applying for a position with an audit client and tracked such movements carefully. They also asked clients to inform them if someone from the audit firm applied for a position, and some asked clients about such movements at least quarterly. Some clients, especially in the early years following SOX, imposed broad freezes on hiring from their audit firm. This cautious approach often extended beyond financial oversight roles to any position that could potentially be classified as such, to avoid unintentional violations. As a result, both audit firms and clients became cautious about all transitions from the audit firm to the client, not only those explicitly covered by the rule.

2.3. Key predictions

The insights from our interviews with current and former Big Four partners are consistent with the notion that SOX fundamentally changed the economics of public accounting and, in turn, reshaped how accounting firms and their professionals operated.

We argue that these structural changes brought on by SOX significantly limited accountants’ ability to develop human capital on the job, a key driver of human capital formation (Becker, 1962). By prohibiting accounting firms from providing consulting services to audit clients, SOX narrowed the set of business opportunities that would originate through the audit function and actively involve accountants. In particular, SOX diminished collaboration between audit and consulting functions, reduced accountants’ involvement in addressing clients’ broader business challenges, and limited networking opportunities with consultants and clients. As a result, accountants had fewer chances to gain broad experience, build skills, and expand professional networks. These reduced opportunities for accountants to invest in their human capital on the job made the accounting profession less attractive, especially to high-quality recruits with better alternative options.

We make three predictions: (1) SOX reduced accountants’ career opportunities; (2) as a

result, it discouraged higher-quality students from choosing accounting majors; and (3) to speak more directly to the underlying mechanism, we predict that reduced career opportunities for university accounting alumni discourage students from selecting accounting majors at their alma maters. To test the first prediction, we examine whether, after SOX, accountants became less likely to move into consulting roles, whether they were less likely to transition to client firms, and whether their wages declined. To test the second, we assess whether the quality of students choosing accounting majors declined after SOX. To test the third, we link the career paths of university alumni in public accounting to subsequent accounting enrollments at their alma maters, based on the idea that alumni careers are key observable and salient signals that can inform and shape students' perceptions of the accounting profession. Specifically, we test whether lower transition rates of university accounting alumni from public accounting to consulting roles are associated with declines in both the quantity and quality of students choosing accounting majors at their alma maters.

3. Data and descriptive statistics

We obtain résumé data from RevelioLabs, which collects and standardizes profiles from LinkedIn — the world's largest online professional networking platform, with an estimated user base exceeding 1 billion. LinkedIn profiles function as online résumés, providing information on, among other things, employment history (e.g., employer name, job title, and start and end dates) and education history, including universities attended. RevelioLabs also provides estimated salary for each position.¹¹ We obtain a list of U.S. accounting firms from Accounting Today, a trade magazine that publishes annual rankings of the largest accounting firms in the country. To ensure

¹¹RevelioLabs notes, "Our salary model predicts the salary for each position using position-specific information such as job title, seniority level, company, and location, as well as user-specific information such as the number of years an individual has worked at the company. The year of observation is also taken into account. The model is trained on salaries found in publicly-available visa application data, self-reported data, and job postings." They also note that, from 2016 onward, salary predictions are generated using a consistent model that estimates position-level wages based on parameters such as firm, occupation, seniority, location, and year. For years prior to 2016 (our sample period ends in 2012), due to limited training data, salaries are imputed by adjusting the 2016 estimates backward using occupation-year salary growth rates from Census Population Survey (CPS) earnings data. While we do not observe actual wages for each accountant and consultant in our sample (which would be ideal), the data provide estimated salaries for each position using the same model during our sample period (1997-2012), enabling comparisons between accountants and consultants within the same firm, in the same MSA, and in the same year.

the feasibility of handling large-scale résumé data, we focus on firms consistently ranked among the top eight accounting firms by revenue during the years surrounding SOX (the “Big Eight”).¹² Finally, we identify individuals working at accounting firms by matching employer names in the résumé data with the list of accounting firms. Among these individuals, we identify those in accounting roles and those in consulting roles based on job titles.¹³ We obtain the list of public clients of the accounting firms from Audit Analytics and supplement it with data from Compustat for the years before 2000.¹⁴

For the accounting enrollment analysis, we obtain university data from the Department of Education’s Integrated Postsecondary Education Data System (IPEDS). We obtain undergraduate accounting program rankings from the Best Undergraduate Accounting Programs rankings of the U.S. News & World Report’s Best Colleges rankings. Our data on student quality comes from the CIRP Freshman Survey of the Higher Education Research Institute (HERI) that asks incoming college students, among other things, their SAT scores, intended college majors, parental income, and whether they are a first-generation college student (see, e.g., Madsen, 2015; Carnes, Christensen, and Madsen, 2023 for use of this data in accounting research).¹⁵

Due to privacy restrictions, HERI does not allow the identification of universities by name,

¹²We reviewed the Accounting Today rankings for 2000–2004 (five years around SOX) and retained firms that appeared in the top 10 at least twice, yielding a total of 12 firms. We then excluded four — Andersen, which collapsed, and H&R Block Tax Services Inc., American Express Tax & Business Services, and Jackson Hewitt Tax Inc., which are primarily tax firms — resulting in a final list of the Big Eight: Deloitte, EY, PwC, KPMG, RSM, Grant Thornton, BDO, and CBIZ.

¹³We identify accounting roles at Big Eight firms if the job title contains any of the following keywords: “accounting,” “accountant,” “CPA,” “audit,” “assurance,” “controller,” or “tax.” We identify consulting roles at Big Eight firms if the job title contains any of the following keywords: “consulting,” “consultant,” “advisory,” or “financial advisor.” Additionally, we classify roles as consulting if the employer’s name indicates the position is within the consulting arm of a Big Eight firm, using identifiers such as “consulting,” “advisory,” “Monitor Deloitte,” “Parthenon EY,” and “Strategy&” (a consulting arm of PwC). To identify if the new position after a position change is a consulting role (e.g., the variable *I(Work in Consulting)* in Tables 2 and 3) — we apply two procedures depending on whether the new position is at a Big Eight firm. If the new position is at a Big Eight firm, we use our list of job title and consulting arm keywords to identify consulting roles. If the new position is not at a Big Eight firm, we utilize ChatGPT and ask it to classify the role as consulting if either of the following holds: (1) the job title contains any of our consulting job title keywords; or (2) the employer is identified as a consulting firm based on employer names and websites. To validate ChatGPT’s classifications for new positions not in a Big Eight firm, we randomly select 200 job titles and manually check the accuracy of ChatGPT’s classifications. Out of 200 random job titles, 33 were consulting and 167 were non-consulting roles. Of the 167 non-consulting roles, ChatGPT classified 3 as consulting (Type I error = 1.8%). Of the 33 consulting roles, ChatGPT classified 2 as non-consulting (Type II error = 6.1%).

¹⁴We backfill non-audit clients prior to 2000 using data on non-audit clients as of 2000 from Audit Analytics.

¹⁵<https://heri.ucla.edu/cirp-freshman-survey/>

preventing us from merging this data with other datasets at the university level (e.g., the IPEDS university data, as well as universities attended by individuals in our résumé data). Consequently, for the analysis where we link alumni careers to subsequent quality of enrollment at their alma maters, we aggregate this data at the state-level based on the universities' locations.¹⁶

Because our setting and key predictions are based on SOX affecting public accountants' career options, and we use accountants' transitions into consulting roles as one of the primary tests, our sample for accountants' careers consists of accountants and consultants working at accounting firms who change positions. The final sample includes around 130,000 position changes by accountants and consultants at the eight largest public accounting firms from 1997 (five years before SOX) to 2012 (ten years after SOX). We use a longer post-period (ten years rather than five) to capture long-run effects but also confirm robustness to a shorter five-year post-period (untabulated). We exclude the year of SOX enactment, 2002, as it was implemented mid-year, complicating the interpretation of effects during event year zero.

Table 1 reports descriptive statistics. Panel A focuses on the individual-level sample for career analysis around SOX. Before changing positions, 59.4% of the individuals in our sample work in accounting roles, and the remaining work in consulting roles at the Big Eight public accounting firms. 26.7% of the individuals are in consulting roles after changing positions. 4.8% of the individuals join a client of their accounting firm. The average wage of accountants and consultants at the public accounting firms in our sample is \$77,083. Panel B presents descriptive statistics for the university-level sample used in the enrollment quality analysis around SOX. Panel C reports descriptive statistics for the university-level sample used to connect university alumni careers to accounting enrollments at their alma maters. Finally, Panel D presents the state-level sample used to connect a state's university alumni careers to quality of accounting enrollments at their alma maters in the same state.

¹⁶IPEDS university-level data does not include measures of student quality by major.

4. SOX and accountants' career paths

4.1. SOX and accountants transitioning to consulting roles

4.1.1. Main effect

To examine the effect of SOX on public accountant's ability to switch to consulting roles, we employ the following specification:

$$I(\text{Work in Consulting})_{ift} = \beta_1 \text{Accountant}_{ift} + \beta_2 \text{Accountant}_{ift} \times \text{SOX}_t + \alpha_{ft} + \varepsilon \quad (1)$$

The sample consists of individuals who worked at a Big Eight public accounting firm in either an accounting or consulting role prior to changing positions. i denotes the individual, f denotes the public accounting firm before the position change, l denotes the metropolitan statistical area (MSA) where the last position was located, and t denotes the year the last position ended. The dependent variable, $I(\text{Work in Consulting})$, is an indicator equal to one if the individual holds a consulting role at any firm after the position change, and zero otherwise. Accountant is an indicator equal to one if the individual held an accounting role at a public accounting firm before the position change (treatment group), and zero if the individual held a consulting role at a public accounting firm before the position change (benchmark group).¹⁷ SOX is an indicator equal to one for years following the enactment of the Sarbanes-Oxley Act in 2002, and zero otherwise. We estimate less stringent specifications as well, but in our most stringent specification, we include firm \times MSA \times year fixed effects (α_{ft}) to account for job prospects for individuals working in the same accounting

¹⁷While consultants at the same accounting firm serve as a useful benchmark for accountants, this comparison has limitations. The pre-SOX environment was beneficial for both audit and consulting functions, as it provided the consulting function with access to client leadership and opportunities to offer consulting services to audit clients. To the extent that such opportunities also facilitated on-the-job training for consultants, reduced opportunities to provide consulting services to audit clients after SOX may have affected consultants' human capital development. Although consulting functions of accounting firms could still offer many services to non-audit clients post-SOX, they no longer had the same level of access to top management as they did pre-SOX through auditors who regularly interacted with top executives. This leaves open the possibility that consultants also experienced reduced opportunities for human capital development after SOX, which would bias against finding post-SOX effects for accountants when using consultants as a benchmark.

firm, in the same location, at the same time. We cluster standard errors by firm \times MSA. This research design essentially estimates the change in the probability of finding consulting roles after SOX for accountants relative to consultants who worked for the same public accounting firm, in the same MSA, and at the same time, before the position change. Appendix A defines all the variables.

Table 2, panel A, presents the results. Estimates are consistent across columns, so we focus on the specification in column (4) with our most stringent firm \times MSA \times year fixed effects. The coefficient on *Accountant* indicates that, before SOX, accountants at public accounting firms were 29.3 percentage points less likely to secure a consulting role than consultants at the same firm, MSA, and time. After SOX, however, accountants became an additional 5.4 percentage points less likely to do so. This effect is economically significant — representing a 18.4% decline relative to the pre-SOX accountant-consultant gap and a 20.2% reduction relative to the sample mean incidence of securing a consulting role.

These results continue to hold in column (5) when we include lagged controls (and their interactions with *Accountant*) for other factors that may influence the public accounting profession, including the 150-hour rule (Barrios, 2022; Sutherland et al., 2024), exposure to SOX 404 internal control testing (if it makes accountants' work more compliance-driven or if time allocated to internal control testing crowds out time devoted to tasks relatively more conducive to human capital development),¹⁸ the restrictiveness of GAAP standards (Le, 2024), and technological investments (Friedman et al., 2024) (all defined in Appendix A).¹⁹ Because many of these controls are at the

¹⁸We acknowledge that, in addition to the SOX Sections 201 and 206 that we focus on, SOX Section 404 may also have affected accountants' human capital development if the post-SOX increase in time allocated to auditing internal controls (which may be more tedious and compliance-oriented) crowded out time devoted to tasks that are more conducive to building human capital. Our control variable for exposure to SOX 404 internal control testing (404-Exposure) relies on the issuance of adverse internal control weakness opinions and does not fully capture all audit hours devoted to internal control auditing post-SOX. While such potential crowding out is consistent with our overall argument that SOX reduced opportunities for accountants' human capital development, any such effects are likely to be more indirect and of secondary importance relative to the effects of Sections 201 and 206, which directly affected accountants' career opportunities and, in turn, human capital development and are the primary focus of our analysis.

¹⁹We control for accountants' exposure to technology by measuring technological investments made by clients of accounting firms. Changes in client technological investments may collectively proxy for changes in clients' demand for accountants, the skill sets auditors need to perform audits, and the technological investments accounting firms make to keep pace with client needs as they adopt new technologies. We measure exposure to technology (Technological Investment) for accountants (or consultants) as the average technological investment of the audit (or non-audit) clients of the public accounting firm where the individual works, weighted by audit (or non-audit) fees. The underlying technology investment data are at the industry-year level from the Bureau of Economic Analysis. We do not include

state level, we use less stringent firm and year fixed effects to preserve variation when including them and their interactions with *Accountant*.

Parallel trends: Our research design assumes that, absent SOX, accountants and consultants would have followed similar trends in their likelihood of securing consulting roles. While this assumption is untestable, we provide support for it by plotting the evolution of the difference in accountants and consultants around SOX in Figure 1. To do so, we modify Eq. (1) by replacing the *SOX* indicator with individual indicators for each event year, interacting these event year indicators with the term *Accountant*, and plotting the coefficients on the *Accountant* \times event year interaction terms. Each estimate in this plot is relative to the omitted event year -1 and represents the difference in the likelihood of finding a consulting role between accountants and consultants in a given event year, relative to the corresponding difference in event year -1 .

Estimates in Figure 1 show no evidence of pre-trends: accountants and consultants exhibit similar trends prior to and leading up to SOX. However, following SOX, there is a sharp decline in the probability of accountants securing consulting roles relative to their consulting colleagues, which continues for the remaining years.

Overall, these results suggest that SOX reduced public accountants' ability to transition to consulting roles, and support our prediction that SOX reduced public accountants' opportunities to develop human capital on the job.

4.1.2. *Junior vs. senior accountants' move to consulting roles*

We also examine cross-sectional variation in the effects on accountants transitioning into consulting roles. An important reason employees change roles and jobs is to improve matches with positions and employers, particularly early in their careers when preferences and skills are still developing, and experience in new roles helps refine that match (Stigler, 1962; Topel and Ward, 1992). Junior accountants are more likely to seek such opportunities, while senior accountants

a control for industry-level technological investment by public accounting firms because our sample covers a single industry (public accounting) with minimal time variation in industry-level technological investment.

are more likely to have settled into suitable roles over time. With fewer opportunities and smaller professional networks to navigate the post-SOX environment, which offered fewer avenues to build human capital and expand professional connections, junior accountants may have been more adversely affected than senior counterparts, who are both less likely to seek new roles and better positioned to leverage established professional networks when they do. This suggests that SOX may have had a greater impact on junior accountants' ability to transition into consulting roles.

In Table 2, panel B, we find evidence consistent with this conjecture. Using Revelio Labs' seniority scores (ranging from 1 to 7), we classify individuals with a score of 3 or less as junior and the rest as senior. We modify Eq. (1) to separately estimate the effect of SOX on transitions to consulting roles for junior and senior employees by interacting $Accountant \times SOX$ with *Junior* and *Senior*. We also include the main terms and their interactions, but only show coefficients of interest for brevity. The estimates are consistent across all columns. Column (4) shows that after SOX, senior accountants were 2.6 percentage points less likely to move into consulting roles relative to their consulting colleagues in the same firm, time, and MSA. For junior accountants, however, this decline was 7.3 percentage points. The difference is both statistically and economically significant. This pattern is consistent in other columns with different fixed effects and controls. These results suggest that SOX especially reduced junior accountants' ability to move into consulting roles.

4.1.3. *SOX and divestiture of consulting practice*

Before SOX's enactment in 2002, Ernst & Young, KPMG, and PwC divested their consulting practices in 2000, 2001, and 2002, respectively, largely in response to SEC pressure over auditor independence — a concern that also contributed to SOX's mandated separation of auditing and consulting services for audit clients (Dey et al., 2012). Some feared that accounting firms might be forced to sell their consulting practices at a discount if regulators imposed a separation. After the five-year non-compete periods expired, all three firms began rebuilding their consulting practices. Deloitte, however, retained its consulting business throughout. The pre-SOX divestitures, driven by regulatory pressure, may have accelerated accountants' reduced transitions into consulting.

However, our mechanism can operate independently of divestiture. In Table 3, we re-estimate Table 2, panel A, restricting the sample to Deloitte, where no divestiture occurred. We continue to find a significant post-SOX decline in accountants' transitions to consulting. These career effects persist even in the extended sample, well after consulting practices were rebuilt (see Online Appendix Figure OA.1).

4.2. *SOX and accountants joining a client firm*

4.2.1. *Main effect*

To examine the effect of SOX on public accountant's ability to join a client firm, we employ the following specification:

$$I(\text{Join Client})_{iftt} = \beta_1 \text{Accountant}_{iftt} + \beta_2 \text{Accountant}_{iftt} \times \text{SOX}_t + \alpha_{ftt} + \varepsilon \quad (2)$$

Eq. (2) is identical to Eq. (1), except that the dependent variable, $I(\text{Join Client})$, equals one if the accountant (consultant) joins an audit (non-audit) client of their accounting firm following the position change, and zero otherwise. Due to data limitations, we observe the accounting firm's clients but not the specific audit engagements of individual auditors. Accordingly, we proxy for accountants' (consultants') audit (consulting) clients using their public accounting employer's public audit (non-audit) clients prior to the position change. All other variables and fixed effects are the same as in Eq. (1). This specification estimates the post-SOX change in the probability that accountants join an audit client of their accounting firm, relative to consultants joining a non-audit client of their accounting firm, comparing individuals who worked at the same firm, in the same MSA, and at the same time prior to the position change.

Table 4, panel A, presents the results. The coefficient estimate for *Accountant* in column (4), which includes firm \times MSA \times year fixed effects, suggests that, prior to SOX, accountants at public accounting firms were 4.2 percentage points more likely to secure a job at one of their firm's audit clients, relative to consultants joining a consulting client. After SOX, however, this

tendency declines by 3 percentage points for accountants relative to consultants. This represents an economically significant effect — a roughly 62.5% reduction compared to the sample mean incidence of joining a client firm. These results continue to hold in column (5) when we include lagged controls (and their interactions with *Accountant*) for the 150-hour rule, exposure to SOX 404 internal control testing, the restrictiveness of GAAP standards, and technological investments, with firm and year fixed effects.

Figure 2 shows the evolution of this effect around SOX. We modify Eq. (2) by replacing the *SOX* indicator with event year indicators, interacted with *Accountant*, and plot the resulting coefficients. Each estimate, relative to event year -1 , captures the difference in the likelihood of joining a client firm between accountants and consultants in a given year. We find no evidence of differential pre-trends, but a sharp post-SOX decline in accountants' likelihood of joining client firms relative to consultants. These results further support the view that SOX reduced accountants' ability to move to their firms' clients.²⁰

Two non-mutually exclusive channels may explain this finding. First, SOX imposes a cooling-off period that restricts auditors from joining a client they audited in the prior twelve months. Violating this rule renders the accounting firm incapable of continuing its engagement with the client. This creates strong incentives for both the accounting firm and its audit client to avoid such moves. Second, SOX may have reduced accountants' opportunities to gain broad experience, build skills, and develop networks, thereby limiting their human capital development and making them less attractive hires for clients (and non-clients). This broader channel reflects a shift in the opportunities for on-the-job human capital development. Since we observe audit clients of the accounting firm but not the specific audit engagements of individual audit personnel, we cannot determine whether accountants were also less likely to move to clients they did not personally audit. As a result, it remains unclear whether the observed decline in client moves is driven by the first channel, the second, or both.

In the next two Sections, 4.2.2 and 4.2.3, we take steps to disentangle the two mechanisms.

²⁰These results hold when extending the sample to recent years (see Online Appendix Figure OA.2).

4.2.2. *Junior vs. senior accountants' move to client firms*

First, we examine the effect of SOX on accountants' moves to their firms' audit clients, separately for senior and junior accountants. On one hand, as with consulting roles, junior accountants may be more responsive to client opportunities as they refine matches with roles and employers. Reduced opportunities to develop human capital early in their careers could therefore impact them more. On the other hand, as noted in Section 2.1, the cooling-off period applies only to "financial reporting oversight roles," which are more likely to be held by senior employees. Senior accountants may thus be more directly affected by this restriction.

Panel B of Table 4 reports the results. We interact *Accountant* \times *SOX* with indicators for *Junior* and *Senior*. We also include the main terms and their interactions, but only show the coefficients of interest for brevity. The estimates are consistent across specifications. Column (4) shows that, post-SOX, junior accountants were 2.5 percentage points less likely to move to client firms relative to their consulting peers at the same firm, time, and MSA. The corresponding decline for senior accountants was 3.9 percentage points. This difference is both statistically and economically significant and remains robust to alternative specifications with varying fixed effects and controls.

These results support the presence of both the direct and broader human capital channels. The stronger decline for senior accountants aligns with the direct effect of the cooling-off period. The smaller, but still significant, decline for junior accountants is consistent with the broader human capital channel, as juniors are less likely to hold financial oversight roles and thus less subject to the cooling-off restriction.

4.2.3. *Accountants joining clients of other audit firms*

We extend the analysis of the broader human capital channel by examining accountants' moves to clients of other Big Eight accounting firms (e.g., a Deloitte accountant moving to a PwC audit client), rather than to clients of their own firm, some of which may be subject to cooling-off period restrictions. Because such moves are not subject to the SOX cooling-off period, a post-SOX

decline in these transitions would provide further evidence for the broader human capital channel.

Table 5, panel A, presents the results. We replicate Table 4, replacing $I(\text{Join Client})$ with $I(\text{Join Client of Other Public Acc Firms})$, an indicator equal to one if the accountant (consultant) joins a firm that was an audit (non-audit) client, in the prior three years, of a Big Eight accounting firm other than their own, and zero otherwise. The estimates indicate a 4.8 percentage point decline for accountants, relative to consultants, in joining clients of other accounting firms.

In panel B, we further separate this effect by seniority. Similar to the larger post-SOX decline observed for junior accountants in transitions to consulting roles, we find that both junior and senior accountants are affected, but the decline in joining audit clients of other accounting firms is greater for junior accountants.

Together, these results support the view that reduced opportunities for on-the-job human capital development after SOX made accountants less attractive hires to both clients of their audit firm and clients of other audit firms.

4.3. *SOX and accountants' wages*

Our evidence so far suggests that SOX reduced public accountants' opportunities to invest in human capital on the job, as reflected in fewer transitions to consulting roles and fewer moves to client and non-client firms. We now turn to the impact of SOX on accountants' wages.

Changing economic forces after SOX could push accountants' wages in either direction. First, SOX may reduce accountants' earning potential by limiting opportunities to move into consulting or client-side roles, which can often be well-compensated. These reduced opportunities may also lead to a selection effect, whereby the profession attracts fewer high-quality individuals, and accountants' wages might decline to reflect lower average quality or productivity. These effects could take some time to materialize. Second, the supply of high-quality candidates may fall after SOX. If demand remains unchanged, this reduced supply could put upward pressure on wages, at least in the short term, while the labor market adjusts. This would imply that SOX could increase accountants' wages, at least in the short run.

Third, SOX may reduce accounting firms' demand for the type of accountants who could exploit the broader pre-SOX career opportunities — those who, beyond audit work, could bring in consulting business, collaborate with consulting teams, and act as strategic advisers to clients — skills likely reflected in pre-SOX wages. In this view, SOX may have led accounting firms to place less weight on accountants having these broader skills, reducing their demand for high-quality candidates for accounting roles and thereby lowering wages. This demand-side force could potentially trigger an immediate wage effect after SOX.

Taken together, these economic forces could exert opposing pressures on wages, making the net effect of SOX on wages an empirical question.

We compare wages for individuals who start accounting versus consulting positions at the same public accounting firm, in the same MSA, and in the same year. We estimate the following specification:

$$\text{Log}(\text{Public Acc Firm Wage})_{ift} = \beta_1 \text{Accountant}_{ift} + \beta_2 \text{Accountant}_{ift} \times \text{SOX}_t + \alpha_{ft} + \varepsilon \quad (3)$$

$\text{Log}(\text{Public Acc Firm Wage})$ is the natural logarithm of the individual's wage paid by public accounting firms. Accountant is an indicator equal to one (zero) if the individual is an accountant (consultant). SOX is defined as in Eq. (1). We include public accounting firm \times MSA \times year fixed effects. Table 6 reports the results. The coefficient on Accountant in column (4) indicates that, prior to SOX, accountants in public accounting earned 17.6% less than consultants at the same accounting firm, in the same MSA and year. After SOX, this gap widened by an additional 4.4 percentage points. Figure 3 shows that the wage gap between accountants and consultants in the same accounting firm-MSA-year began to widen within two years after SOX.²¹

Overall, the evidence suggests that accountants' wages in public accounting decline after SOX.

²¹The widening gap in public accounting wages persists in more recent years (see Online Appendix Figure OA.3).

5. SOX and the quality of accounting enrollment at universities

5.1. Quality of accounting enrollment at universities

After documenting the effects of SOX on accountants' careers, we now turn to our second broad prediction: SOX discouraged high-quality students from choosing accounting majors. This may occur if reduced opportunities to invest in human capital on the job made the profession less attractive to top talent, or if public accounting firms reduced demand for accountants with the ability and skills to pursue broader pre-SOX opportunities.²² To test this prediction, we compare the quality of students enrolling in accounting versus other business majors at the same university, before and after SOX. Using a university-business major-year panel from 1997 to 2010 based on the HERI freshmen survey, we estimate the following difference-in-differences specification:

$$\begin{aligned} \% \text{ High Quality Enrollment}_{umt} = & \beta_1 \text{ Accounting Major}_{umt} \\ & + \beta_2 \text{ Accounting Major}_{umt} \times \text{SOX}_t + \alpha_{ut} + \varepsilon \end{aligned} \quad (4)$$

u denotes the university, m denotes the business major, and t denotes the year. The dependent variable, *% High Quality Enrollment*, is the proportion of high-quality students (SAT scores of 1200 or above) among those who declare the intention to pursue a given business major. *Accounting Major* is an indicator that equals one for accounting majors, and zero otherwise.²³ *SOX* is an

²²As noted before, changes in public accounting can influence the overall appeal of the accounting profession because public accounting is a common career choice for many accounting majors entering the labor market. To estimate the prevalence of accounting majors joining public accounting firms upon graduation, we hand collect placement data for schools with top-30 accounting programs according to the U.S. News rankings. Among these programs, we find public accounting placement information (not necessarily from the same year) for 7 bachelor's and 6 master's programs. Based on available data from recent years, approximately 49.5% (67%) of accounting undergraduate (master's) students took their first job after graduation at a Big 4 firm, and 58% (83%) at a public accounting firm (which may or may not be a Big 4 firm). We complement these statistics with data from AICPA Trends Reports. The 2001 AICPA Trends Report surveys a broader set of schools with accounting programs and reports that, among new accounting bachelor's and master's degree recipients in the 1999-2000 academic year, 34% and 62% took positions in public accounting firms, respectively. The corresponding statistics from the 2008 report are 34% and 70%. Note that the above statistics may understate the percentage of graduates who desire a job in public accounting because they only include those who are able to secure such a position. Overall, the evidence is consistent with the notion that public accounting is a natural place for accounting majors to begin their careers.

²³We use SAT scores because they are standardized, improving comparability across students, and have been shown to significantly predict and outperform other measures in forecasting academic success in college (Friedman, Sacerdote, Staiger, and Tine, 2025) and early career outcomes such as admission to top graduate programs or employment at

indicator that equals one for years following the enactment of SOX in 2002, and zero otherwise. We estimate less stringent specifications as well, but in our most stringent specification, we include α_{ut} , university \times year fixed effects, to account for factors that may affect a given university in a given year. As before, we drop event-year zero as SOX was enacted mid-year. We cluster standard errors by state. This research design essentially estimates how the fraction of high-quality students among those choosing accounting majors, relative to other business majors at the same university in the same year, changes after SOX.

Table 7, panel A, presents the results. The coefficient estimate for *Accounting Major* in column (2), which includes university \times year fixed effects, suggests that before SOX, accounting majors enrolled a smaller fraction of high-quality students relative to high quality enrollment in other business majors at the same university in the same year. However, after SOX, this student quality gap widened by 4.7 percentage points, denoting a 26.1% drop in student quality of accounting majors relative to the sample mean fraction of high-quality enrollments in business majors. These results continue to hold in column (3) when we include controls (and their interactions with *Accounting Major*) for the 150-hour rule, exposure to SOX 404 internal control testing, the restrictiveness of GAAP standards, and technological investments, with university and year fixed effects.

Figure 4 shows the event-time version of this result. We replace the *SOX* indicator in Eq. (4) with event-year indicators, interact them with *Accounting Major*, and plot the resulting coefficients. Each estimate reflects the student quality gap between accounting and other business majors in a given year, relative to the gap in event year -1 . We find no clear evidence of differential pre-trends, but observe a decline in student quality in accounting relative to other business majors following SOX. These results support the view that SOX deterred high-quality students from majoring in accounting.²⁴

prestigious firms (Chetty, Deming, and Friedman, 2023). High school GPAs, by contrast, have lower predictive power and can vary across schools even among students with similar academic ability.

²⁴SOX may have deterred not only high-quality students but also students across the quality spectrum, potentially reducing the overall number of students declaring an accounting major. At the same time, SOX created substantial new audit business for public accounting firms, such as internal control testing and expanded audit scopes, which may have increased demand for accountants regardless of quality. For example, Friedman et al. (2024) document that the aggregate number of accounting graduates began rising around the time of SOX before declining around 2015. This initial post-SOX increase in accounting majors, perhaps driven by the increased demand for audit services resulting

5.2. *Students learning about changing opportunities*

We explore a potential mechanism through which students may learn about and respond to changing career opportunities after SOX. Students considering a college major may rely on various sources of information, including parents, guardians, friends and their parents, and relatives. Ideally, we would observe individuals' information sources and compare the decisions of those more versus less likely to be informed about careers in accounting. While such sources are not directly observable, we argue more broadly that students with greater access to economic and informational resources are better positioned to choose majors based on career prospects. More specifically, for students whose parents work in accounting or consulting, or who are educators training accountants or consultants (such as business school faculty), parents are likely to be an important source of information about career opportunities in accounting. However, the survey data we use do not allow us to precisely identify such individuals.²⁵ As a relevant but noisy alternative proxy, we use students who report their parents' occupation as "Business." This group, broader than our ideal group, may capture students whose parents are employed in business occupations and therefore more likely to be aware of career opportunities in professional business services such as accounting or consulting. We argue that such students may be more responsive to the narrowing opportunities in accounting after SOX.

To test this idea, we identify students with access to greater economic and informational resources as those with above-median parental income and those who are not first-generation college students, and we identify students with parents in business occupations. Table 7, Panel B, presents the results. We convert the university–business major–year panel used in Panel A into a university–business major–year–informed student panel, where the informed student indicator equals one for high parental income in columns (1)–(3), for students who are not first-generation

from SOX, could obscure an underlying quality-based decline in the number of students entering the profession. We acknowledge that aggregate enrollments are also informative, but our focus is on how SOX reduced the number of high-quality candidates in the accounting profession by narrowing opportunities to gain broad experiences and skills, and in turn, to develop human capital on the job.

²⁵We do observe a relevant parental occupation category, "accountant," but the number of observations is small, and we do not observe the category "business school faculty."

college students in columns (4)-(6), and for students with parents in business occupations in columns (7)-(9). Columns (1)-(3) interact *Accounting Major* \times *SOX* with indicators for above- and below-median parental income (*High Parental Income* and *Low Parental Income*). Columns (4)-(6) interact *Accounting Major* \times *SOX* with indicators for whether a student is a first-generation college student versus others (*Not First-Generation College Student* and *First-Generation College Student*). Columns (7)-(9) interact *Accounting Major* \times *SOX* with indicators for students with “Business” as parental occupation versus others (*Parental Occupation-Business* and *Parental Occupation-Others*). All main effects and interaction terms are included.

Across all specifications, we find that the decline in high-quality enrollment in accounting majors, relative to other business majors at the same university and time, is more pronounced among students with greater access to economic and informational resources (high parental income and not first-generation college students) and among those with parents in business occupations.

5.3. *Universities placing students in large accounting firms*

We also examine whether universities more likely to place students in large public accounting firms (which offer both audit and consulting services) are more likely to experience enrollment effects. Students from these universities joining public accounting likely had broader career opportunities before SOX that narrowed afterward. Because university names in the HERI database are anonymous for privacy reasons, we cannot directly identify schools more likely to place students in large public accounting firms. To proxy for such universities, we use admissions selectivity, a variable in the HERI data based on the SAT scores of admitted students, where higher median SAT scores indicate greater selectivity. We assume that, on average, students in accounting programs at more selective universities are more likely to obtain jobs in large public accounting firms than those at less selective universities.

In Table 7, Panel C, we test whether the enrollment quality effect of SOX is stronger at more versus less selective universities by interacting *Accounting Major* \times *SOX* with indicators for high- and low-selectivity universities (*High University Selectivity* and *Low University Selectivity*).

We find a stronger decline at more selective universities in the fraction of high-quality students declaring accounting majors relative to other business majors at the same university and time. The differences are both statistically and economically significant, with estimates suggesting a decline three to four times larger at more selective universities than at less selective ones. This suggests that universities more likely to place students in large public accounting firms experience stronger enrollment quality effect of SOX.

6. University alumni career paths and subsequent accounting enrollments at alma maters

We turn to our third prediction to further examine the mechanism through which narrowing career opportunities post-SOX (Section 4) deterred high-quality students from majoring in accounting (Section 5). Specifically, we link the careers of university accounting alumni to subsequent accounting enrollments at their alma maters. Alumni careers can serve as salient and observable signals that broadly shape students' perceptions of the accounting profession.²⁶ We model accounting enrollment as a function of alumni transitions from public accounting to consulting, which we use as a proxy for the breadth of experiences, skills, and networks developed on the job. We begin by estimating the following specification:

$$\begin{aligned} \text{Declare Accounting Major}_{ust+1} = & \beta_1 \text{Pr}(\text{Acc Alumni Transition to Consulting})_{ust} \\ & + \gamma X'_{ust} + \alpha_u + \alpha_t + \varepsilon \end{aligned} \quad (5)$$

The unit of observation is university-year. u denotes the university, s denotes the state where the university is located, and t denotes the year. The sample period covers alumni transition probabilities from 1997 to 2019 (our IPEDS enrollment data ends with the academic year beginning in 2020). The dependent variable has two versions. First, $N(\text{Declare Accounting Major})$ is the number of undergraduates who declare accounting as their major at the university. IPEDS provides

²⁶We do not assume that students must speak directly with alumni. Rather, we posit that alumni careers serve as salient signals that shape students' views of the profession, even in the absence of direct interaction.

university-level data on students graduating with a major in accounting, recorded by year of graduation rather than the year the major is declared. To measure the number of students declaring an accounting major in a given university-year, we assume that in a four-year undergraduate program, students choose their major two years before graduation, reflecting the common U.S. practice of selecting a major in the second or third year.²⁷ Because this outcome is a count variable, we estimate this specification using a Poisson regression. Second, *% Declare Accounting Major* is the number of undergraduates who declare accounting as their major, scaled by the number of undergraduates who declare any business major at the same university. Because this outcome is a continuous variable, we estimate this specification using OLS. *Pr(Acc Alumni Transition to Consulting)* represents the probability of the university's public accounting alumni transitioning to consulting roles. Using our résumé data, we define it as the number of university alumni transitioning from Big Eight public accounting roles to consulting roles during the year, divided by the number of Big Eight public accounting university alumni who change positions that year.²⁸

X is a vector of controls. We control for the university's undergraduate accounting program being ranked in the top 50 of the U.S. News & World Report's Best Undergraduate Accounting Program rankings.²⁹ Additional controls include the 150-hour rule, exposure to SOX 404 internal control testing, the restrictiveness of GAAP standards, and technological investments. Some of these controls drop out in specifications with more stringent fixed effects.

Table 8, panel A, presents the results. The coefficient estimates for *Pr(Acc Alumni Transition to Consulting)* are consistent across columns. Estimates in column (2), which includes state \times year fixed effects, suggest that a decline in the likelihood of a university's public accounting alumni transitioning to consulting roles is associated with a subsequent decrease in the number of students choosing an accounting major at that university. Specifically, a one standard deviation decrease in

²⁷For example, if 1,000 students graduate with an accounting degree from a university in 2014, we assume 1,000 declared the major in 2012. A limitation of this approach is that it excludes students who switched majors or did not graduate, so the measure primarily reflects those who declared accounting major and graduated.

²⁸An individual is classified as a university alumnus if they have earned a bachelor's degree or higher from that institution.

²⁹The U.S. News & World Report rankings subscription does not include access to historical accounting program rankings. Therefore, we use the latest available rankings for 2025, retrieved in December 2024, and assume the composition of the top-50 programs remains relatively stable over the sample period.

the probability of such career transitions is associated with a roughly 4.8% decline in accounting majors at their alma maters (i.e., $(e^{0.220} - 1) \times 0.194$). This relationship holds in column (3), which includes university and year fixed effects. Our inference remains unchanged in columns (4) through (6), where we scale the number of accounting majors by the number of all business majors at the same university.

In addition to enrollment quantity, we also examine how university accounting alumni careers relate to the quality of subsequent accounting enrollments at their alma maters. The idea is that reduced career options in accounting may particularly deter high-quality students, who likely have stronger alternative options, from choosing an accounting major. As noted earlier, this analysis is conducted at the state level because the HERI freshmen survey includes SAT scores and intended college majors but does not report university names, preventing direct links between university alumni careers and enrollment quality at specific institutions. However, since the states in which universities are located are observed, we connect careers of alumni from universities in a given state to the subsequent quality of students choosing accounting majors at universities in that state.

Using state-year data, we estimate the following specification:

$$\begin{aligned} \% \text{ High Quality Enrollment}_{st+1} = & \beta_1 \text{Pr}(\text{Acc Alumni Transition to Consulting})_{st} \\ & + \gamma X'_{st} + \alpha_s + \alpha_t + \varepsilon \end{aligned} \quad (6)$$

s represents the state and t represents the year. The sample period covers alumni transition probabilities for universities within each state from 1997 to 2010 (our HERI survey data ends in 2010). The dependent variable, *% High Quality Enrollment*, is the proportion of high-quality students (SAT scores of 1200 or above) among those who declare the intention to pursue an accounting major at one of the state's universities in that year. *Pr(Acc Alumni Transition to Consulting)* denotes the probability of the state's university public accounting alumni transitioning to consulting roles. We control for the 150-hour rule, exposure to SOX 404 internal control testing, the restrictiveness of GAAP standards, and technological investments.

Table 9 presents the results. Estimates in column (1) suggest that as transitions from public

accounting to consulting decline for alumni of universities in a state, fewer high-quality students subsequently enroll in accounting at their alma maters in the same state. A one-standard-deviation decrease in the probability of a state's university accounting alumni transitioning to consulting is associated with an approximately 2.6 percentage point decline (i.e., 0.317×0.083), or a roughly 7.1% decline relative to the sample mean, in the fraction of high-quality students subsequently enrolling in accounting at their alma maters in the same state. Our inference is unchanged in column (2) when we scale high-quality enrollment in accounting majors with high-quality enrollment in all business majors in the same state.

Overall, these results support the idea that when opportunities to develop human capital on the job decline in public accounting, fewer (high-quality) students subsequently choose an accounting major.

7. Conclusion

We argue that while SOX aimed to strengthen auditor independence, it fundamentally changed the economics of public accounting. It curtailed collaboration between accounting and consulting functions and reduced accountants' opportunities to address clients' broader business problems and build professional networks. These changes constrained accountants' ability to invest in their human capital on the job, making the profession less attractive, particularly to top talent. Using comprehensive résumé data from public accounting firms, we find that after SOX, public accountants were less likely to transition into consulting roles or to join client (or non-client) firms, and their wages declined. We find a decline in the quality of students enrolling in accounting majors at universities. Linking university alumni career paths to subsequent accounting enrollments, we show that as transitions from accounting to consulting fall, both the number and quality of students choosing accounting as a major at their alma maters decline.

These findings have important implications for policymakers, regulators, and the accounting profession. While auditor independence is critical to the integrity of financial reporting and capital markets, our results highlight that independence exists along a continuum and that enforcing it

involves trade-offs. Restricting accountants' career mobility may undermine their ability to invest in human capital. Policymakers should consider whether easing restrictions on non-audit services or auditor transitions could better balance independence with career development. More broadly, our study emphasizes the need to consider the unintended labor market consequences of financial and accounting regulations.

Given the global reach of the Big Four accounting firms and SOX's influence on auditor independence regulations around the world, our findings may extend beyond the U.S. This is consistent with anecdotal evidence of declining accounting enrollments in other parts of the world. We believe this is a pressing issue, and exploring it further, both within and outside the U.S., is a promising direction for future research.

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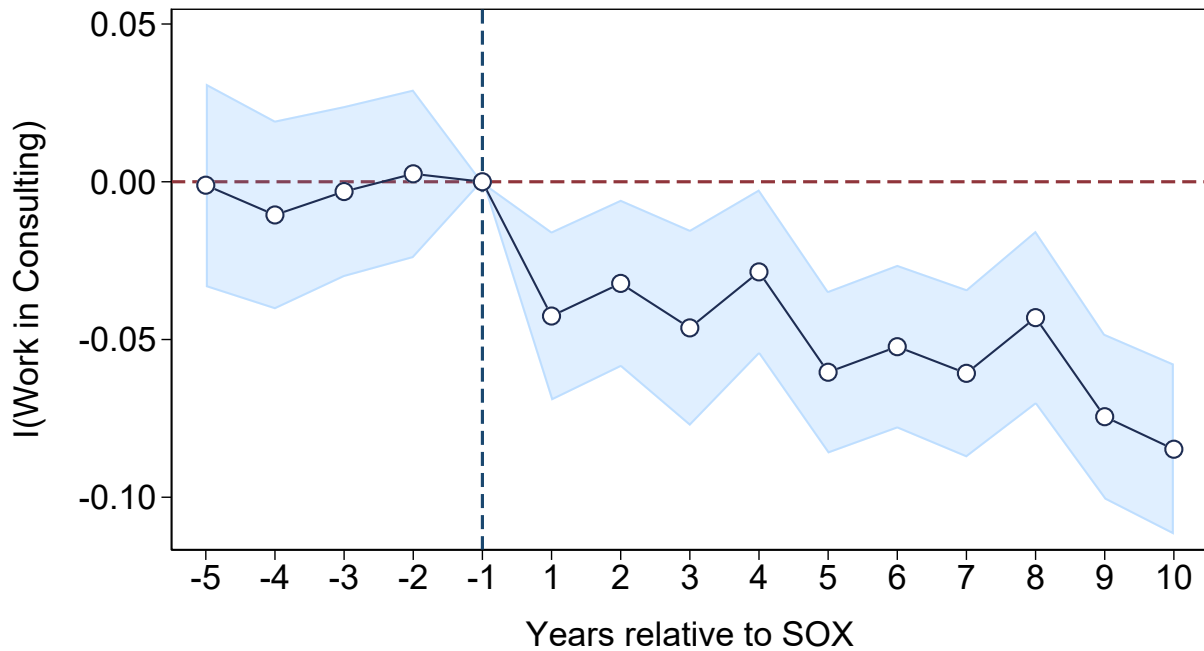


Fig. 1. Accountants transitioning to consulting roles around SOX

This figure plots the probability of accountants transitioning to consulting roles, relative to consultants at the same public accounting firm, in the same MSA, at the same time, around SOX. All estimates are relative to the omitted group, event year = -1. The specification includes Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots denote point estimates, and the shaded area around the dots represents 90% confidence intervals.

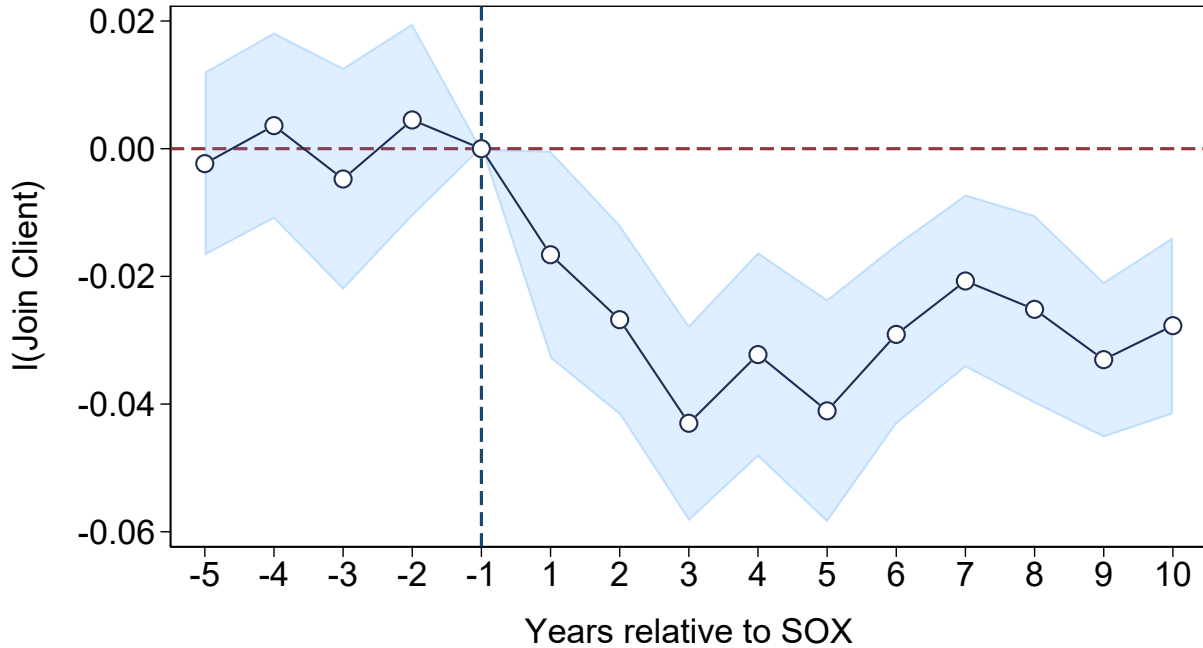


Fig. 2. Accountants joining clients around SOX

This figure plots the probability of accountants joining audit clients of their public accounting firm, relative to consultants at the same firm, in the same MSA and at the same time, joining non-audit clients of their accounting firm around SOX. All estimates are relative to the omitted group, event year = -1. The specification includes Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots denote point estimates, and the shaded area around the dots represents 90% confidence intervals.

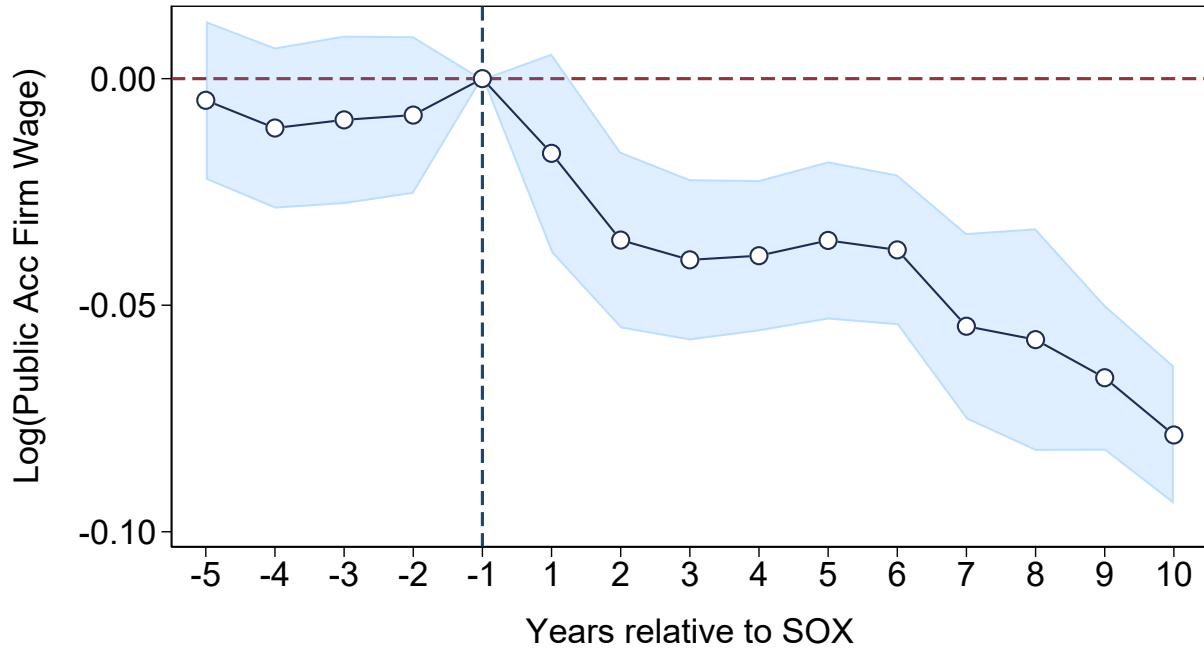


Fig. 3. Accountants' wages around SOX

This figure plots wages around SOX for accountants relative to consultants in public accounting. We compare wages for individuals starting in accounting versus consulting roles within the same public accounting firm, in the same MSA, and in the same year. All estimates are relative to the omitted group, event year = -1. Specifications include Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots represent point estimates, and shaded areas indicate 90% confidence intervals.

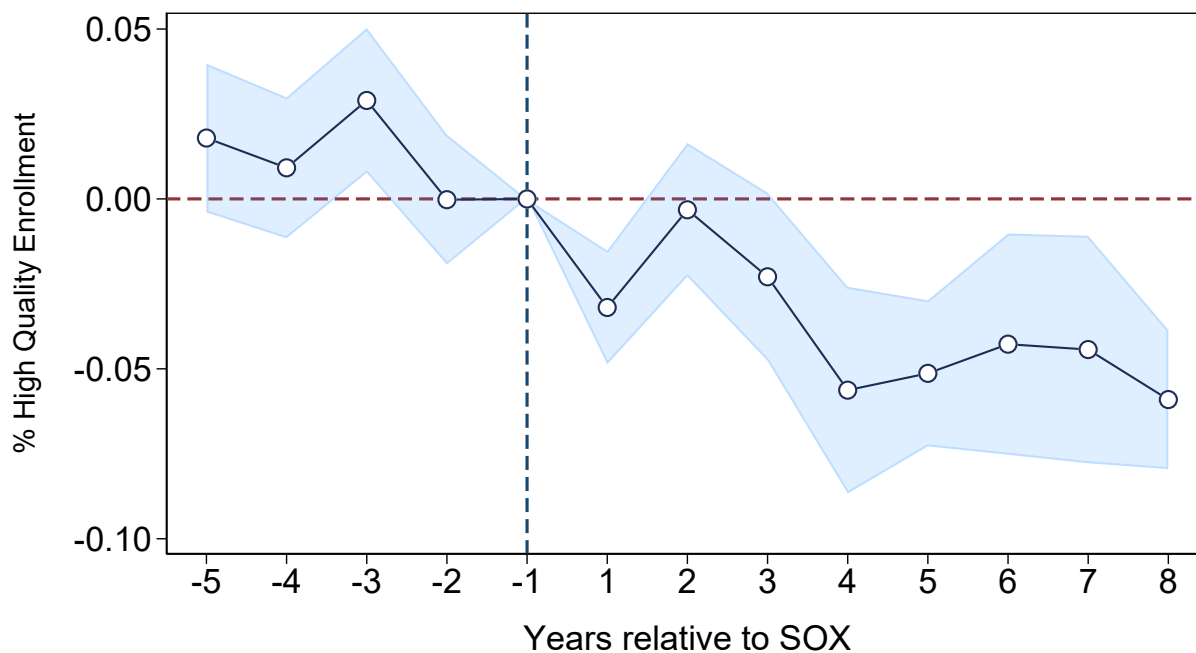


Fig. 4. Quality of accounting enrollments at universities around SOX

This figure plots the fraction of high-quality students (SAT scores of 1200 or above) among those declaring accounting majors, relative to other business majors at the same universities, around SOX. All estimates are relative to the omitted group, event year = -1. The specification includes University \times Year fixed effects. Standard errors are clustered by state. Dots denote point estimates, and shaded areas represent 90% confidence intervals.

Table 1
Descriptive statistics.

	Mean	SD	Q1	Median	Q3	N
Panel A: Individual-level SOX sample (Tables 2, 3, 4, 5 and 6)						
I(Work in Consulting)	0.267	0.442	0.000	0.000	1.000	128,913
I(Join Client)	0.048	0.214	0.000	0.000	0.000	128,913
I(Join Client of Other Public Acc Firms)	0.154	0.361	0.000	0.000	0.000	128,913
Public Acc Firm Wage (in \$)	78,083	23,008	62,084	75,823	90,554	174,837
Accountant	0.594	0.491	0.000	1.000	1.000	128,913
SOX	0.764	0.424	1.000	1.000	1.000	128,913
150-Hour Rule	0.590	0.492	0.000	1.000	1.000	128,913
404-Exposure	0.038	0.066	0.000	0.000	0.057	128,913
GAAP Restrictiveness	-0.000	1.000	-0.052	0.544	0.617	128,913
Technological Investment	-0.000	1.000	-0.804	-0.073	0.929	128,913
Junior	0.616	0.486	0.000	1.000	1.000	128,913
Panel B: University-level sample (HERI) (Table 7)						
% High Quality Enrollment	0.180	0.261	0.000	0.056	0.250	13,567
Accounting Major	0.466	0.499	0.000	0.000	1.000	13,567
SOX	0.558	0.497	0.000	1.000	1.000	13,567
High Parental Income	0.489	0.500	0.000	0.000	1.000	25,182
Not First-Generation College Student	0.530	0.499	0.000	1.000	1.000	25,100
Parental Occupation-Business	0.493	0.500	0.000	0.000	1.000	25,669
High University Selectivity	0.520	0.500	0.000	1.000	1.000	13,567
150-Hour Rule	0.508	0.500	0.000	1.000	1.000	13,567
404-Exposure	0.029	0.049	0.000	0.000	0.050	13,567
GAAP Restrictiveness	0.000	1.000	-1.573	0.602	0.644	13,567
Technological Investment	-0.000	1.000	-0.678	-0.101	0.532	13,567
Panel C: University-level sample (IPEDS) (Table 8)						
N(Declare Accounting Major)	64.498	61.382	21.000	44.000	86.000	8,636
% Declare Accounting Major	0.167	0.072	0.116	0.155	0.208	8,636
Pr(Acc Alumni Transition to Consulting)	0.112	0.194	0.000	0.000	0.154	8,636
150-Hour Rule	0.819	0.385	1.000	1.000	1.000	8,636
404-Exposure	0.038	0.044	0.000	0.027	0.059	8,636
GAAP Restrictiveness	-0.000	1.000	-0.123	0.079	0.703	8,636
Technological Investment	0.000	1.000	-0.681	-0.243	0.503	8,636
Top-50 Accounting Program	0.080	0.272	0.000	0.000	0.000	8,636
Panel D: State-level sample (Table 9)						
% High Quality Enrollment (Accounting)	0.371	0.228	0.234	0.346	0.500	540
% High Quality Enrollment (Accounting vs. Business)	0.849	0.490	0.645	0.822	0.990	531
Pr(Acc Alumni Transition to Consulting)	0.124	0.083	0.073	0.125	0.167	540
150-Hour Rule	0.657	0.475	0.000	1.000	1.000	540
404-Exposure	0.030	0.058	0.000	0.000	0.046	540
GAAP Restrictiveness	0.000	1.000	0.225	0.525	0.589	540
Technological Investment	-0.000	1.000	-0.653	-0.090	0.526	540

This table reports descriptive statistics. All variables are defined in Appendix A.

Table 2

Effect of SOX on accountants transitioning to consulting roles.

Panel A: Accountants transitioning to consulting roles

Dependent Variable =	I(Work in Consulting)				
	(1)	(2)	(3)	(4)	(5)
Accountant × SOX	-0.058***	-0.052***	-0.051***	-0.054***	-0.041***
	(-6.704)	(-6.168)	(-6.196)	(-5.779)	(-3.762)
Accountant	-0.301***	-0.303***	-0.299***	-0.293***	-0.290***
	(-42.868)	(-42.725)	(-42.575)	(-39.590)	(-30.311)
Accountant × 150-Hour Rule					-0.036***
					(-4.535)
Accountant × 404-Exposure					-0.071
					(-1.298)
Accountant × GAAP Restrictiveness					0.009**
					(2.015)
Accountant × Technological Investment					-0.015***
					(-4.547)
Mean dep. var.	0.267	0.267	0.267	0.267	0.267
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm × Year FE	No	Yes	Yes	No	No
Firm × Year × MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R ²	0.154	0.154	0.155	0.152	0.155

This table examines the effect of SOX on accountants transitioning to consulting roles. The sample includes position change events by individuals who held accounting or consulting roles at Big Eight public accounting firms. Sample period is 1997-2012. Panel A examines the effect of SOX on accountants transitioning to consulting roles. *I(Work in Consulting)* is an indicator equal to one if the individual holds a consulting role in any firm after the position change, and zero otherwise. *Accountant* equals one if the individual held an accounting role at a Big Eight firm prior to the position change, and zero if they held a consulting role. *SOX* equals one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the individual works in a state that has adopted the 150-hour rule one year before the position change, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the individual works, divided by that firm's total number of audit clients in that state, one year before the position change. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the individual works one year before the position change. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. For accountants (consultants) at a Big Eight firm, *Technological Investment* is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are reported in the respective columns. Column (5) of Panel A includes the main terms for control variables not reported for brevity. Panel B examines the effect of SOX on accountants transitioning to consulting roles, separately for junior and senior accountants. *Junior (Senior)* is an indicator equal to one for individuals with a seniority score of 3 or less (greater than 3) on a seven-point scale from Revelio Labs. Other main terms and their interactions are included, but not shown for brevity. Column (5) of Panel B includes all control variables and their interactions with *Accountant* as in column (5) of Panel A. *t*-statistics in parentheses are based on standard errors clustered by Firm × MSA. ***, **, and * indicate statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively. All variables are defined in Appendix A.

Table 2 (Continued)

Effect of SOX on accountants transitioning to consulting roles.

Panel B: Junior vs. senior accountants

Dependent Variable =	I(Work in Consulting)				
	(1)	(2)	(3)	(4)	(5)
Accountant × SOX × Junior	-0.080*** (-7.044)	-0.073*** (-6.602)	-0.072*** (-6.655)	-0.073*** (-6.306)	-0.065*** (-4.794)
Accountant × SOX × Senior	-0.030*** (-3.072)	-0.024** (-2.541)	-0.025*** (-2.586)	-0.026** (-2.446)	-0.016 (-1.302)
P-value of coef. diff. (two-tailed)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Controls	No	No	No	No	Yes
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm × Year FE	No	Yes	Yes	No	No
Firm × Year × MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R^2	0.157	0.157	0.158	0.155	0.157

Table 3

Deloitte sample: Effect of SOX on accountants transitioning to consulting roles

Dependent Variable =	I(Work in Consulting)			
	(1)	(2)	(3)	(4)
Accountant × SOX	-0.132*** (-11.043)	-0.134*** (-11.233)	-0.133*** (-11.271)	-0.113*** (-4.314)
Accountant	-0.252*** (-19.596)	-0.246*** (-20.145)	-0.244*** (-20.537)	-0.255*** (-13.615)
Accountant × 150-Hour Rule				-0.017 (-1.376)
Accountant × 404-Exposure				-0.026 (-0.307)
Accountant × GAAP Restrictiveness				0.009 (1.273)
Accountant × Technological Investment				-0.023*** (-4.059)
Mean dep. var.	0.324	0.324	0.324	0.324
Year FE	Yes	Yes	No	Yes
MSA FE	No	Yes	No	No
Year × MSA FE	No	No	Yes	No
Obs.	36,117	36,117	36,117	36,117
Adj. R ²	0.153	0.155	0.155	0.154

This table examines the effect of SOX on the probability of accountants at Deloitte holding consulting roles after a position change. The sample includes position change events by individuals who held accounting or consulting roles at Deloitte. Sample period is 1997-2012. *I(Work in Consulting)* is an indicator equal to one if the individual holds a consulting role in any firm after the position change, and zero otherwise. *Accountant* equals one if the individual held an accounting role at Deloitte prior to the position change, and zero if they held a consulting role. *SOX* equals one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the individual works in a state that has adopted the 150-hour rule one year before the position change, and zero otherwise. *404-Exposure* is the number of Deloitte's audit clients with internal control weaknesses in the state where the individual works, divided by Deloitte's total number of audit clients in that state, one year before the position change. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the individual works one year before the position change. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. For accountants (consultants) at a Big Eight firm, *Technological Investment* is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are reported in the respective columns. Column (4) includes the main terms for control variables not reported for brevity. *t*-stats in parentheses are based on standard errors clustered by MSA. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 4
Effect of SOX on accountants transitioning to client firms.

Panel A: Accountants transitioning to client firms

Dependent Variable =	I(Join Client)				
	(1)	(2)	(3)	(4)	(5)
Accountant × SOX	-0.026***	-0.027***	-0.028***	-0.030***	-0.027***
	(-7.754)	(-7.648)	(-7.907)	(-7.843)	(-4.441)
Accountant	0.041***	0.042***	0.041***	0.042***	0.035***
	(11.709)	(11.741)	(11.507)	(11.000)	(6.025)
Accountant × 150-Hour Rule					0.010**
					(2.378)
Accountant × 404-Exposure					0.001
					(0.053)
Accountant × GAAP Restrictiveness					-0.001
					(-0.559)
Accountant × Technological Investment					-0.001
					(-0.953)
Mean dep. var.	0.048	0.048	0.048	0.048	0.048
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm × Year FE	No	Yes	Yes	No	No
Firm × Year × MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R ²	0.011	0.012	0.014	0.010	0.012

This table examines the effect of SOX on accountants joining client firms. Sample is position change events of individuals who held accounting or consulting roles at Big Eight public accounting firms. Sample period is 1997-2012. Panel A examines the effect of SOX on accountants joining client firms. *I(Join Client)* is an indicator variable that equals one if the accountant (consultant) joins a firm that was an audit (non-audit) client of their public accounting firm employer in the last three years, and zero otherwise. *Accountant* equals one if the individual held an accounting role at a Big Eight firm prior to the position change, and zero if they held a consulting role. *SOX* equals one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the individual works in a state that has adopted the 150-hour rule one year before the position change, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the individual works, divided by that firm's total number of audit clients in that state, one year before the position change. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the individual works one year before the position change. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. For accountants (consultants) at a Big Eight firm, *Technological Investment* is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are shown in respective columns. Column (5) of Panel A includes the main terms for control variables not reported for brevity. Panel B examines the effect of SOX on accountants joining client firms, separately for junior vs. senior accountants. *Junior (Senior)* is an indicator that equals one for individuals with a seniority score of 3 or less (more than 3) on a seven-point seniority scale from Revelio Labs. Other main terms and their interactions are included, but not shown for brevity. Column (5) of Panel B includes all control variables and their interactions with *Accountant* as in column (5) of Panel A. *t*-stats in parentheses are based on standard errors clustered by Firm × MSA. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 4 (Continued)

Effect of SOX on accountants transitioning to client firms.

Panel B: Junior vs. senior accountants

Dependent Variable =	I(Join Client)				
	(1)	(2)	(3)	(4)	(5)
Accountant \times SOX \times Junior	-0.023*** (-5.680)	-0.022*** (-5.389)	-0.023*** (-5.628)	-0.025*** (-5.699)	-0.024*** (-3.715)
Accountant \times SOX \times Senior	-0.033*** (-5.600)	-0.034*** (-5.758)	-0.035*** (-5.889)	-0.039*** (-6.070)	-0.034*** (-4.527)
P-value of coef. diff. (two-tailed)	0.14	0.08	0.09	0.06	0.14
Controls	No	No	No	No	Yes
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm \times Year FE	No	Yes	Yes	No	No
Firm \times Year \times MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R^2	0.012	0.013	0.015	0.010	0.012

Table 5

Effect of SOX on accountants transitioning to audit clients of other public accounting firms.

Panel A: Accountants transitioning to audit clients of other public accounting firms

Dependent Variable =	I(Join Client of Other Public Acc Firms)				
	(1)	(2)	(3)	(4)	(5)
Accountant × SOX	-0.037***	-0.039***	-0.043***	-0.048***	-0.060***
	(-7.060)	(-7.648)	(-8.547)	(-9.351)	(-6.635)
Accountant	0.043***	0.042***	0.042***	0.045***	0.052***
	(9.591)	(9.897)	(9.809)	(9.613)	(5.745)
Accountant × 150-Hour Rule					0.009
					(1.339)
Accountant × 404-Exposure					0.074*
					(1.685)
Accountant × GAAP Restrictiveness					0.006
					(1.320)
Accountant × Technological Investment					0.004
					(1.198)
Mean dep. var.	0.154	0.154	0.154	0.154	0.154
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm × Year FE	No	Yes	Yes	No	No
Firm × Year × MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R ²	0.008	0.008	0.013	0.017	0.008

This table examines the effect of SOX on accountants joining clients of other public accounting firms. Sample is position change events of individuals who held accounting or consulting roles at Big Eight public accounting firms. Sample period is 1997-2012. Panel A examines the effect of SOX on accountants joining clients of other public accounting firms. *I(Join Client of Other Public Acc Firms)* is an indicator variable that equals one if the accountant (consultant) joins a firm that was an audit (non-audit) client, in the prior three years, of a Big Eight accounting firm other than their own, and zero otherwise. *Accountant* equals one if the individual held an accounting role at a Big Eight firm prior to the position change, and zero if they held a consulting role. *SOX* equals one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the individual works in a state that has adopted the 150-hour rule one year before the position change, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the individual works, divided by that firm's total number of audit clients in that state, one year before the position change. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the individual works one year before the position change. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. For accountants (consultants) at a Big Eight firm, *Technological Investment* is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are shown in respective columns. Column (5) of Panel A includes the main terms for control variables not reported for brevity. Panel B examines the effect of SOX on accountants joining clients of other public accounting firms, separately for junior vs. senior accountants. *Junior (Senior)* is an indicator that equals one for individuals with a seniority score of 3 or less (more than 3) on a seven-point seniority scale from Revelio Labs. Other main terms and their interactions are included, but not shown for brevity. Column (5) of Panel B includes all control variables and their interactions with *Accountant* as in column (5) of Panel A. *t*-stats in parentheses are based on standard errors clustered by Firm × MSA. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 5 (Continued)

Effect of SOX on accountants transitioning to audit clients of other public accounting firms.

Panel B: Junior vs. senior accountants

Dependent Variable =	I(Join Client of Other Public Acc Firms)				
	(1)	(2)	(3)	(4)	(5)
Accountant \times SOX \times Junior	-0.044*** (-6.394)	-0.047*** (-6.779)	-0.050*** (-7.515)	-0.057*** (-8.213)	-0.068*** (-6.164)
Accountant \times SOX \times Senior	-0.020*** (-2.686)	-0.022*** (-2.960)	-0.025*** (-3.353)	-0.029*** (-3.700)	-0.043*** (-4.150)
P-value of coef. diff. (two-tailed)	0.01	0.01	0.01	< 0.01	0.01
Controls	No	No	No	No	Yes
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm \times Year FE	No	Yes	Yes	No	No
Firm \times Year \times MSA FE	No	No	No	Yes	No
Obs.	128,913	128,913	128,913	128,913	128,913
Adj. R^2	0.008	0.009	0.013	0.017	0.008

Table 6
Effect of SOX on accountants' wages.

Dependent Variable =	Log(Public Acc Firm Wage)				
	(1)	(2)	(3)	(4)	(5)
Accountant × SOX	-0.038*** (-6.690)	-0.043*** (-8.264)	-0.044*** (-9.114)	-0.044*** (-7.794)	-0.030*** (-3.411)
Accountant	-0.191*** (-41.361)	-0.189*** (-43.960)	-0.178*** (-45.459)	-0.176*** (-42.799)	-0.187*** (-20.944)
Accountant × 150-Hour Rule					-0.017*** (-2.633)
Accountant × 404-Exposure					-0.005 (-0.188)
Accountant × GAAP Restrictiveness					0.007* (1.673)
Accountant × Technological Investment					-0.010*** (-4.690)
Mean dep. var. (in \$)	78,083	78,083	78,083	78,083	78,083
Mean (Accountant)	0.661	0.661	0.661	0.661	0.661
Mean (SOX)	0.766	0.766	0.766	0.766	0.766
Firm FE	Yes	No	No	No	Yes
Year FE	Yes	No	No	No	Yes
MSA FE	No	No	Yes	No	No
Firm × Year FE	No	Yes	Yes	No	No
Firm × Year × MSA FE	No	No	No	Yes	No
Obs.	174,837	174,837	174,837	174,837	174,837
Adj. R ²	0.130	0.135	0.159	0.168	0.134

This table examines the effect of SOX on wages paid by public accounting firms to accountants vs. consultants. The sample includes individuals who join accounting or consulting roles at Big Eight public accounting firms. Sample period is 1997-2012. *Log(Public Acc Firm Wage)* is the natural logarithm of the individual's wage paid by public accounting firms. *Accountant* is an indicator equal to one (zero) if the individual is an accountant (consultant). *SOX* is an indicator equal to one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the individual joins a public accounting firm in a state that has adopted the 150-hour rule one year before the position start, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the public accounting firm that the individual joins is located, divided by that firm's total number of audit clients in that state, one year before the position start. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the public accounting firm that the individual joins is located one year before the position start. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. For accountants (consultants) at a Big Eight firm, *Technological Investment* is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Column (5) includes the main terms for control variables not reported for brevity. Sample means of the dependent variables (in \$) are shown in the respective columns. *t*-stats in parentheses are based on standard errors clustered by Firm × MSA. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 7

Effect of SOX on quality of accounting enrollment at universities.

Panel A: Share of high-quality students in accounting vs. other business majors

Dependent Variable =	% High Quality Enrollment		
	(1)	(2)	(3)
Accounting Major × SOX	-0.052*** (-10.374)	-0.047*** (-7.802)	-0.044*** (-4.833)
Accounting Major	-0.214*** (-20.182)	-0.209*** (-21.333)	-0.218*** (-12.952)
Accounting Major × 150-Hour Rule			0.001 (0.023)
Accounting Major × 404-Exposure			-0.054 (-0.578)
Accounting Major × GAAP Restrictiveness			-0.000 (-0.088)
Accounting Major × Technological Investment			-0.008 (-1.223)
Mean dep. var.	0.180	0.180	0.180
Year FE	Yes	No	Yes
University FE	Yes	No	Yes
University × Year FE	No	Yes	No
Obs.	13,567	13,567	13,567
Adj. R^2	0.562	0.422	0.563

This table examines the effect of SOX on the quality of accounting enrollment at universities. Panel A examines the effect of SOX on the share of high-quality students in accounting vs. other business majors. The unit of observation is university-year-business major. Sample period is 1997-2010 (our HERI survey data ends in 2010). *% High Quality Enrollment* is the share of students who scored 1200 or above on the SAT among those declaring the intention to choose a given business major. *Accounting Major* is an indicator variable equal to one for those choosing the accounting major and zero for those choosing other business majors. *SOX* equals one for survey years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise. *150-Hour Rule* is an indicator variable that equals one if the university is located in a state that has adopted the 150-hour rule, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the university is located, divided by the firm's total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the university's state. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. *Technological Investment* is the average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state where the university is located. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are shown in the respective columns. Column (3) of Panel A includes the main terms for control variables not reported for brevity. *t*-stats in parentheses are based on standard errors clustered by state. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 7 (Continued)

Effect of SOX on quality of accounting enrollment at universities.

Panel B: Effect on students with better economic and informational resources

Dependent Variable =	% High Quality Enrollment								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Accounting Major × SOX × High Parental Income	-0.034***	-0.033***	-0.028***						
	(-7.085)	(-6.444)	(-5.074)						
Accounting Major × SOX × Low Parental Income	-0.016***	-0.013***	-0.010*						
	(-5.192)	(-4.176)	(-1.793)						
Accounting Major × SOX × Not First-Generation College Student				-0.050***	-0.047***	-0.044***			
				(-10.801)	(-9.142)	(-8.163)			
Accounting Major × SOX × First-Generation College Student				-0.001	0.001	0.005			
				(-0.354)	(0.441)	(1.046)			
Accounting Major × SOX × Parental Occupation-Business							-0.029***	-0.027***	-0.023***
							(-7.632)	(-6.475)	(-4.881)
Accounting Major × SOX × Parental Occupation-Others							-0.019***	-0.017***	-0.013**
							(-5.770)	(-4.591)	(-2.403)
P-value of coef. diff. (two-tailed)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05	0.05	0.05
Controls	No	No	Yes	No	No	Yes	No	No	Yes
Year FE	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
University FE	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
University × Year FE	No	Yes	No	No	Yes	No	No	Yes	No
Obs.	25,182	25,182	25,182	25,100	25,100	25,100	25,669	25,669	25,669
Adj. R ²	0.438	0.364	0.438	0.514	0.449	0.514	0.485	0.441	0.485

Panel B examines the effect of SOX on students with better economic and informational resources. The unit of observation is university-year-business major-informed student. Sample period is 1997-2010. In columns (1) to (3) of Panel B, the informed student indicator is determined by parental income: *High Parental Income* and *Low Parental Income*. In columns (4) to (6) of Panel B, the informed student indicator is determined by parental education: *Not First-Generation College Student* and *First-Generation College Student*. In columns (7) to (9) of Panel B, the informed student indicator is determined by parental occupation: *Parental Occupation-Business* and *Parental Occupation-Others*. *High (Low) Parental Income* is an indicator variable that equals one for those whose parents earn above (below) year-median annual income, and zero otherwise. *(Not) First-Generation College Student* is an indicator variable that equals one for those that are (not) first-generation college students, and zero otherwise. *Parental Occupation-Business (Others)* is an indicator variable that equals one for those whose parents work in business (other) occupations, and zero otherwise. Other main terms and their interactions are included, but not shown for brevity. Columns (3), (6), and (9) of Panel B includes all control variables and their interactions with *Accounting Major* as in column (3) of Panel A.

Table 7 (Continued)

Effect of SOX on quality of accounting enrollment at universities.

Panel C: Effect on students in high selectivity universities

Dependent Variable =	% High Quality Enrollment		
	(1)	(2)	(3)
Accounting Major \times SOX \times High University Selectivity	-0.069*** (-9.800)	-0.067*** (-8.523)	-0.057*** (-6.434)
Accounting Major \times SOX \times Low University Selectivity	-0.022*** (-3.602)	-0.016** (-2.519)	-0.010 (-1.031)
P-value of coef. diff. (two-tailed)	< 0.01	< 0.01	< 0.01
Controls	No	No	Yes
Year FE	Yes	No	Yes
University FE	Yes	No	Yes
University \times Year FE	No	Yes	No
Obs.	13,567	13,567	13,567
Adj. R^2	0.610	0.507	0.610

Panel C examines the effect of SOX on students in high selectivity universities. The unit of observation is university-year-business major. Sample period is 1997-2010. *High (Low) University Selectivity* is an indicator variable that equals one for universities classified by HERI as (not) having “high” and “very high” selectivity, and zero otherwise. University selectivity is based on admissions SAT scores, which are collected by HERI from IPEDS. Other main terms and their interactions are included, but not shown for brevity. Columns (3) of Panel C includes all control variables and their interactions with *Accounting Major* as in column (3) of Panel A.

Table 8

University accounting alumni transition to consulting and subsequent accounting enrollment.

Dependent Variable =	N(Declare Accounting Major)			% Declare Accounting Major		
	(1)	(2)	(3)	(4)	(5)	(6)
Pr(Acc Alumni Transition to Consulting)	0.199*** (2.969)	0.220*** (2.972)	0.090*** (2.858)	0.011*** (2.955)	0.011*** (2.746)	0.006** (2.417)
150-Hour Rule	-0.017 (-0.429)		-0.005 (-0.135)	0.001 (0.356)		-0.002 (-0.625)
404-Exposure	-0.028 (-0.123)		-0.007 (-0.069)	0.009 (0.474)		-0.003 (-0.188)
GAAP Restrictiveness	-0.226 (-1.628)		-0.115 (-1.038)	-0.002 (-0.203)		0.006 (0.668)
Technological Investment	-0.006 (-0.154)		-0.011 (-0.469)	-0.004 (-1.594)		-0.004* (-1.932)
Top-50 Accounting Program	0.714*** (6.116)	0.704*** (5.995)		-0.021*** (-3.210)	-0.021*** (-3.374)	
Mean dep. var.	64.498	64.498	64.498	0.167	0.167	0.167
Year FE	Yes	No	Yes	Yes	No	Yes
State FE	Yes	No	No	Yes	No	No
University FE	No	No	Yes	No	No	Yes
Year × State FE	No	Yes	No	No	Yes	No
Model	Poisson	Poisson	Poisson	OLS	OLS	OLS
Obs.	8,636	8,636	8,636	8,636	8,636	8,636
Adj. (Pseudo) R ²	0.218	0.246	0.829	0.154	0.105	0.685

This table examines whether a lower probability of university alumni transitioning from accounting to consulting roles is associated with subsequent declines in undergraduate accounting enrollment at their alma maters. The unit of observation is university-year. The sample period covers university alumni transition probabilities from 1997 to 2019 (our IPEDS enrollment data ends with the academic year beginning in 2020). *N(Declare Accounting Major)* is the number of undergraduates who declare accounting as their major at a given university, assuming students select their majors two years before completing a four-year undergraduate program. *% Declare Accounting Major* is number of undergraduates who declare accounting as their major at a given university scaled by number of undergraduates who declare any business major at the same university. *Pr(Acc Alumni Transition to Consulting)* for a university-year represents the probability of the university's public accounting alumni transitioning to consulting roles during that year — defined as the number of university alumni switching from Big Eight public accounting roles to consulting roles during the year, divided by the number of Big Eight public accounting university alumni who change positions that year. *150-Hour Rule* is an indicator variable that equals one if the university is located in a state that has adopted the 150-hour rule, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state where the university is located, divided by the firm's total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the university's state. *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. *Technological Investment* is the average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state where the university is located. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. *Top-50 Accounting Program* is an indicator variable that equals one for universities with an undergraduate accounting program ranked among the top-50 by U.S. News Rankings, and zero otherwise. Columns (1) to (3) exploit Poisson models, and columns (4) to (6) exploit OLS models. Sample means of the dependent variables are shown in the respective columns. *t*-stats in parentheses are based on standard errors clustered by state. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Table 9

University accounting alumni transition to consulting and subsequent quality of accounting enrollment: State level evidence.

Dependent Variable =	% High Quality Enrollment	
	Accounting	Accounting vs. Business
	(1)	(2)
Pr(Acc Alumni Transition to Consulting)	0.317**	0.526*
	(2.383)	(1.834)
150-Hour Rule	-0.010	-0.054
	(-0.268)	(-0.723)
404-Exposure	0.216	0.041
	(0.679)	(0.043)
GAAP Restrictiveness	-0.064	-0.177
	(-0.640)	(-0.757)
Technological Investment	0.009	0.017
	(0.401)	(0.348)
Mean dep. var.	0.371	0.849
Year FE	Yes	Yes
State FE	Yes	Yes
Obs.	540	531
Adj. R^2	0.330	0.114

This table examines whether a lower probability of a state's university alumni transitioning from accounting to consulting roles is associated with subsequent declines in undergraduate accounting enrollment at their alma maters in the same state. The unit of observation is state-year. The sample period covers alumni transition probabilities for universities within each state from 1997 to 2009 (our HERI survey data ends in 2010). *% High Quality Enrollment (Accounting)* is the share of high-SAT students (1200 or above) among accounting majors at universities in a given state. *% High Quality Enrollment (Accounting vs. Business)* is the share of high-SAT students (1200 or above) among accounting majors, scaled by the share of high-SAT (1200 or above) students among all business majors at universities in the same state. *Pr(Acc Alumni Transition to Consulting)* is the probability that alumni from universities located within the state transition to consulting roles after previously holding accounting roles at Big Eight public accounting firms. *150-Hour Rule* is an indicator variable that equals one if state has adopted the 150-hour rule, and zero otherwise. *404-Exposure* is the number of a Big Eight firm's audit clients with internal control weaknesses in the state, divided by the firm's total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report. *GAAP Restrictiveness* is a continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024). *GAAP Restrictiveness* is standardized to have a mean of zero and a standard deviation of one. *Technological Investment* is the average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. *Technological Investment* is standardized to have a mean of zero and a standard deviation of one. Sample means of the dependent variables are shown in the respective columns. *t*-stats in parentheses are based on standard errors clustered by state. ***, **, and * indicate statistical significance (two-sided) at the 0.01, 0.05, and 0.10 levels, respectively. All variables are defined in Appendix A.

Appendix A Variable Definitions

Variable	Description
<i>Individual-level sample for SOX analyses</i> (Tables 2, 3, 4, 5, and 6)	
I(Work in Consulting)	An indicator variable that equals one if the individual holds a consulting role in any firm following the position change, and zero otherwise.
I(Join Client)	An indicator variable that equals one if the accountant (consultant) joins a firm that was an audit (non-audit) client of their public accounting firm employer in the last three years, and zero otherwise.
I(Join Client of Other Public Acc Firms)	An indicator variable that equals one if the accountant (consultant) joins a firm that was an audit (non-audit) client, in the prior three years, of a Big Eight accounting firm other than their own, and zero otherwise.
Log(Public Acc Firm Wage)	The natural logarithm of the individual's wage paid by public accounting firms.
Accountant	An indicator variable that equals one if the individual held an accounting role at a Big Eight public accounting firm before the position change, and zero if they held a consulting role at a Big Eight public accounting firm before the position change.
SOX	An indicator variable that equals one for years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise.
150-Hour Rule	An indicator variable that equals one if the individual works in a state that has adopted the 150-hour rule one year before the position change, and zero otherwise.
404-Exposure	The number of a Big Eight firm's audit clients with internal control weaknesses in the state where the individual works, divided by that firm's total number of audit clients in that state, one year before the position change. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report.
GAAP Restrictiveness	A continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the state where the individual works one year before the position change. <i>GAAP Restrictiveness</i> is standardized to have a mean of zero and a standard deviation of one.
Technological Investment	For accountants (consultants) at a Big Eight firm, this is the average technology investment of the accounting firm's audit (non-audit) clients, weighted by audit (or non-audit) fees. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. <i>Technological Investment</i> is standardized to have a mean of zero and a standard deviation of one.
Junior	An indicator variable equal to one if the individual held a junior position at a Big Eight public accounting firm before the position change, and zero if they held a senior position at a Big Eight firm. We classify positions with a Revelio Labs seniority score of 3 or below as <i>Junior</i> , and those above 3 as <i>Senior</i> .

Appendix A Variable Definitions (Continued)

Variable	Description
<i>University-level sample for SOX analyses (HERI) (Table 7)</i>	
% High Quality Enrollment	The proportion of incoming college students that have scored 1200 or above on the SAT, among those declaring the intention to choose a given business major.
Accounting Major	An indicator variable that equals one for those choosing the accounting major and zero for those choosing other business majors.
SOX	An indicator variable that equals one for survey years from 2002 onward, following the enactment of the Sarbanes-Oxley Act, and zero otherwise.
High Parental Income	An indicator variable that equals one for those whose parents earn above year-median annual income, and zero otherwise. <i>Low Parental Income</i> equals one when <i>High Parental Income</i> equals zero.
Not First-Generation College Student	An indicator variable that equals one for those that are not first-generation college students, and zero otherwise. <i>First-Generation College Student</i> equals one when <i>Not First-Generation College Student</i> equals zero.
Parental Occupation-Business	An indicator variable that equals one for those whose parents work in business occupations, and zero otherwise. <i>Parental Occupation-Others</i> equals one when <i>Parental Occupation-Business</i> equals zero.
High University Selectivity	An indicator variable that equals one for universities classified by HERI as having “high” and “very high” selectivity, and zero otherwise. University selectivity is based on admissions SAT scores, which are collected by HERI from IPEDS. <i>Low University Selectivity</i> equals one when <i>High University Selectivity</i> equals zero.
150-Hour Rule	An indicator variable that equals one if the university is located in a state that has adopted the 150-hour rule, and zero otherwise.
404-Exposure	The number of Big Eight firms’ audit clients with internal control weaknesses in the state where the university is located, divided by the firm’s total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report.
GAAP Restrictiveness	A continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the university’s state. <i>GAAP Restrictiveness</i> is standardized to have a mean of zero and a standard deviation of one.
Technological Investment	The average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state where the university is located. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. <i>Technological Investment</i> is standardized to have a mean of zero and a standard deviation of one.

Appendix A Variable Definitions (Continued)

Variable	Description
<i>University-level sample (IPEDS) (Table 8)</i>	
N(Declare Accounting Major)	The number of undergraduates who declare accounting as their major at a given university, assuming students select their major two years before completing a four-year undergraduate program.
% Declare Accounting Major	The proportion of undergraduates who declare accounting as their major at a given university relative to all undergraduates who declare a business-related discipline as their major at the same university, assuming students select their major two years before completing a four-year undergraduate program.
Pr(Acc Alumni Transition to Consulting)	The number of university alumni switching from Big Eight public accounting roles to consulting roles during the year, divided by the number of Big Eight public accounting university alumni who change positions that year. An individual is classified as an alumnus of a university if they have earned a bachelor's degree or higher from that university.
150-Hour Rule	An indicator variable that equals one if the university is located in a state that has adopted the 150-hour rule, and zero otherwise.
404-Exposure	The number of Big Eight firms' audit clients with internal control weaknesses in the state where the university is located, divided by the firm's total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report.
GAAP Restrictiveness	A continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024), based on the university's state. <i>GAAP Restrictiveness</i> is standardized to have a mean of zero and a standard deviation of one.
Technological Investment	The average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state where the university is located. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. <i>Technological Investment</i> is standardized to have a mean of zero and a standard deviation of one.
Top-50 Accounting Program	An indicator variable that equals one for universities with an undergraduate accounting program ranked among the top-50 by U.S. News Rankings, and zero otherwise.

Appendix A Variable Definitions (Continued)

Variable	Description
<i>State-level sample</i> (Table 9)	
%High Quality Enrollment (Accounting)	The proportion of incoming college students at universities within the state who declare an intention to major in accounting and have scored 1200 or above on the SAT.
%High Quality Enrollment (Accounting vs. Business)	The proportion of incoming college students at universities within the state who declare an intention to major in accounting and have scored 1200 or above on the SAT, scaled by the proportion of incoming college students at universities within the state who declare an intention to major in any business-related discipline and have scored 1200 or above on the SAT.
Pr(Acc Alumni Transition to Consulting)	The probability that alumni from universities located within the state transition to consulting roles after previously holding accounting roles at Big Eight public accounting firms. An individual is classified as an alumnus of a university if they have earned a bachelor's degree or higher from that university.
150-Hour Rule	An indicator variable that equals one if the state has adopted the 150-hour rule, and zero otherwise.
404-Exposure	The number of Big Eight firms' audit clients with internal control weaknesses in a state, divided by the firm's total number of audit clients in that state. A client is identified as having internal control weaknesses if it discloses a material weakness in internal control over financial reporting in any SOX 404 report.
GAAP Restrictiveness	A continuous GAAP restrictiveness exposure measure at the state-decade level from Le (2024). <i>GAAP Restrictiveness</i> is standardized to have a mean of zero and a standard deviation of one.
Technological Investment	The average state-year technology investment of the (audit and non-audit) clients of the Big Eight firms in our sample headquartered in the state. The underlying technology investment data are based on Bureau of Economic Analysis (BEA) industry-year data on private nonresidential fixed investment in software, including prepackaged, custom, and own-account software. <i>Technological Investment</i> is standardized to have a mean of zero and a standard deviation of one.

Online Appendix for:

Independence at What Cost? Regulation, Accounting
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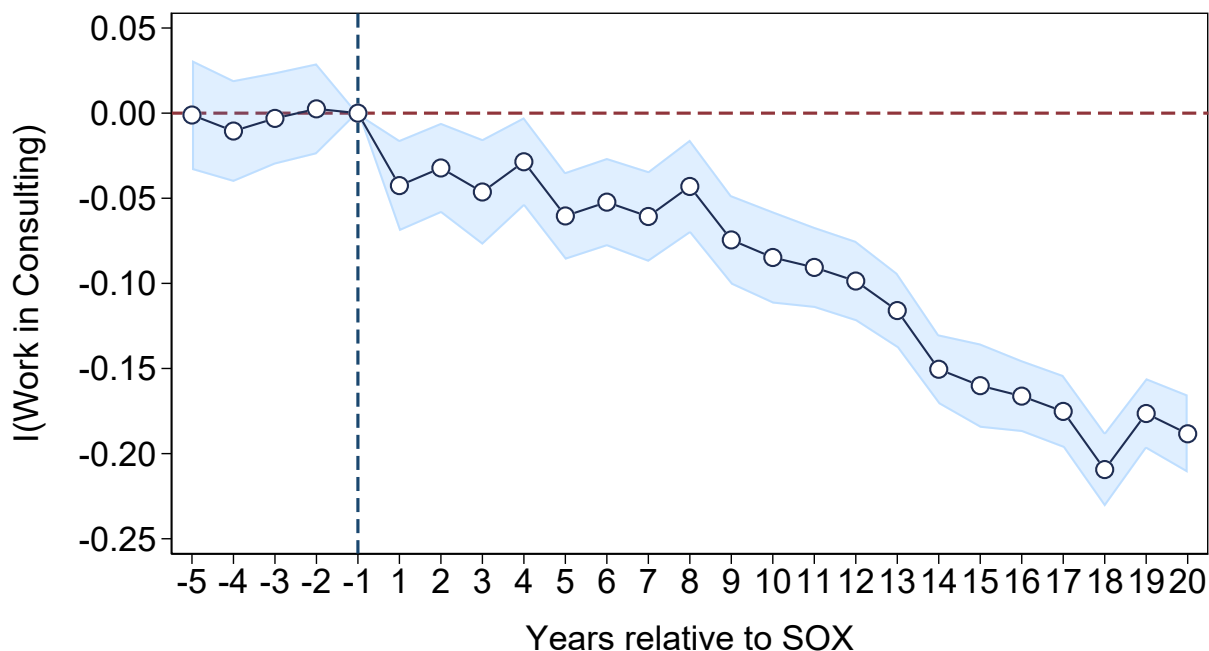


Fig. OA.1. Extended sample: Accountants transitioning to consulting roles around SOX

This figure uses the extended sample spanning years from 1997 to 2022 and plots the probability of accountants transitioning to consulting roles, relative to consultants at the same public accounting firm, in the same MSA, at the same time, around SOX. All estimates are relative to the omitted group, event year = -1. The specification includes Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots denote point estimates, and the shaded area around the dots represents 90% confidence intervals.

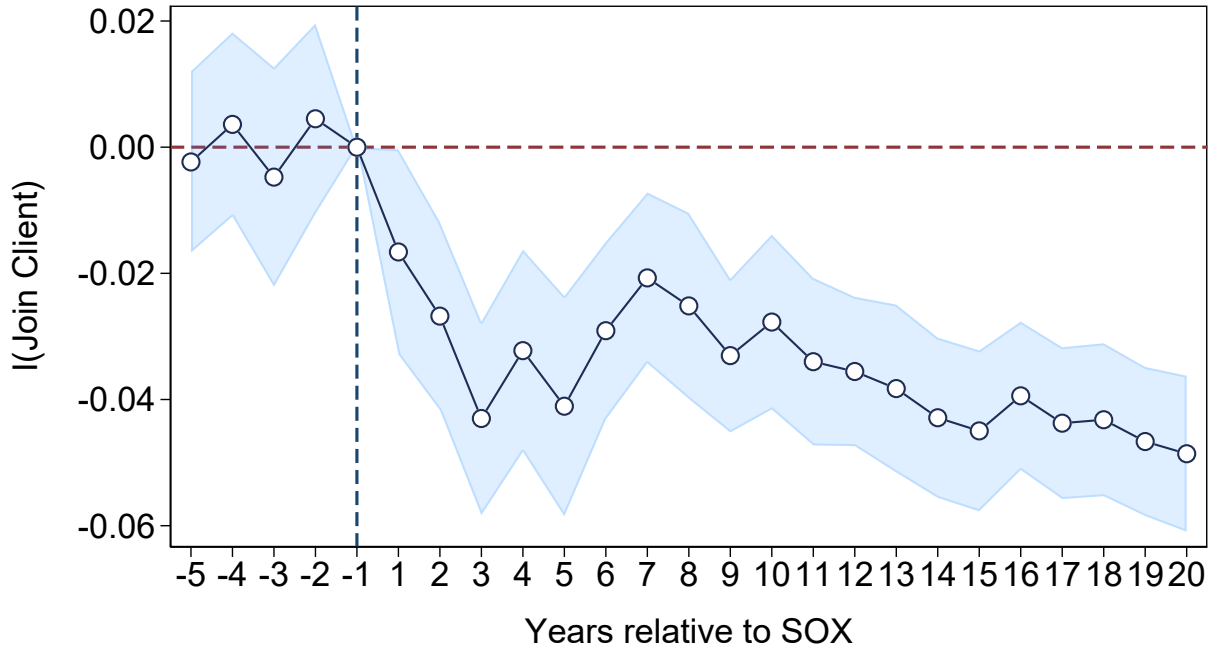


Fig. OA.2. Extended sample: Accountants joining clients around SOX

This figure uses the extended sample spanning years from 1997 to 2022 and plots the probability of accountants joining audit clients, relative to consultants at the same public accounting firm, in the same MSA, at the same time, joining non-audit clients, around SOX. All estimates are relative to the omitted group, event year = -1. The specification includes Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots denote point estimates, and the shaded area around the dots represents 90% confidence intervals.

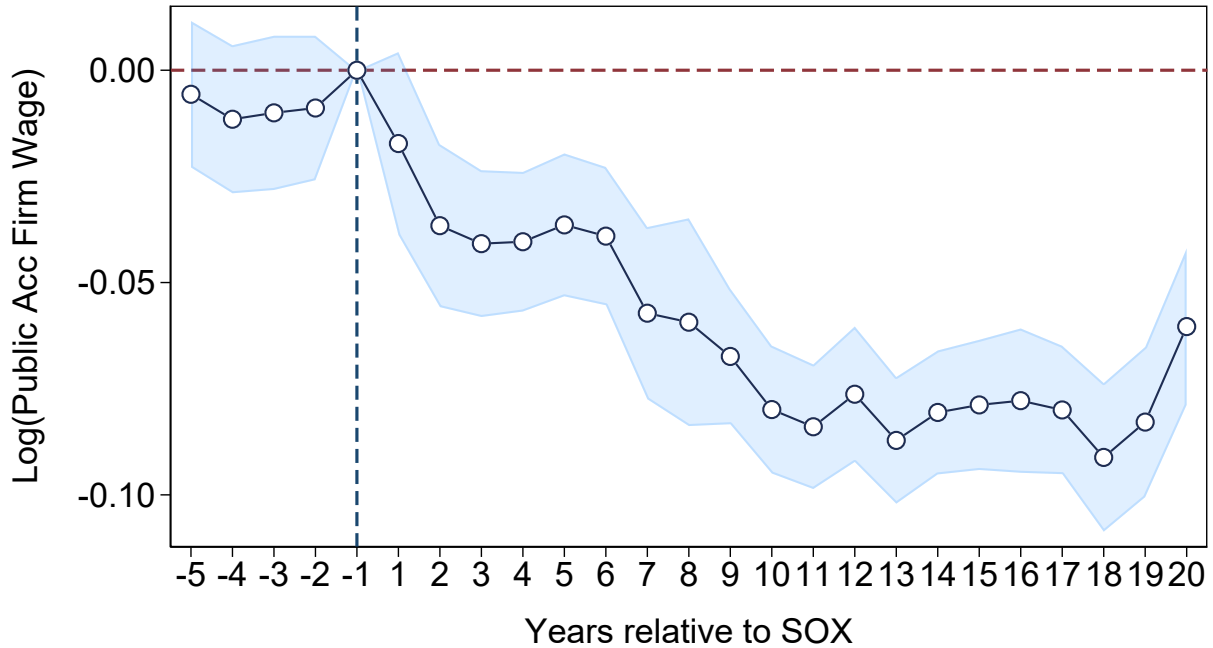


Fig. OA.3. Extended sample: Accountants' wages around SOX

This figure uses the extended sample spanning years from 1997 to 2022 and plots wages around SOX for accountants relative to consultants in public accounting. We compare wages for individuals starting in accounting versus consulting roles within the same public accounting firm, in the same MSA, and in the same year. All estimates are relative to the omitted group, event year = -1. The specification includes Firm \times Year \times MSA fixed effects. Standard errors are clustered by Firm \times MSA. Dots denote point estimates, and the shaded area around the dots represents 90% confidence intervals.