Occupation-Specific Education Requirements and Occupational Silos: Evidence from CPA Licensing Rules*

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Abstract

We study the effect of licensing-induced, occupation-specific education requirements on workers' occupational mobility and earnings. We study this question in the context of Certified Public Accountants' (CPAs) licensing rules, exploiting the staggered introduction of a change in the number and composition of CPAs' educational requirements across states. We find that an increase in mandatory accounting-specific credit hours leads to more time spent in accounting jobs, less cross-occupation job switching, and a reduction in the licensing earnings premium. Supplemental analyses indicate that the effects represent a specialization of worker skills rather than a general decline in CPAs' accounting performance. The collective findings suggest that by imposing occupation-specific course requirements, licensing regimes can create less portable human capital, reducing both occupational mobility and the licensing earnings premium.

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1 Introduction

Nearly a quarter of employees today work in an occupation that requires a government-issued license, a significant increase from just 5% in 1950. The rising importance of these licenses has motivated a wealth of research on how licensing impacts labor market entry and exit (e.g., Kleiner, 2000). A crucial component of these licensing regimes is the requirement to obtain specific education and training. These education and training mandates aim to ensure a baseline level of competency among licensed individuals. The mandates often require licensees to complete a specific sequence of coursework, with over three-quarters of licensed occupations requiring the completion of occupation-specific coursework in some form. Given the prevalence of these requirements and the importance of education in shaping workers' human capital (e.g., Becker, 1964; Arrow, 1973), in this paper, we leverage cross-state variation in licensing-induced occupation-specific course requirements to examine whether these requirements generate occupation-specific human capital. In particular, we explore how the requirements shape workers' career trajectories (i.e., mobility within and across occupations), skills, and earnings.

Occupational mobility (i.e., the ability to move between occupations) has important implications for worker earnings (Kambourov and Manovskii, 2009b) and aggregate wage inequality (Kambourov and Manovskii, 2009a). Despite high returns to occupational tenure, a substantial and growing share of workers switch occupations over their careers, rising from 15% in the 1970s to over 20% by the 1990s (Kambourov and Manovskii, 2009a). Moreover, workers consider an occupation's option value, which depends on its mobility prospects, when choosing occupations (Gyetvai, 2024). These facts motivate the need to understand the determinants of occupational mobility.

Conceptually, licensing-induced course requirements could affect occupational mobility and worker earnings in several ways. A stream of literature shows that more specialized education leads to greater occupational attachment (e.g., Krueger and Kumar, 2004; Kinsler and Pavan, 2015; Altonji et al., 2016; Hanushek et al., 2017). There are also studies documenting

that this effect is driven by larger wage penalties for workers with highly specialized education when they switch to dissimilar occupations (Poletaev and Robinson, 2008; Gathmann and Schönberg, 2010). All else equal, a reduction in occupational mobility (and thus, outside opportunities) could lead to lower worker earnings. At the same time, occupation-specific education can develop the skills that workers need for their specific occupation, helping to raise their productivity and wages. The literature has also shown that in certain instances (e.g., when workers want to switch between task-similar occupations), specialized skills can facilitate occupational mobility (Gathmann and Schönberg, 2010; Groes et al., 2014). Given these opposing forces, the effect of mandatory occupation-specific credit hours on occupational mobility and worker earnings remains an open empirical question.

We study this question in the context of Certified Public Accountants' (CPAs) occupational licensing requirements. Focusing on CPAs offers several distinct advantages. First, for CPAs, the National Association of State Boards of Accountancy (NASBA) maintains an extensive repository of license information, including individuals' names, licensure dates, and the state in which they are licensed. This identifying information enables the linking of workers to other databases that contain information on their career paths. Second, since accountants are white-collar workers, typical resume databases (e.g., Revelio Labs) offer extensive coverage of these workers. Third, occupation-specific coursework for accountants is relatively well-defined (i.e., what qualifies as an "accounting" course is clear); thus, the occupation serves as a helpful case to understand the broader economic impact of occupation-specific education on occupational mobility. Lastly, in terms of the overall requirements for their licensure, CPAs are largely representative of other licensed, white-collar occupations.

To study this question, we focus on the staggered introduction of the 150-hour rule. The rule was rolled out on the state level throughout the 1990s and 2000s, and required CPAs to complete 30 additional credit hours (i.e., equivalent to an extra year of post-secondary education) before licensure. In addition to increasing the total number of credit hours required for licensure, states varied substantially in how they modified the composition of

those credits. In particular, states varied in the share of the 30 additional credits that needed to be fulfilled by completing *accounting* courses. For example, some states (e.g., Indiana and Alaska) left the number of accounting credits untouched, while others increased the number of credits to maintain the same proportion (relative to the total number of credits). The variation in how states adjusted their credit requirements around the 150-hour rule creates variation in the intensity of the change in mandated occupation-specific education.

We start by compiling a database of the number of accounting-specific (and general business) credit hours required for CPA licensure in each state. We compile this data by tracking the sections of each state's historical statutes and administrative codes that contain the rules governing CPA licensure. We obtain initial section references from the NASBA's Accountancy Licensing Library (ALL) and track these sections using a combination of LexisNexis and states' historical archives. We also collect license information on all CPAs from NASBA's administrative CPAVerify database and link this data to LinkedIn resume data from Revelio Labs. The resume data provides granular, position-level data that allows us to track the career trajectories of workers post-licensure until they exit the workforce.

We begin our empirical examination by assessing how an increase in the number of mandatory accounting-specific credits affects the share of accounting positions CPAs hold post-licensure. We find that an increase in required accounting-specific credits leads to a higher share of accounting positions in a worker's post-licensure career. In terms of economic magnitude, a one standard deviation change in the proportion of mandatory accounting-specific credits leads to a 2-3 percentage point increase (5-6% relative to the mean) in the share of accounting positions held by CPAs. We also find that this effect is not explained by a greater volume of (but shorter tenured) accounting positions. The total amount of time that a worker spends in accounting-specific positions during their career also increases when they are subject to more accounting-specific credit hours. Notably, we find that the effect is persistent, as it materializes when considering horizons of (i) five years post-licensure, (ii) ten years post-licensure, and (iii) a worker's entire post-licensure career.

We then examine the impact of accounting-specific credits on workers' job switching. While an increase in the share of time that workers spend in accounting could result from less frequent cross-occupation job switching, it could also represent career persistence based on where workers obtain their first post-licensure job. We find that an increase in the number of required accounting-specific credits leads to a meaningful shift in workers' job-switching across several dimensions. First, an increase in the number of accounting-specific credits, if anything, leads to *more* overall job switching over an individual's career. Second, conditional on changing jobs, the share of CPAs' job switches to accounting-specific positions increases when workers are subject to more mandatory accounting credit hours. Similarly, an increase in the number of required accounting-specific credits decreases the likelihood that a worker switches to a non-accounting role and increases the likelihood of switching to an accounting role. We interpret these collective results as evidence of occupation-specific education increasing human capital *within* an occupation, but decreasing the portability of workers' skills *across* occupations.

Next, we examine the impact of accounting-specific credit requirements on workers' average earnings. We find, across various post-licensure time horizons, that accounting-specific credit requirements reduce the licensing premium earned by CPAs over their careers. In terms of economic magnitude, a one standard deviation change in the proportion of mandatory accounting-specific credits leads to a 2-5% decrease in average earnings. We find that the magnitude of the earnings penalty attenuates over longer horizons.

We then conduct several supplemental analyses to test our interpretation that the education requirements build less portable occupation-specific human capital. First, we find that workers subject to the higher accounting-specific credit requirements are, if anything, more likely to be promoted to senior positions than those who are not subject to the higher credit requirements. Second, we find that the total number of misconduct cases and CPA exam performance does not significantly change when workers are subject to more accounting-specific credit requirements. Third, we find that the skills listed on workers' LinkedIn pro-

files become more concentrated in specific areas when they are subject to more mandatory accounting-specific credits. In particular, the requirements lead to a higher concentration of skills related to accounting & financial reporting. We also find that the brunt of the cost is imposed on underrepresented minority groups, consistent with prior findings on the unequal costs that the 150-hour rule imposes on minority CPAs (Sutherland et al., 2024). Overall, the results are consistent with occupation-specific credit requirements creating less portable skills and fewer cross-occupation outside options for workers. The results do not appear to be explained by a general decline in workers' ability to perform accounting services, since, if anything, they obtain more promotion opportunities *within* accounting.

The collective results are consistent with occupation-specific education requirements leading to lower occupational mobility. We find that an increase in the number of occupation-specific credit requirements leads to a higher share of time spent in that occupation, fewer job switches outside of the occupation, and a reduction in the CPA licensing earnings premium documented by prior studies (e.g., Barrios, 2022). These effects appear to result from the requirements creating more specialized human capital: the concentration of skills increases, while promotion and overall performance on accounting tasks do not change substantially. Consistent with the costliness of these requirements for workers, we also find that states with more accounting-specific course requirements have fewer CPA licenses, suggesting that these requirements lead workers to sort away from the occupation.

We conjecture that two mechanisms could (simultaneously) explain our findings. First, in a frictional labor market (i.e., one with imperfect competition (Aobdia et al., 2024; Choi et al., 2025)) where wage determination is viewed through the lens of a wage bargaining or posting model, a reduction in outside options could directly reduce CPAs' average earnings by raising employers' relative bargaining/monopsony power (Hervé, 2023; Caldwell and Danieli, 2024). The requirements essentially introduce a hold-up problem: licensing forces workers to make a sunk investment in occupation-specific skills, limiting their outside opportunities. This lack of portability shifts bargaining power to employers, creating barriers to exit that

suppress the licensing wage premium. Second, even in a frictionless labor market, highly paid CPAs with strong (non-accounting) outside options could systematically sort out of the occupation, leading to a reduction in both the aggregate supply of workers and the average earnings of the remaining workers. In reality, both mechanisms likely play a role in explaining our empirical findings.

Lastly, to assess whether our baseline findings generalize to other occupations, we compile a cross-section of coursework requirements for 17 additional occupations and construct measures of career trajectories for workers in those occupations. Using this broader sample of workers, we document a similarly negative association between coursework requirements and occupational mobility. Further, using variation in *other* licensing-induced requirements (e.g., exam requirements), we find that the negative association is strongest when the requirements are placed *on top of* other quality-assurance mechanisms, such as degree and exam requirements. These results suggest that requiring more occupation-specific education limits workers' opportunities outside their occupation, especially when the licensing regime already applies other quality-assurance mechanisms (e.g., exam and degree requirements).

The results contribute to multiple strands of literature. First, the findings contribute to the literature on occupational licensing. A substantial body of literature in economics, law, and accounting has assessed the impact of occupational licensing on worker outcomes. Most of these studies focus on the effects of licensing on workers' entry and exit decisions, as well as their salaries (e.g., Kleiner, 2000; Kleiner and Krueger, 2013; Kleiner and Vorotnikov, 2017; Gittleman et al., 2017; Larsen et al., 2020). The literature generally finds that licensing generates economic rents for licensed workers without yielding clear benefits, leading to lower overall welfare (Kleiner and Soltas, 2023). Recent studies have begun to consider how licensure affects dynamic outcomes, such as labor market fluidity and geographic mobility (Johnson and Kleiner, 2020; Chilton et al., 2024; Kleiner and Xu, 2025). Our study is the first to investigate how licensing-induced course requirements affect workers, distinguishing between occupation-specific and general education requirements. This source of variation is

important; many states mandate *specific* coursework beyond general degree requirements. Our results help explain why prior studies (e.g., Kleiner and Xu, 2025) find lower cross-occupation mobility among licensed workers, by showing that the composition of required coursework (separate from the total amount of coursework) can constrain skill portability.

Second, the findings contribute to the literature on the impact of specialized versus general education on human capital formation. The literature has primarily focused on the differences in labor market outcomes for workers who pursue vocational training versus specialized degrees and documents that, in the cross-section, occupations with more specialized training tend to offer a wage premium (e.g., Hanushek et al., 2017; Silos and Smith, 2015; Leighton and Speer, 2020), with evidence that this premium can be primarily attributed to selection (e.g., Malamud and Pop-Eleches, 2010). However, the literature also documents that specialization carries costs: when workers with specialized degrees switch occupations, they incur larger wage penalties than those with more general degrees (Robst, 2007; Altonji et al., 2012; Silos and Smith, 2015; Seah et al., 2025). Our results show that mandating more specialized education amplifies the costs of specialization (reduced portability and weaker outside options) without delivering the offsetting benefits (higher-quality accounting services). The tilt towards the *costs* of specialization in our setting likely reflects that we examine specialization that is *mandated* by regulation rather than chosen by workers.

Third, the findings contribute to the literature on accounting regulation and labor market outcomes. The literature has documented that accounting regulation and standard-setting activities can have a meaningful impact on the accountant labor market (Bloomfield et al., 2017; Vetter, 2019; Cascino et al., 2021; Breuer et al., 2023; Le, 2025; Pandey et al., 2025). While other studies have studied accounting regulations' impact on accountants' *geographic mobility* (e.g., Bloomfield et al., 2017; Cascino et al., 2021), our study is among the first to assess its impact on *occupational mobility* (alongside Pandey et al., 2025). With respect to the literature on the 150-hour rule specifically, several studies have assessed the rule's impact on initial entry and exit decisions across different groups of accountants (Meehan

and Stephenson, 2020; Barrios, 2022; Sutherland et al., 2024; Choi et al., 2025; Shah, 2025). These studies focus on the effort costs imposed on students when they are subjected to *more* education requirements. Our study contributes to this literature by exploiting variation in the *composition* of education requirements across states' implementations of the 150-hour rule. By exploiting institutional differences in how states applied the 150-hour rule, our study documents that the *makeup* of educational requirements is crucial in evaluating the rule's effect. This study is also the first in accounting to examine how licensing requirements affect post-licensure career dynamics, rather than focusing on entry or exit into the occupation.

Our study also has policy implications. Amid a nationwide shortage of accountants, states have begun to roll back the 150-hour rule in an effort to reduce the barriers to entry in the occupation. Several states (e.g., Ohio, Virginia, California, among many others) have already rolled back these rules or have pending legislation to do so. Prior literature has shown that adding more credits overall imposes costs on employees. Our study reveals that the composition of these requirements is also a crucial dimension to consider.[1] Professional organizations frequently promote the CPA license as a gateway to a wealth of career paths (e.g., ACCA, 2025). Yet these same professional and regulatory bodies have expressed concern that students increasingly view the CPA as offering too narrow a range of career opportunities (e.g., Illinois Soceity of CPAs, 2021; Center for Audit Quality, 2023; National Pipeline Advisory Group, 2023). Our study suggests that the design of licensing rules is an important driver of CPAs' (in)ability to pursue outside opportunities, potentially making the accounting occupation a less desirable option for prospective candidates.[2]

[1]The issue of *how* to design the composition of the coursework for the extra 30 semester hours was the subject of contentious debate (Section 3.2 provides an overview of the historical debate.)

[2]This insight is broadly in line with anecdotal concerns raised by NASBA leadership about states' (differential) application of the rule (National Association of State Boards of Accountancy, 2008a).

2 Conceptual Underpinnings

The ways in which occupation-specific education can affect worker outcomes are captured by the framework in Becker (1964). Becker (1964) lays out two types of human capital that can be accumulated: general and specific human capital. Workers can invest in specific training, which enhances their productivity within a given context (i.e., within a firm or occupation), but may limit their outside options. To map our question to Becker (1964), we view occupation-specific education as being "specialized training" for a particular occupation. This tradeoff (enhanced worker productivity from more education versus their outside options) lies at the center of our empirical exploration.

A substantial body of empirical literature in labor economics has examined the effects of general versus specialized skills on worker outcomes. A line of literature, primarily focusing on the differences in labor market outcomes for workers who pursue vocational training versus specialized degrees, documents that in the cross-section, occupations with more specialized training tend to offer a wage premium (e.g., Hanushek et al., 2017; Silos and Smith, 2015; Leighton and Speer, 2020), with evidence that this premium can be primarily attributed to selection (e.g., Malamud and Pop-Eleches, 2010). These studies' findings are consistent with the existence of returns to specialized skills. However, the literature also documents that specialization carries costs. Lazear (2004), for example, shows that balanced skills portfolios are more conducive to entrepreneurship than specialized skills. The insights from this study suggest that while specialized skills can be rationally chosen to perform tasks in a given occupation, these skills may transfer to other contexts (i.e., entrepreneurship). Other studies document that when workers with specialized degrees switch occupations outside of their field, they incur larger wage penalties than those with more general degrees (Robst, 2007; Altonji et al., 2012; Silos and Smith, 2015; Seah et al., 2025).

In the context of our research question, the effect that the mandatory occupation-specific credits have on worker mobility depends on which of the economic forces (i.e., enhanced productivity or a reduction in outside options) dominates. The effects also depend on the

type of mobility; that is, whether the mobility is within- or across-occupations. If the required occupation-specific education significantly enhances worker productivity, we would expect the requirements to lead to greater job position switches within the occupation, resulting in better promotion and advancement opportunities. If the skills that these workers develop within their occupation are transferable to other occupations, we may also expect that the enhanced productivity would translate to higher mobility across occupations. However, if the skills are specialized to the occupation (and thus are not complementary to the skills required in other occupations), we would expect cross-occupation moves to decline due to a weakening of workers' outside options.

Second, the impact of the occupation-specific education requirements on workers' earnings is theoretically ambiguous. On the one hand, occupation-specific training could increase productivity in accounting and, consequently, raise accountants' wages. On the other hand, specialization also narrows the scope of what accountants do. The narrowed scope may reduce outside opportunities, which, all else equal, would weaken the worker's bargaining position. As a result, wages may decline. On a net basis, the effect that mandatory occupation-specific credit hours has on worker earnings depends on which mechanism (raised accounting productivity or a decline in outside options) dominates.

3 Institutional Background

3.1 Accountants' Licensing Requirements

In the United States, accountants' job duties include preparing and conducting external audits of companies' financial statements and attesting to compliance with U.S. Generally Accepted Accounting Principles (GAAP). Accountants can choose to become a Certified Public Accountant (CPA), which requires them to obtain a CPA license. Accountants obtain this license so that they can engage in certain activities that are restricted to only CPAs; for example, CPAs can sign off on an external financial audit of a company while non-

CPA accountants cannot. Licensure as a CPA requires successful completion of the Uniform CPA Examination, administered by the American Institute of Certified Public Accountants (AICPA). This standardized exam maintains consistent testing standards across all U.S. jurisdictions, irrespective of the state in which candidates seek licensure.

In addition to the examination requirement, CPA candidates must fulfill further educational and professional experience criteria. Notably, these supplementary requirements are established by individual state boards of accountancy rather than a centralized regulatory body, creating interstate variation in licensure prerequisites. This decentralized regulatory structure also extends to post-licensure requirements: practicing CPAs must complete continuing professional education (CPE) credits as mandated by their respective state boards of accountancy.

3.2 The Implementation of the 150-Hour Rule

In 1988, the AICPA endorsed the 150-hour education requirement, recommending that state boards add 30 semester hours to their existing educational prerequisites. This rule, once implemented, would require CPA license candidates to complete 150 semester hours of post-secondary education, rather than the traditional 120-hour baccalaureate requirement. While the AICPA formally endorsed this requirement in 1988, it lacked regulatory authority; the actual implementation of the requirement remained at the discretion of individual state boards of accountancy. The exact date of adoption of the 150-hour rule varied considerably across jurisdictions. Some states (e.g., Florida) had proactively implemented enhanced educational requirements prior to the AICPA's 1988 resolution. All other states adopted the 150-hour requirement throughout the 1990s and 2000s, resulting in staggered implementation of the rule across states spanning more than two decades.

The educational requirements for CPA licensure encompass both a minimum number of *total* semester hours and, often, *field-specific* course requirements in designated subject areas. To qualify for licensure, candidates must complete a prescribed number of semester hours

in particular disciplines. These requirements mandate completion of courses directly related to accounting practice, including financial accounting, auditing, and taxation, alongside coursework in supporting fields such as business, economics, and business law.

These course-specific requirements predated the 150-hour rule. However, the adoption of the 150-hour requirement prompted many states to reassess and modify their course-specific requirements, leading to varying changes in these requirements across states. States responded to the 150-hour rule through four distinct approaches to course-specific requirements. First, some states, like Alaska and New York, maintained their existing course requirements without modification. Second, states such as Alabama and Arizona used the transition as an opportunity to introduce course-specific requirements for the first time. Third, jurisdictions like Virginia and Colorado increased their course-specific requirements almost proportionally, scaling them to match the 25% increase in total educational hours. Fourth, states including California and Florida implemented disproportionate increases, expanding course-specific requirements beyond the relative increase in total hours. This varied implementation resulted in meaningful differences in curricular requirements across states.[3]

The issue of *how* to set the composition of the coursework for the extra 30 semester hours was a key consideration during the initial implementation of the 150-hour rule and sparked significant debate. For example, Richard Goode (Former NASBA Vice Chair) stated that "some states that adopted 150-hour laws have used the additional hours of education to significantly expand the number of accounting hours students must take ... [which] would act to further discourage student interest in becoming accountants" (National Association of State Boards of Accountancy, 2008a). Nathan Garrett (former NASBA Chair) expressed

[3]Table A2 shows the state-level credit hour requirements for accounting and business courses before and after the adoption of the 150-hour rule (Figure 3 maps the variation), showing a substantial variation in the credit requirements across states. One important question is *why* some states chose to adopt more rather than fewer accounting credits. Prior studies have found that the only robust determinant of the timing of 150-hour rule adoption is the proportion of CPAs on a state's accountancy board (Sutherland et al., 2024). Similarly, using the set of determinants from (Sutherland et al., 2024), we find in Table A7 that the only robust determinant of state's credit changes around the 150-hour rule is their GDP/capita (i.e., size) and, if anything, the proportion of CPAs on a state's accountancy board (consistently positively associated, but statistically insignificant).

similar concerns, stating that requiring more accounting courses (relative to other applications of the 150-hour rule) "may have some value to students who know they want to be permanently technically oriented, perhaps spending their careers as tax researchers. However, if that graduate has goals in the corporate area outside of tax and technical audit staff, he is wasting valuable education hours" (National Association of State Boards of Accountancy, 2008a). The NASBA Education Committee also listed, as an open question of policy relevance, whether "a significant difference exists between candidates with additional hours in business and accounting and those with additional hours in unrelated subjects" (National Association of State Boards of Accountancy, 2008b). These anecdotes show that the *composition* of the additional credit hours was not merely a minor consideration but a key policy variable subject to a contentious policy debate among the state boards.

4 Empirical Strategy

4.1 Data

4.1.1 NASBA CPA Repository Data

We obtain individual-level CPA data from the National Association of State Boards of Accountancy (NASBA) CPA repository. This database contains detailed licensure information, including practitioners' names, license numbers, jurisdictions of licensure, addresses, initial licensure dates by state, expiration dates (where applicable), and current license status. The repository aggregates information submitted directly by state boards of accountancy where CPAs maintain active registrations, providing a centralized source for verified licensure data across all U.S. jurisdictions. We collected the version of this database as of 2024.[4]

This dataset enables tracking of individual CPAs' licensure histories, including initial licensing dates and multi-state registrations. The NASBA repository's standardized format

[4]It is to be noted that some states (Delaware, New Mexico, the District of Columbia, Hawaii, Illinois (before 2006), Minnesota, and Vermont) do not provide this information to NASBA and thus, CPAs licensed in these states will not be included in the analyses that use this data.

and comprehensive coverage enables large-scale empirical analysis of the CPA profession with administrative, state board-verified data.

4.1.2 LinkedIn Resume Data

We utilize Revelio Lab's individual workforce database, which contains comprehensive information from LinkedIn profiles, including education credentials (bachelor's, master's degrees, etc.), professional and other certifications, employment history (job titles, locations), employer details, and personal information (names, locations, titles). The database typically includes start and end dates for employment positions, roles, and educational experiences. Approximately 60% of CPAs in the United States maintain LinkedIn profiles (Barrios, 2022).

From the complete universe of LinkedIn online resumes, we construct our sample by identifying profiles where users explicitly indicate CPA licensure. For U.S.-based members, we implement a keyword search strategy, scanning for the terms "CPA" or "Certified Public Accountant" (and variations of those terms) within the user name, user biography, and education sections of their profiles. Placing this filter on our sample reflects a balance between Type I and Type II errors in the CPA identification process. Our approach minimizes Type I errors, as the subset of individuals we identify in our data has clearly indicated that they are CPAs. In addition to reducing Type I errors in this stage of the data collection process, this filter also helps minimize false positives in the matching process between the Revelio data and the CPAVerify data, since it removes many duplicate name-state pairs. On the other hand, placing this filter on our sample means that our data has a non-negligible rate of Type II errors, since not all CPAs disclose their credentials on their profiles.Thus, our final sample consists of individuals who have obtained CPA certification and have chosen to publicly disclose this credential on their professional profiles.

4.1.3 Matching CPAVerify to LinkedIn Resume Data

A crucial component of our empirical analysis involves determining the treatment status of individual licensees, which requires identifying the state in which each CPA holds their license. For CPAs with multiple licenses, the education requirements of the state that granted their initial license most likely governed their qualification process, as these requirements would have had to be satisfied to obtain the license. Another critical component of our empirical strategy involves identifying each licensee's CPA cohort, which requires determining the date when they obtained their first CPA license. Since LinkedIn resume data does not readily provide state licensure information or the date of licensure, we address this limitation by merging the LinkedIn resume data with the administrative CPAVerify records. This data matching strategy serves dual purposes. First, it enables us to identify the specific state of licensure for each CPA in our sample. Second, the matching process allows us to validate the authenticity of self-reported CPA licenses on LinkedIn profiles against official licensure records. This verification ensures the reliability of our sample by confirming that individuals claiming CPA credentials on their professional profiles are, in fact, licensed practitioners.

There are several inherent challenges with matching the two datasets due to the absence of a common unique identifier that would enable direct merging. We approach the matching process using names as the primary linking variable, recognizing that individuals may report different name variations on their resumes compared to official CPA registry records. String Matching may not necessarily account for this. To address name variation issues, we employ context specific semantic similarity matching based on transformer embeddings. The invention of the transformers architecture by Vaswani et al. (2017) led to the development of several models such as the BERT (Devlin et al., 2019) and the sentence-BERT (Reimers and Gurevych, 2019). Specifically, we encode names using the MiniLM-L6-v2 model based on the MiniLM approach introduced by Wang et al. (2020). We do not use high-dimensional BERT-based sentence similarity models since the text we use for matching is not complex sentences, but a few words in the form of names. We further calculate the cosine similar-

ity scores between name pairs. We retain pairs that achieve a similarity score above 88%, establishing a high threshold for potential matches (Colangelo et al., 2025).

We implement several validation steps to eliminate incorrect matches. First, we exclude matches where the Revelio data indicate that the member completed their undergraduate degree after their first year of licensure, as this would constitute an impossible match, given that all states require at least an undergraduate degree for CPA licensure. Second, we only retain matches where the LinkedIn member's profile indicates they have worked, studied, or currently reside in at least one state corresponding to their CPA license(s) as recorded in their administrative CPAVerify record. Finally, in cases where a single licensee matches multiple LinkedIn profiles or vice versa after these filtering steps, we preserve only the match with the highest name similarity score. This multi-step validation procedure ensures the accuracy of our linked dataset while maintaining sufficient sample size for our empirical analysis.

4.1.4 Course Requirements From State Historical Archives

To assess how states adjusted their credit requirements in response to the 150-hour rule, we compile data on changes in course-specific semester-hour requirements from multiple authoritative sources. For each state, its administrative codes and statutes contain a section outlining the requirements for all licensed occupations. Within each of these sections, every state has a designated section describing the requirements for CPA licensing. Identifying these sections can be challenging because each state's regulations contain tens of thousands of pages covering all aspects of state law. While some states organize these regulations into distinct sections that make the code easy to navigate (e.g., Alabama, Minnesota, Massachusetts), others do not (e.g., New Jersey, Colorado, Montana). Online Appendix Figure A2 illustrates the contrasting navigational pathways from administrative code sections to CPA education requirements in Alabama and New Jersey. Panel A presents Alabama's administrative structure, which features a dedicated section for the state board of accountancy within its administrative code, thereby facilitating relatively straightforward navigation to

relevant requirements. Conversely, Panel B depicts New Jersey's administrative framework, which lacks a discrete section for its state board of accountancy. Moreover, New Jersey's regulations governing initial CPA licensure may be nested across multiple potential sections within the administrative code, introducing navigational complexity in collecting information on the relevant educational requirements. In addition to these challenges, most codes reflect the most up-to-date versions of all the laws. Tracking these laws throughout time (especially through the 1990s) often requires resources beyond the current, publicly available version of the administrative code.

We begin our data collection process by obtaining initial section references from the NASBA's Accountancy Licensing Library (ALL). The NASBA's ALL contains references to sections in the current administrative code and statutes that cover the different requirements for CPA licensure, including education, examination, and training requirements. Since we focus on education requirements, we only extract the section references relating to education. In particular, there are typically two sections that are relevant for our purposes: (i) the education requirements for sitting the uniform CPA exam, and (ii) the education requirements for final licensure. We collect both section references for each state. In our empirical analyses, we retain the *maximum* credit hours required between the two requirements.

Equipped with the initial section references, we move to collecting historical information on those requirements over time. While section references provide a starting point in each state's current regulations to identify the education requirements for CPAs, due to reordering of the regulations over time, these section references are not always consistent across years. However, in cases where the section references do change, we are at least able to identify section headings (e.g., "Credit Requirements for Certified Public Accountants") that make identifying historical versions of those sections significantly simpler. We use several sources to identify historical versions of each state's administrative code. These sources include state administrative registers (the most common), historical versions of state accountancy board websites, and LexisNexis. For each state, we capture a snapshot of that state's education

requirements both before and after the 150-hour rule. Our data collection captures both accounting-specific and related course requirements, measured in semester hours. We tabulate these education requirements in Online Appendix Table A2, where we also include the section references for the relevant legal authorities.[5]

4.1.5 Course Catalog Data

We collect course catalog data for all AACSB-accredited business schools in the United States. We first identify all AACSB accredited schools via their accreditation database. For each of these schools, we collect course data from DegreeData, a provider of historical course catalogs for a wide range of universities starting from 2007. From this database, we collect all available course catalogs, which are often available on the annual level. Within these catalogs, we manually identify all accounting courses offered (identified via course codes; e.g., "ACCT", "ACT", "ACC") and we collect the name of the course and its description, if this information is available.

4.2 Research Design

We use the staggered introduction of the 150-hour rule over time, along with each state's corresponding change in the number (or share) of accounting credits required for CPA licensure, to identify the impact of accounting-specific education requirements on worker outcomes. We estimate the following specification:

$$Y_{i,s} = \beta_1 \times Treatment\ Cohort_{s,t} \times \Delta Accounting\ Credits_s + \beta_2 Treatment\ Cohort_{s,t} + \beta_3 \Delta Accounting\ Credits_s + \alpha_s + \alpha_t + \epsilon_{i,s,t}$$

where i denotes the worker, s denotes the state the worker is licensed in, and t denotes

[5]One thing to note is that we are not able to collect education requirements data for 7 states: Arkansas, Kentucky, Maryland, North Carolina, Ohio, Tennessee and Utah. We are unable to do so because, for these states, historical versions of their administrative codes can only be accessed through physical archives, or they do not make historical versions going back to the pre-150-hour-rule period easily available to the public.

the year the worker obtains their license. We include state and licensure-year fixed effects, and cluster all standard errors on the state level. $Treatment\ Cohort_{s,t}$ refers to whether the individual belongs to a treatment cohort, which is defined as a cohort of workers who obtain their license after their state has passed the 150-hour rule. $\Delta Accounting\ Credits_s$ refers to the magnitude of the difference in accounting course credits required in the pre- and post-150-hour rule periods. We obtain data on these accounting course credits by tracking section references containing CPA education requirements in each state's historical statutes and administrative codes.

In our main specifications, we use two variations of $\Delta Accounting\ Credits_s$ to measure the intensity of the accounting-specific credit change: (i) the raw difference in the number of required accounting credits pre- and post-150-hour rule, and (ii) the change in the proportion of required accounting credits (relative to the total number of credit hours needed for licensure) pre- and post-150-hour rule. Conceptually, the coefficient of interest, β_1, captures the effect of an implementation of the 150-hour rule that required "X" amount more (or less) accounting-specific credits relative to the pre-150-hour-rule regime. All outcomes are constructed at the individual worker level and represent the accumulated outcomes of workers over a specified period following their licensure. For each worker, we only retain positions that those workers that start after obtaining their license. In our main tests, we construct workers' outcomes over several time horizons: (i) 5 years after licensure, (ii) 10 years after licensure, and (iii) all positions they held after licensure.

4.3 Descriptive Statistics

We tabulate the descriptive statistics for our sample in Table 1. The descriptive statistics reveal that the average increase in the number of accounting-specific credit requirements in our sample is between 8 and 9 semester hours, which is equivalent to approximately 3 semester-long courses. The mean change in the proportion of accounting-specific credit hours is between 0.02 and 0.03, with the standard deviation being 0.09. This statistic indicates

that there is substantial variation in how states changed the proportion of accounting-specific credit requirements after the 150-hour rule.

In Figure 4, we plot event studies using the approach in de Chaisemartin and D'Haultfœuille (2024), which corrects for common issues documented with staggered difference-in-differences (DID) designs such as bias produced by heterogeneous and dynamic treatment effects (de Chaisemartin and D'Haultfœuille, 2020; Callaway and Sant'Anna, 2021; Sun and Abraham, 2021; Baker et al., 2022).[6] Notably, unlike most other standard staggered difference-in-differences approaches, de Chaisemartin and D'Haultfœuille (2024) allows for designs with continuous treatment exposure. As shown in Figure 4, focusing on the three cohorts before and after rule adoption, the effects appear to unfold only after the first post-rule cohort. The figure also shows that the pre-rule-change trends are not systematically different from zero.

5 Results

5.1 Accounting Course Requirements and University Courses

We begin our empirical examination by assessing whether the course requirements are binding. In Panel A of Table 2, we find that the course requirements lead to more accounting courses offered at universities. The coefficient magnitude in Column (1) implies that within a given university, a one-unit change in the raw number of credits required leads to an increase of 0.38 in the number of accounting courses offered. This coefficient implies a nearly 1:1 mapping between the requirements and the courses offered, since a typical course in our sample is 3 credits (or semester hours). Thus, a 3-credit increase in required accounting courses would imply an increase of 1.14 accounting courses. In Panel B, we further explore what type of accounting courses are added when the requirements increase. We find that the requirements lead to more advanced and non-principles courses (i.e., not introductory accounting courses) being added. We do not find that the requirements lead to an increase

[6] We also plot the event studies using a traditional two-way fixed effects design in Figure A3.

in introductory course offerings, consistent with the requirements leading universities to add more specialized accounting courses.

Further, to examine the types of courses licensees enroll in to satisfy the accounting-specific coursework requirements, we analyze whether stricter accounting course requirements affect the likelihood of completing a Masters degree in specific subjects. In Panel D of Table 2, we find that stricter accounting course requirements increase the likelihood of completing a Masters degree in Accounting, while reducing the likelihood of completing a general Business Masters degree or MBA. This pattern suggests that, in states with more extensive accounting-specific coursework requirements, prospective licensees may enroll in Accounting Master's programs in order to satisfy the mandated credit requirements. This result implies that the coursework requirements not only affect the training that CPAs receive but also the degree they can earn, which may impact their career trajectories.

5.2 Accounting Course Requirements and Accounting Positions

We begin our empirical examination by assessing the impact of accounting course requirements on the share of time that workers spend in accounting relative to other occupations.[7] In Panel A of Table 3, we find that accountants subject to an increase in the number of accounting credits end up spending more of their career in accounting-specific positions. In Column (1), using the raw increase in the number of credits as our measure of treatment intensity, we find that a higher number of required accounting credit hours leads to a greater share of that accountant's positions being in the accounting occupation within five years of licensure. In Columns (2) and (3), we increase the horizon to include ten years after licensure and the worker's entire career, respectively, and find similar results across these different horizons.

In Columns (4) through (6), we use the proportion of accounting credits (relative to the

[7]In our main analysis, we define "accounting" positions via occupation codes assigned by Revelio Labs (i.e., k1500). We assign a position as "accounting" if it contains any of these terms: accountant, accounting, tax, audit, financial reporting, controllers, accounts receivable, accounts payable, bookeeper, treasurer. We assess the robustness of our results to alternative classifications of accounting positions in Table XX.

total number of credit hours required) as our measure of treatment intensity. Consistent with Columns (1) to (3), we find that CPAs in states that implemented the 150-hour rule with larger increases in the proportion of mandatory accounting credits spend more of their career in accounting positions. In terms of economic magnitude, a one standard deviation change in the proportion of accounting credit hours required leads to a 2-3 percentage point (about 5-6% relative to the mean) increase in the share of accounting-specific job positions. The magnitudes and overall results are consistent when considering horizons of five and ten years, as well as over the span of the worker's entire career.

In Panel B of Table 3, we assess the impact of the accounting credit requirements on the proportion of an individual's career spent in accounting-specific positions. Overall, our findings are consistent with those in Panel A. In terms of economic magnitude, we again find that a one-standard-deviation change in the proportion of accounting credit hours required leads to a 2-3 percentage point (about 5-6% relative to the mean) increase in the share of years spent in accounting-specific positions. The collective results are consistent with the notion that workers subject to more mandatory accounting courses spend a greater portion of their careers in accounting-specific positions.

5.3 Accounting Course Requirements and Job Mobility

Next, we assess the impact of accounting credit requirements on workers' mobility, both within accounting and across occupations. We conduct this analysis to disentangle whether the higher share of time spent in accounting is purely driven by employees' initial post-licensure placements into those positions or if the education requirements also affect their mobility across positions and occupations more generally.

In Panel A of Table 4, we first look at whether the accounting credit requirements affect *overall* job mobility. We find that, in most of our specifications, the number of accounting course requirements does not significantly impact the likelihood that an individual switches positions during their career. In Columns (1) and (4), using a five-year horizon post-licensure,

we do not find that the additional credit requirements significantly impact the likelihood that a worker switches jobs. In Columns (2) and (5), using a ten-year horizon post-licensure, we also do not find a significant relationship between the number of accounting course credits required and the likelihood of a job switch. However, when examining the span of a worker's entire career, as shown in Columns (3) and (6), we find that workers subject to the more stringent requirements are more likely to switch jobs at some point during their career. We interpret the results as suggesting that, if anything, the accounting-specific credit requirements increase the overall likelihood that a worker switches positions during their career.

In Panels B through D, we further decompose workers' job switches by grouping them into accounting and non-accounting job switches. We define accounting job switches as ones that involve a worker switching into an accounting position. We define a non-accounting job switch as one that involves a switch into a non-accounting position. Our analyses in these panels are also restricted to workers who switch jobs at least once during their careers. In Panel B of Table 4, we find that a one-standard-deviation increase in the proportion of required accounting credit hours decreases the proportion of non-accounting job switches by 3-4 percentage points. We document similar insights in Panels C and D, which examine the impact of the credit requirements on the likelihood of a job switch being either accounting or non-accounting, respectively. That is, we find that a higher number of accounting-specific credit requirements leads to a higher likelihood of an accounting job switch and a lower likelihood of a non-accounting job switch.

5.4 Accounting Course Requirements and Worker Earnings

Having documented that accounting-specific course requirements appear to reduce the cross-occupation mobility of accountants, we turn to assessing how the credit requirements impact accountants' earnings.

In Panel A of Table 4, using Revelio salary data, we find that workers who are subject to a higher number of accounting-specific credit requirements earn less than those who are

subject to fewer accounting-specific credits.[8] These results are economically and statistically significant. We find that a one standard deviation change in the proportion of accounting-specific credits required leads to a 2-5% decline in the average salary that a CPA earns during their career. Importantly, the reduction in salary should be interpreted as a reduction in the licensing premium, rather than an absolute decrease in salaries (i.e., relative to non-licensed accountants). These results are consistent with the accounting credit requirements imposing barriers on workers seeking career flexibility, rather than reflecting accountants' choice to stay within the boundaries of their occupation. Another notable trend is that the earnings effect is stronger at shorter time horizons (e.g., five years) than at longer time horizons over an accountant's entire career.

In Panel B, we replicate the wage results using data from the Current Population Survey (CPS). The advantage of the CPS data is that it reflects accountants' actual wages. The drawback of the CPS data is that its anonymized nature prevents us from matching individual CPAs by name and, consequently, from defining treatment by year of initial licensure. Instead, we assess the impact on *all* accountants in a given year. Under this alternate treatment definition, we expect attenuated effects in the initial periods—since only a small fraction of accountants will be newly licensed CPAs subject to the rule—with effects increasing over time as this fraction grows. We find similar results in direction and magnitude to those in Panel A. The consistency of the impact across the two datasets, despite their relative strengths and weaknesses, provides evidence that accounting-specific requirements appear to reduce earnings.

[8]One limitation of this earnings metric is that it typically reflects predicted rather than actual wages. Chen et al. (2024) validated that it closely resembles the wage distribution from administrative sources in the aggregate. For our purposes, the estimated nature of the wage data poses a smaller challenge because we examine typical salary differences *across* positions held by CPAs with varying levels of accounting-specific education, rather than identifying small individual wage variations that would require precise data, similar to the use of this data by Dorn et al. (2025).

5.5 Mechanisms

5.5.1 Accounting Course Requirements and Accounting Performance

Seniority and Promotions Our first supplemental test studies whether the accounting-specific credit requirements lead to a change in the likelihood of promotion for CPAs. The reduction in earnings documented in Section 5.3 could reflect that CPAs subject to the accounting-specific credit requirements receive fewer promotions due to a lower overall ability, rather than the *specificity* of their skill set. In Panel A of Table 6, we find in Columns (1) and (4) using a five-year horizon and Columns (2) and (5) using a ten-year horizon after licensure that there are no significant differences in the seniority (or promotion behavior) between workers subject to the more accounting-specific credit requirements versus those who are not.

In Columns (3) and (6), we find that if anything, workers subject to the accounting-specific credit requirements are more able to rise to senior positions during the course of their careers. This comports with the attenuation of the earnings effects once we consider longer time horizons in Table 5. That is, while workers subject to the more accounting-specific credit requirements are less likely to move across occupations (to higher-paying opportunities), they are more likely to ascend the ranks within accounting, which helps in the long run to offset their lower earnings potential. In Panel B, we use an indicator for whether the individual ascends above the manager level in their career, and throughout Columns (1) through (6), we do not find significant evidence that the course requirements aid this. Thus, the increase in seniority documented in Panel A should be viewed as a natural consequence of lower attrition (i.e., since workers do not have good exit opportunities, they can ascend to a slightly higher rank). The fact that the results in Panel B suggest this result does not hold for promotions to the highest levels (e.g., partners, CFOs, controllers) indicates that it is likely not a consequence of an improvement in accounting capabilities per-se.[9]

[9] If this were the case, we would expect higher likelihoods of promotion regardless of the level.

Professional Misconduct and CPA Exam Performance We turn to testing whether accounting-specific credit requirements lead to higher quality accountants, in terms of their CPA exam performance and their professional misconduct rates. While no complete measure of "accountant quality" exists, these two measures provide two complementary dimensions of quality. CPA exam performance offers a direct measure of accountants' knowledge of essential accounting concepts. These exams span audit, tax, regulatory requirements, and accounting-related aspects of business law. The drawback of this measure is that it does not reflect performance on the job, as the exam occurs pre-licensure. Our second measure of quality, the number of professional misconduct rates as defined and collected by Sutherland et al. (2024), offers an on-the-job measure of quality. However, misconduct charges are relatively rare occurrences, and only capture serious breaches of professional conduct that may not capture the nuances of an accountant's "quality." Nevertheless, the two measures together have complementary strengths and weaknesses.

We find in Panels A and B of Table 7 that we do not observe any significant change in misconduct rates or CPA exam performance following the 150-hour rule's implementation, regardless of whether the state had accounting-specific course requirements or not. This result is generally in line with Sutherland et al. (2024), who find that professional misconduct did not change on average post-150-hour rule. Thus, the accounting-specific requirements do not appear to lead to observable better (or worse) accountants.

5.5.2 Accounting Course Requirements and Skill Concentration

Accounting Course Requirements and Listed Skills Next, we assess whether the accounting-specific credit requirements lead to a higher concentration of skills within a particular area. If skills become more highly concentrated when CPAs are subject to more accounting-specific credit requirements, this would be consistent with the education requirements leading to a more specialized skillset. To explore this question, we utilize data from Revelio Labs, which records the skills that users voluntarily share on their LinkedIn profiles.

This data has several notable limitations. One limitation is that the data is static and is not recorded by Revelio on a time-varying basis. It is possible that the skills recorded on users' profiles were added before they were licensed. This drawback is not particularly problematic for our purposes, since we are primarily interested in whether the education requirements lead to workers with a more concentrated skill set, regardless of whether this materializes from selection (i.e., a more concentrated skill set developed pre-licensure) or from treatment (i.e., a more concentrated skill set post-licensure). Another drawback of the data is the voluntary nature of disclosure; employees may be more likely to disclose skills they believe are substantive but not other common (albeit still essential) skills (Dorn et al., 2025).

We find in Table 8 that skills appear to be more concentrated within an area for cohorts subject to more accounting-specific credit requirements compared to those that are not. We also assess the proportion of accounting-specific skills that are mentioned, and find that this proportion is higher when CPAs are subject to more accounting-specific credit requirements, albeit marginally insignificant ($pval < 0.13$).

5.6 Heterogeneous Impacts of Accounting Course Requirements

Having established that accounting credits requirements reduce cross-occupational mobility and lead to worse outcomes for CPAs in general, we explore whether the effects are heterogeneous across CPAs based on their demographic characteristics. Existing research documents that the costs imposed on workers are especially burdensome for minority CPAs (Sutherland et al., 2024). Following the categorization in Sutherland et al. (2024), we label non-minority CPAs as Asian and White males and all other groups as minority CPAs.

Overall, in Table 9, we find evidence consistent with the notion that accounting-specific credit requirements most strongly affect minority CPAs. While the sum of the coefficients implies that the "silo" effect still applies to non-minority CPAs, the magnitude of the impact is much smaller. We consider these differences in outcomes both within five years of licensure and over a CPA's entire career and find similar results. The persistence of this effect implies

that occupation-specific credit requirements may also perpetuate inequities by primarily reducing the occupational mobility and earnings of minority CPAs.

5.7 Accounting Course Requirements and CPA Licenses

Finally, we assess the impact of accounting-specific credit requirements on individuals' decisions to enter the occupation and to become a licensed CPA. Prior research has already documented that, in general, the 150-hour rule significantly reduced the number of prospective candidates for CPA licensure. In Table 10, we document similar findings. Consistent with the overall costliness of the accounting-specific education requirements to CPAs, we find that the overall number of CPA licenses is lower in states that adopt a greater number of accounting-specific credit requirements. The results demonstrate that the accounting-specific credit requirements not only impact career trajectories but also do so in a meaningful enough way to deter prospective candidates from pursuing a CPA license.

6 Supplemental Results

6.1 Supplemental Results: Cross-Occupation Analyses

6.1.1 Data

We extend our analysis beyond the accounting occupation to examine whether specific course requirements for licensure are associated with reduced occupational mobility and wages across a broader set of licensed occupations. To gather information on occupations' licensure requirements, we start from the Knee Regulatory Center's Annual Snapshot of Licensed Occupations which covers state-level licensing requirements for 55 occupations (Norris et al., 2024). This data covers the exams required, degree requirements, and initial application fees to become licensed for that occupation in the specific state. For each of these occupation-state pairs, we collect the *current* coursework requirements using a combination

of manual resources and OpenAI's API to identify relevant sections in each state's administrative code that contain information on education and course requirements. We employ a sequential search approach: first using OpenAI's GPT-4o model to search for specific coursework requirements, then re-running the query again with GPT-4o if no match is found, and finally employing OpenAI's GPT-5 model if still unsuccessful. If none of the query iterations identify an education code that includes requirements, we classify the occupation-state pair as having no specific coursework requirements and manually verify that no coursework requirements exist. We define *Requires Specific Coursework*$_{s,j}$ as a binary variable that takes a value of one if our procedure identifies specific coursework requirements for licensure in occupation j in state s, and 0 otherwise.

We focus on one key outcome variable for this analysis. *Proportion in Occupation*$_{i,j}$ measures the total number of days individual i was employed in licensed occupation j, divided by the total number of days individual i was employed in any occupation. We calculate this variable using employment position data from Revelio Labs' Individual Workforce dataset. We identify individuals employed in licensed occupations using the SOC occupation codes from the Knee Regulatory Center's dataset, manually assigning the closest licensed occupation to matched k1500 occupation codes from the Revelio data. The k1500 code provides a highly granular classification of employment positions as professional roles. We assign one licensed occupation to each k1500 code, though a licensed occupation may correspond to multiple k1500 codes. We successfully match 17 of the 55 licensed occupations from the Knee Regulatory Center dataset to at least one k1500 role (reported in Figure A4). For each occupation, we calculate the proportion of an individual's career spent in positions whose k1500 classifications correspond to that licensed occupation, beginning from the first time the individual was employed in that occupation. We define the state of licensure as the state where the individual was first employed in a k1500 role matched to the licensed occupation.

6.1.2 Research Design

Our research design exploits differences in coursework requirements across occupations and states. We estimate the following specification:

$$Y_{i,s,j,t} = \beta_1 \times \textit{Requires Specific Coursework}_{s,j} + \beta_k \sum Controls_k + \alpha_{s,t} + \alpha_{j,t} + \epsilon_{i,s,j,t}$$

where i denotes the worker, s denotes the state of licensure, j denotes the licensed occupation and t denotes the cohort or year depending on the outcome variable used for the estimation. We employ different combinations of state, occupation, and time/cohort fixed effects, excluding state $\times$ occupation fixed effects. In the most stringent specification, we include state $\times$ year/cohort and occupation $\times$ year/cohort fixed effects. These fixed effects control for confounding state-level shocks in specific years (by comparing across occupations in a given state and year), and potential occupation-specific shocks in specific years (by comparing within an occupation but across states in a given year). We cluster standard errors at the state $\times$ occupation level (i.e., the level at which "treatment" varies).

6.1.3 Results

We tabulate the results of our cross-occupation tests in Table 11. In Panel A, we explore the association between a licensed occupation's coursework requirements and the proportion of workers' careers spent in their occupation. Across specifications, we find that an occupation requiring specific coursework is associated with a 2 percentage-point higher share of positions within that occupation throughout the worker's career.

In Panel B, we interact the course requirements with each occupation's *other* licensing requirements. We focus on the key requirements of these licensing regimes: the number of exams, degree requirements, and initial fees. In Column (2), we find that the association is stronger for occupations with a minimum degree requirement. In Column (3), we find

that there is no significant incremental association when occupations' course requirements are interacted with an indicator of whether the occupation has an above-median initial application fee. In Column (4), we find that the association between the proportion of a worker's career spent in their occupation and course requirements is stronger for occupations with more exams. In Column (5), pooling all of these other requirements into one regression in a horse race, we find that occupations that add coursework requirements on top of exam requirements and degree requirements most robustly exhibit the strongest "silo" effect.

The collective findings suggest that the effect we document using our CPA-focused design likely extends beyond accounting. While the results from the analyses in this section should not be interpreted causally because we lack exogenous variation in the number of credits across occupations, the associations we document are similar in direction and magnitude to those in our main analysis. The results also add some nuance to our main findings. Using variation across occupations in other, non-coursework licensing requirements, we document that the silo effect of coursework requirements is strongest when other requirements (e.g., degree and exam requirements) already exist. This finding implies that coursework requirements in and of themselves are not necessarily harmful; the adverse effects materialize when they duplicate (or extend) other requirements that already ensure a baseline level of quality.[10]

6.2 Supplemental Results: Robustness

We conduct several robustness checks to address several concerns. First, most states adopted the 150-hour rule during the 1990s and early 2000s. However, LinkedIn was only launched in 2002, and Revelio Labs did not start collecting profile data until 2008. Thus, one concern may be that the results reflect better data coverage for later cohorts relative to earlier cohorts. While data coverage is generally better for later cohorts, LinkedIn allows and

[10]For example, although we don't explore them in detail in this paper, exam requirements already ensure that licensed professionals meet a reasonable quality threshold (Chilton et al., 2024). Occupations that mandate specific coursework on top of exam requirements experience the strongest "silo" effects, consistent with the idea that these courses do not significantly improve worker productivity or quality but require workers to specialize beyond their private optimum.

encourages users to list all positions they have ever held. Thus, if an individual is included in our data and has some information on the positions they have held, it is likely that this information is complete. We conduct two tests to assess whether the differences in data availability affect our findings in Online Appendix Table A3 and Table A4. In Table A3, we restrict our analyses to states that adopted the 150-hour rule in 2000 or later. This subset of cohorts is likely to have better data coverage than states that adopted the rule pre-2000. In Table A4, we additionally restrict the data to three cohorts before and after the rule change. This further reduces concerns that data coverage systematically differs, because we only compare cohorts within a few years of each other. Applying both of these conditions does not significantly alter the results or key takeaways of the study.

In Table A5, we conduct a robustness test that replaces "zero" credit requirements with a typical number of required accounting credits. While some states do not explicitly specify the number of accounting course credits they need (which we treat as "0" in our primary analyses), they typically require undergraduate training in accounting. Thus, it is unlikely that the states truly require zero accounting credits. In Table A5, for these states, we replace their credit requirements with the average number of required accounting credits (21 credits) and find that our results hold.

In Table A6, to provide evidence that the results are tied to accounting credits specifically (and not just more credits overall, or more credits in another field that is highly correlated with the number of accounting credits), we include the change in the number of general business credits as an additional control. Online Appendix Figure A1 plots the change in required business credits pre- and post-150-hour rule. If the results speak to occupation-specific education requirements, we should only document significant results using the accounting education requirements and not general business credit requirements. Using the raw number of credits as an intensity measure, we find that the results hold for accounting credit hour requirements but not general business credit hour requirements.[11] Finally, while it is unlikely

[11]For this test, we avoid using proportions due to the mechanical relationship between the share of accounting and business credits, given that they are scaled by the total number of credits.

that general economic conditions are correlated with the exact intensity *and* the staggered timing of the 150-hour rule changes we study, in Table A7, we consider a placebo occupation to assess whether our results are driven by general state-level economic factors. As expected, we find no evidence, across all of our main outcomes, that the change in accounting-specific credits affects lawyers' occupational mobility and labor market outcomes. Together, these tests indicate that the effects we identify in our main design are specific to how a change in *accounting credits* affects the outcomes of *accountants* specifically.[12]

7 Discussion

To organize the potential mechanisms at play in our setting and assess whether our collective findings can be rationalized in a single framework, we develop a parsimonious wage-bargaining model. The intention behind our framework is to assess whether a simple model, in which workers allocate education between occupation-specific and general skills, in the presence of a mandate that pushes workers' specialization above the privately optimal level, can generate results consistent with the core set of empirical findings.

7.1 Environment

We consider a case with a representative worker who allocates a unit of education between occupation-specific and general skills. There are two occupations: occupation j and a representative other occupation o. Let $\theta \in [0, 1]$ denote the *share* of occupation-specific skills, which in our framework are useful only in an occupation j while general skills apply to

[12] Although we observe parallel pre-trends in our event studies and our placebo tests rule out many general state-level factors that could confound our findings, we include an additional robustness test in Table A8 where we re-run our main tests with various state-level controls that could potentially predict the timing of the introduction of the 150-hour rule and the intensity of the accounting credit change. We use the variables included in the determinants models of Sutherland et al. (2024) and Cascino et al. (2021) (although it is noteworthy that both studies do not find significant predictive power for nearly all of the factors they consider when modeling the timing of the introduction of the 150-hour rule/CPA mobility provision, supporting the plausibly exogenous nature of the rule changes). We also explicitly include a control for the introduction of the CPA mobility provisions from Cascino et al. (2021) to ensure our findings are distinct from these provisions. We find that our findings are robust to the inclusion of these control variables.

both occupations j and o. Conceptually, we imagine a worker that has already chosen their occupation j but is still selecting their optimal level of specialization in that subject (e.g., a student who has chosen a field to work in but is still deciding on the exact coursework they want to complete). In their selection of the degree of specialization, they also consider the possibility of moving to another occupation o.

7.2 Worker Output

Each worker's output in occupation j is linear in the level of specialization they select:

$$y_j(\theta) = \alpha_j + \beta_j\,\theta, \qquad \beta_j > 0 \tag{1}$$

In the outside-market (occupation o), each worker's output is defined as a combination of the investment in general skills $(1-\theta)$ and the transferrability of the investment in the specialized skill (θ).[13] To capture transferrability of the specialized skill, let $\chi \in \mathbb{R}$ measure how much the specialized education carries over to productivity in occupation o, such that $\chi < 1$ denotes a substitutive relationship, $\chi = 1$ denotes a neutral relationship, and $\chi > 1$ denotes a complementary spillover:

$$y_o(\theta) = \alpha_o + \beta_o\big[(1-\theta) + \chi\,\theta\big] = \alpha_o + \beta_o\big[1-(1-\chi)\theta\big], \qquad \beta_o > 0. \tag{2}$$

In addition to the output that the worker could produce in their outside options, there is also a quadratic cost to switching occupations, denoted by $\frac{\phi}{2}\theta^2$. The value of the outside option is:

$$o(\theta) = y_O(\theta) - \frac{\phi}{2}\theta^2, \phi > 0$$

[13]Notably, we assume that investment in general skills (1 - θ) only contributes to the productivity in the outside occupation. Allowing general skills also to raise productivity in j would rescale the baseline productivity term α_j and does not qualitatively change the predictions.

7.3 Wage Determination and Worker's Problem

We consider a Nash bargaining model in which a worker negotiates a wage with the firm, consistent with the canonical model presented in Mortensen and Pissarides (1994). If bargaining in occupation j breaks down, the worker can exit to occupation o. For simplicity, we assume that wages in the outside occupation o are determined competitively such that $w_o(\theta) = y_o(\theta)$. In occupation j, the wage that prevails from the negotiation process is:

$$w_j(\theta) = \eta\, y_j(\theta) + (1 - \eta)\, o(\theta). \tag{3}$$

Thus, the worker's problem is:

$$\max_{\theta \in [0,1]} \; U(\theta) \equiv w_j(\theta) - C(\theta).$$

where $C(\theta)$ represents the cost of obtaining specialized training. Notably, while our framework does not formally incorporate "switching" between occupations, the difference between the wages ($\Delta = w_j$ - w_o) can be interpreted as the degree of attachment that the worker has to occupation j, since it measures the difference in payoffs the worker would get in occupation j versus occupation o.

7.4 Effect of Specialized Education Requirement

We illustrate the results generated by the framework in Figure 5, where occupation j represents accounting, while all other occupations are represented by occupation o. For simplicity, we assume there are quadratic costs to obtaining more specialization $C(\theta) = \frac{\kappa}{2}\theta^2$. In the figure, we plot the effects of a binding mandate that raises specialization above the privately optimal level under a set of plausible parameters.

The figure illustrates that, under the condition that skills are sufficiently non-complementary, the stylized framework's predictions are consistent with the complete set of core empirical

results.[14] First, raising the share of specialized training above the optimal point $(\bar{\theta} - \theta^*) > 0$ leads to lower outside options. This occurs because the expected wage in the outside occupation declines, given that a higher share of education is in specialized (as opposed to general) skills. Second, in terms of the worker's wage in accounting, two opposing forces determine the new accounting wage: accounting productivity increases (i.e., $y_j(\theta)$) and thus raises wages, but the value of the outside option decreases (i.e., $o(\theta)$), which lowers wages. Given our parameterization, on a net basis, the wage that the worker receives in accounting decreases. Third, while we do not formally incorporate switching into the framework to keep it parsimonious, we interpret $\Delta = w_j - w_o$ as the individual's "attachment" to accounting, which the framework predicts would go up as a result of the mandate on specialized education. Overall, the empirical results can be rationalized within a single stylized framework, and the framework elucidates the conditions that must be true to observe these results (i.e., sufficiently non-complementary skills).

7.5 Other Potential Mechanisms

We present this framework as one potential explanation for our empirical findings. The requirements reduce occupational mobility and wages by essentially introducing a hold-up problem: licensing forces workers to make a sunk investment in occupation-specific skills, limiting their outside opportunities. This lack of portability shifts bargaining power to employers, creating barriers to exit that suppress the licensing wage premium. Since we model wages as being determined through a bargaining process, the framework implicitly assumes that the labor market is not frictionless, either due to costs associated with em-

[14] Notably, the change in occupation j's wage exhibits an ambiguous sign in response to a mandated increase in specialization requirements, even if skills are non-complementary. In the framework, after the mandate is imposed, occupation j wages can only fall if $\chi < 1 - \frac{\eta\,\beta_j}{(1-\eta)\,\beta_o} + \frac{\phi}{\beta_o}\bar{\theta}$. This condition highlights that our results are likely to generalize to occupations where occupation-specific skills are unlikely to be transferable. The threshold also varies with η, implying that for workers with lower bargaining power (η), specialization is more likely to lead to a decline in wages. Similarly, the threshold also varies with β_j/β_o, implying that specialization is more likely to lead to a decline in wages when the occupation of the worker's outside option is, on average, more productive than their current occupation.

ployees switching jobs (e.g., occupational barriers, educational requirements) or employers hiring new employees (e.g., training costs), which creates scope for bargaining on wages. Prior studies suggest that the assumption of imperfect competition may hold in the context of accounting labor markets, given empirical evidence documenting that employers in this industry have non-trivial wage-setting power (e.g., Aobdia et al., 2024; Choi et al., 2025).

The results, however, can also be rationalized in a purely frictionless labor market. This can be true, for example, if the CPA labor market is segmented into multiple differentiated markets (e.g., Breuer et al., 2023; Le, 2025). If the requirements induce workers in one segment (i.e., higher-earning generalists with a stronger desire/ability to move across occupations) to preemptively sort out of the licensing regime, the results could reflect a compositional change in the types of accountants remaining in the CPA labor market. Under this scenario, there could be fewer accountants (i.e., a reduction in aggregate supply), and the remaining accountants could have lower occupational mobility and lower average earnings, consistent with the empirical findings. In reality, both of these mechanisms (treatment and selection) are likely at play.[15] We are agnostic on which exact mechanism drives the results; our primary goal is to document that occupation-specific course requirements *can* create silos that leave workers in that occupation worse off.[16]

[15] In Table A10, we test whether the pool of students majoring in accounting is significantly different after the implementation of the 150-hour rule for high- versus low-credit intensity states. We do not find any significant difference along dimensions such as students' intention to pursue an accounting career, their interest in the subject, or their self-assessed mathematical ability. While these tests do not necessarily rule out the selection interpretation, it provides some evidence that the pool of entrants is not substantially different along these dimensions.

[16] Importantly, under either mechanism, our results indicate that mandated occupation-specific education creates a misallocation in the labor market. If the effects operate primarily through a loss in skill portability, the findings imply a misallocation of skills across workers (i.e., workers are over-specialized relative to their privately optimal level). If the effects operate primarily through worker selection, the results imply a misallocation of workers across occupations (i.e., workers who would otherwise have found it optimal to become an accountant, absent the mandatory course requirements, choose a different occupation). The mechanism only matters in distinguishing who bears the cost, individual workers (direct loss in skill portability) or the profession at large (selection), not in establishing the *existence* of the net cost.

8 Conclusion

Nearly a quarter of the United States workforce requires a government issued license to work, making it essential to understand the labor market implications of occupational licensing requirements. This study investigates how occupation-specific education requirements influence occupational mobility and earnings, focusing on licensed accountants in the U.S.

Our findings reveal that accountants licensed in states with larger increases in accounting-specific education credits spend more time in accounting jobs, switch jobs across occupations less, and experience a reduction in the licensing earnings premium. We also document that these requirements, if anything, lead to more promotion within accounting. Supplemental analyses indicate that the effects represent a specialization of worker skills rather than a general decline in CPAs' accounting performance. The collective results suggest that mandating accounting-specific credits reduces both occupational mobility and the licensing earnings premium, without a meaningful change in CPAs' accounting performance.

We believe that these insights are of interest to regulators. They suggest that the design of licensing regimes (i.e., the share of occupation-specific education requirements) non-trivially harms workers' outcomes and consequently deters entry into the occupation. Thus, regulators should balance the expected benefits of additional occupation-specific coursework and the costs to workers' mobility and earnings.

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Figure 1: Licensed Occupations' Requirements

This figure presents the proportion of occupation-state pairs with specific pre-licensure requirements for professional employment. Data on initial licensing fees (Fee), licensing examinations (Exam), educational degree requirements (Degree), and experience requirements (Experience) are obtained from the Knee Regulatory Center's Annual Snapshot of Licensed Occupations. Data on occupation-specific coursework requirements (Coursework) are collected using a sequential search approach with OpenAI's GPT-4o and GPT-5 models, following the methodology described in Section 6.1.

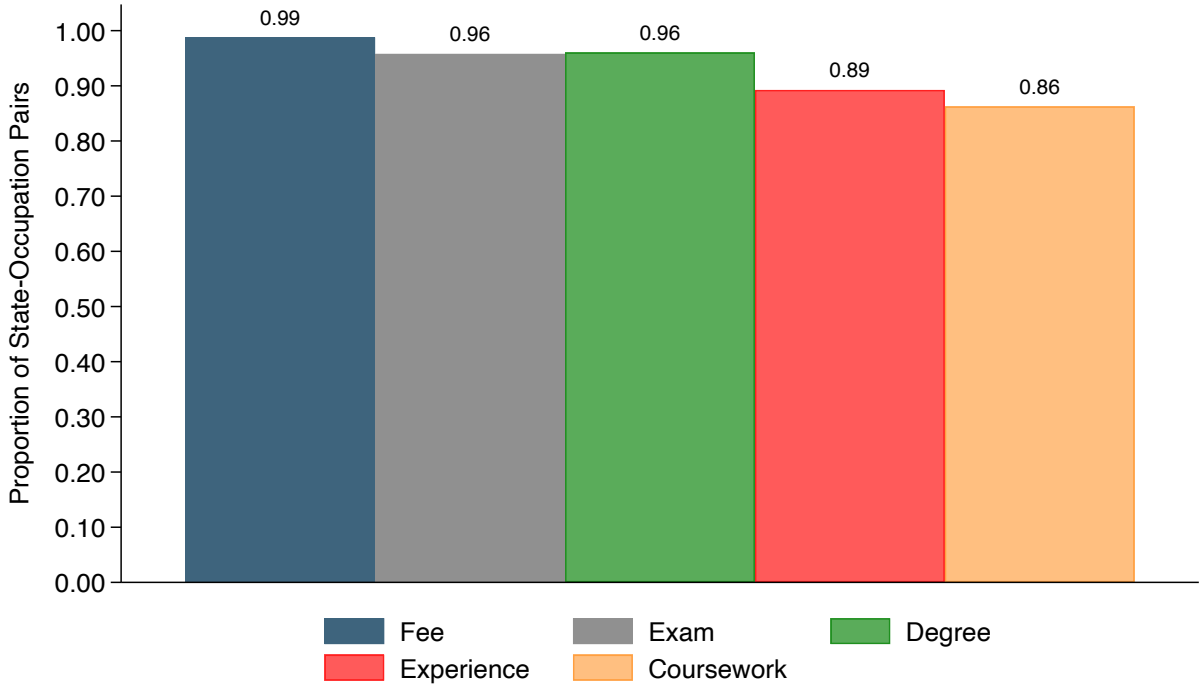
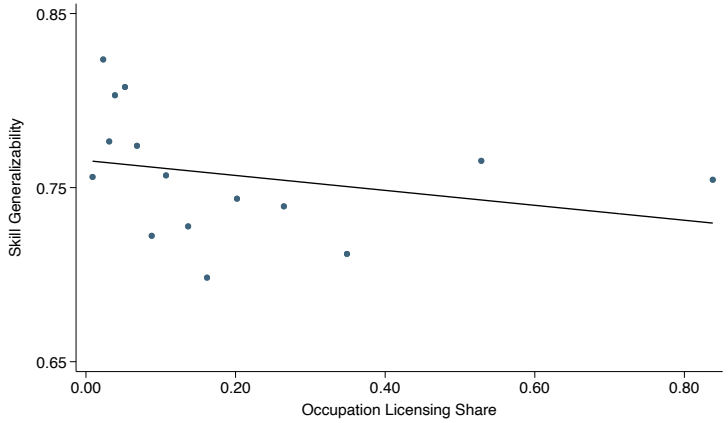
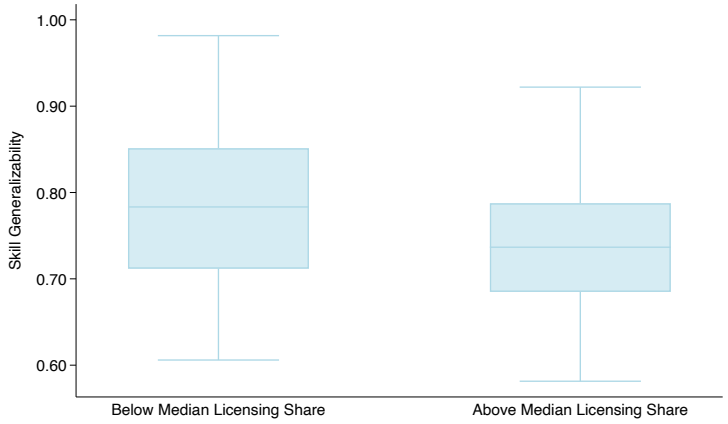


Figure 2: Occupations' Share of Licensed Workers and Skill Specificity

This figure plots the relationship between the skill specificity of occupations and the share of workers in those occupations who are licensed. Panel A shows a binned scatterplot of the occupation's skill generalizability on the vertical axis, and the occupation's share of licensed workers on the horizontal axis. Panel B plots box plots of the skill generalizability measure for occupations with a below-median licensing share and occupations with an above-median licensing share. The occupation's licensing share is computed using the Current Population Survey (CPS) 2016 - 2019 waves in Months 1 and 5 for workers between the ages of 20 and 65 (i.e., when the relevant licensing questions were asked). The skill generalizability measure is constructed in three steps. First, the measure uses data from the O*NET 30.0 Database and takes all of the O*NET skills for a focal occupation that have an above-median importance score. Second, for each skill with an above-median importance score, we compute the share of *other* occupations that label the skill as having above-median importance. Third, the final skill generalizability measure is constructed as the weighted sum of the shares from the second step, where the weights are computed by taking the ratio of the skills' importance score to the focal occupation relative to the sum of importance scores from all above-median skills for that focal occupation.



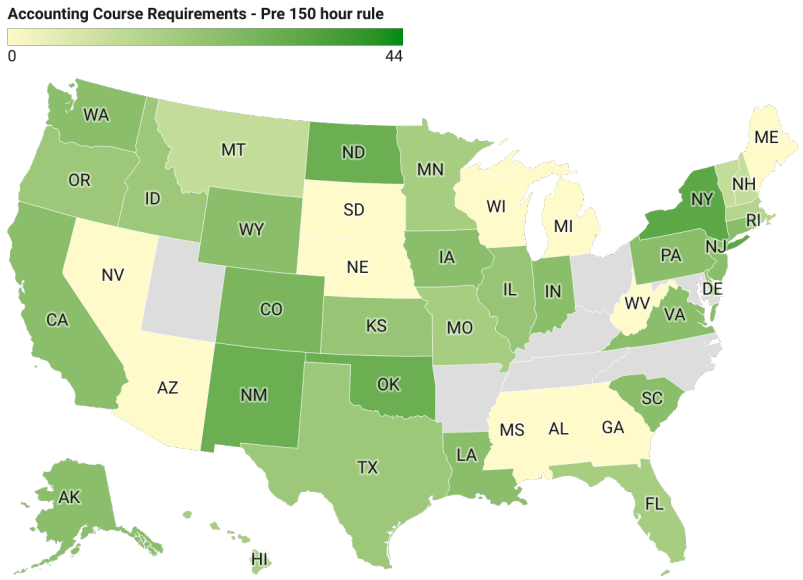
Panel A: Binned Scatterplot of Skill Generalizability and Share of Licensed Workers in Occupation



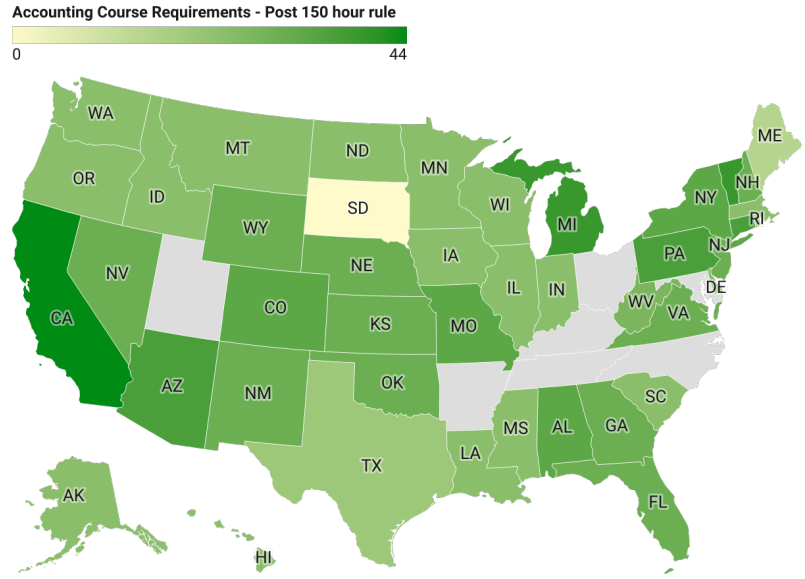
Panel B: Skill Generalizability and for Above/Below Median Licensing Share Occupations

Figure 3: State-Level Accounting Course Requirements

This figure highlights the state-level accounting course requirements using a choropleth map. Panel A records the state-wise accounting course requirements before the 150-hour rule was adopted. Panel B records the state-wise accounting course requirements after the 150-hour rule was adopted.



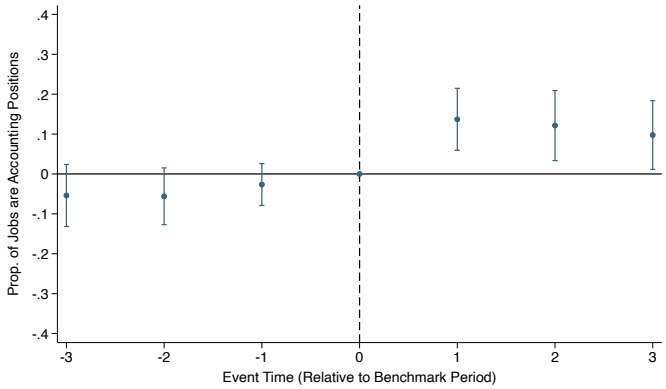
Panel A: State-level Accounting Course Requirements - Before Adoption of 150-hour rule



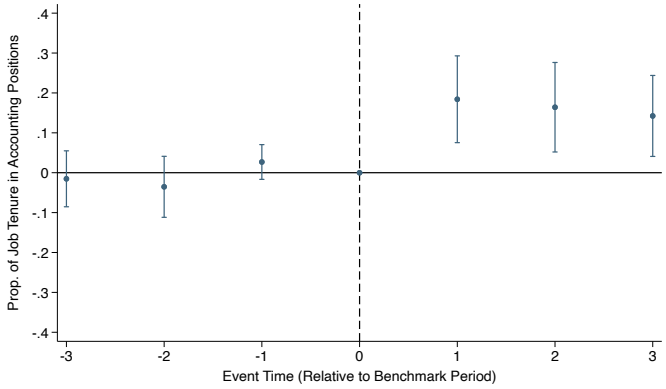
Panel B: State-level Accounting Course Requirements - Post Adoption of 150-hour rule

Figure 4: Event Study Plots (de Chaisemartin and D'Haultfœuille (2024) Approach)

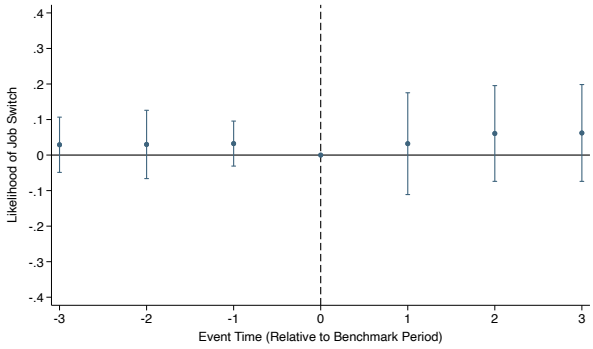
This figure plots event study coefficients for the research design discussed in Section 4.2 using the change in the proportion of credits as the treatment exposure measure, and the approach proposed in de Chaisemartin and D'Haultfœuille (2024), which allows for staggered difference-in-differences designs with continuous treatment exposure. Panel A uses Proportion of Accounting Positions as the outcome variable. Panel B uses Proportion of Tenure in Accounting as the outcome variable. Panel C uses Likelihood of Any Job Switch as the outcome variable. Panel D uses Proportion of Non-Accounting Job Switches as the outcome variable. Panel E uses Average Salary as the outcome variable. Panel F uses Average Seniority as the outcome variable. Panel G uses the Number of Misconduct cases as the outcome variable. Panel H uses the Number of CPA Licenses as the outcome variable. The standard errors are clustered on the state level. The vertical dashed line indicates the point at which the treatment occurs, while the horizontal solid line represents a coefficient of 0. The benchmark period is period t-1. The figure shows 90% confidence intervals.



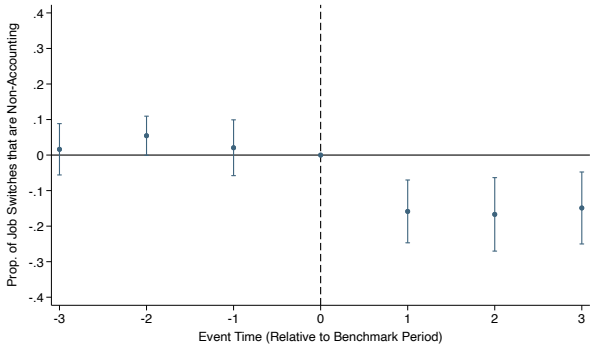
Panel A: Proportion of Accounting Positions



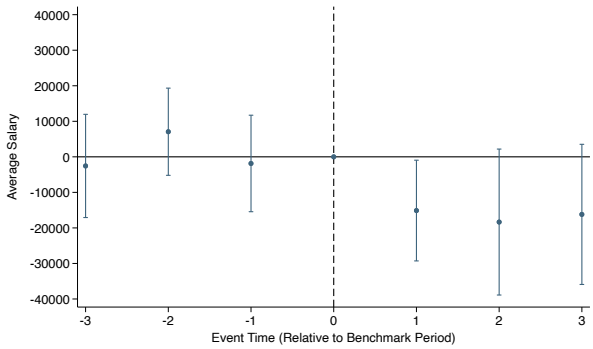
Panel B: Proportion of Tenure in Accounting



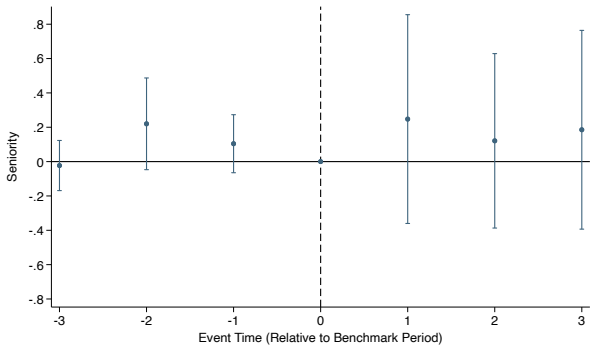
Panel C: Likelihood of Any Job Switch



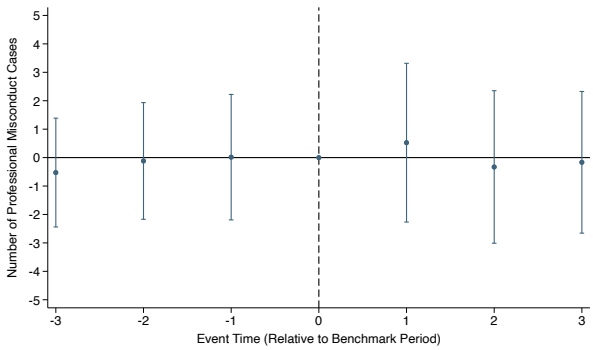
Panel D: Prop. Non-Accounting Job Switches



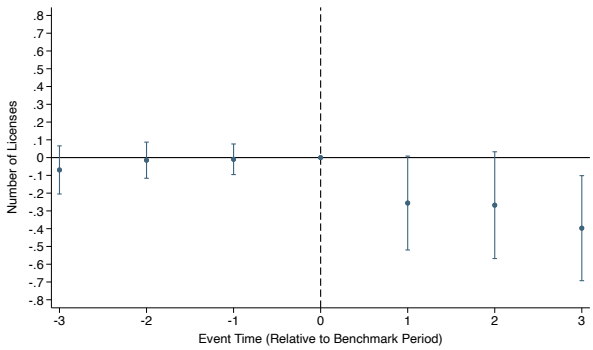
Panel E: Average Salary



Panel F: Average Seniority



Panel G: Number of Professional Misconduct Cases



Panel H: Number of CPA Licenses

Figure 5: Effect of Binding Specialization Mandate (Stylized Framework)

This figure shows the predictions produced from the model in Section 7 after imposing a simulated specialized education requirement. The parametrization is as follows: $\bar{\theta} = 0.5$, $\alpha_j = \alpha_o = 0$, $\beta_j = \beta_o = 1$, $\phi = 2$, $\eta = 0.5$, $\chi = 0.6$, and $\kappa = 0.6$. $\bar{\theta} - \theta^*$ denotes the amount of specialization that the mandate requires above the privately optimal level of θ. w_o denotes the wage in the outside options. w_j denotes the wage in occupation j. y_j denotes the productivity in occupation j. Δ denotes the attachment to occupation j. $o(\theta)$ denotes the value of the outside occupation. $U(\theta)$ denotes the total utility for the worker.

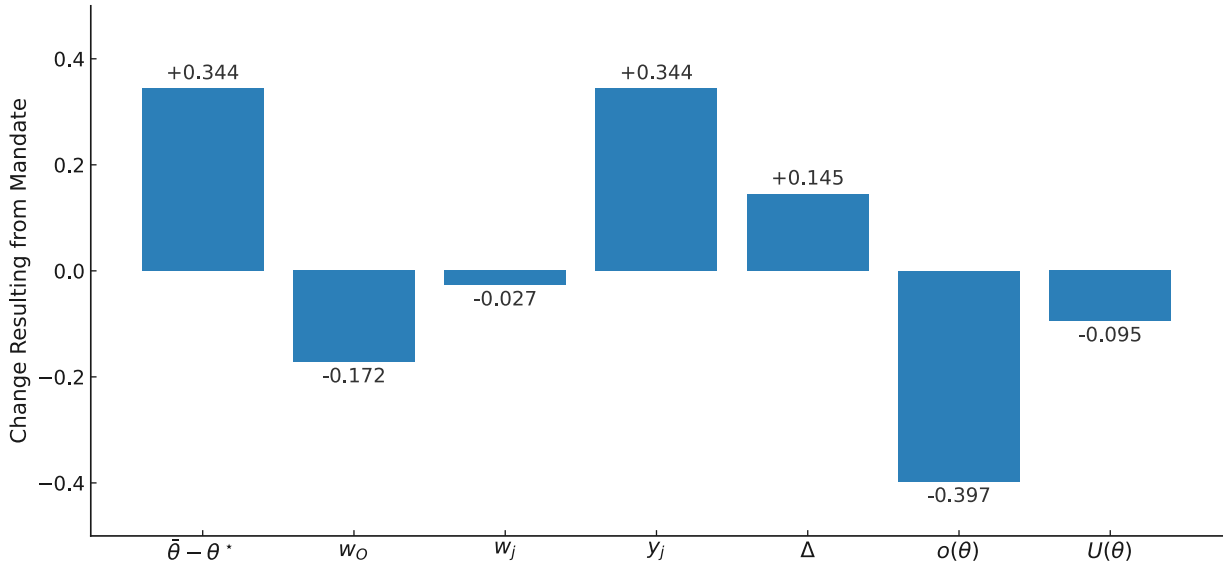


Table 1: Summary Statistics

This table reports the summary statistics for the sample. Panel A reports the summary statistics for the sample within 5 years post-licensure. Panel B reports the summary statistics for the sample within 10 years post-licensure. Panel C reports the summary statistics for the sample within workers' entire post-licensure career. Panel D reports summary statistics for variables that do not vary on the individual level or are time-invariant (i.e., skills).

Panel A: Summary Statistics (Positions Within 5-Years Post-Licensure)

	Obs	Mean	SD	p10	p25	p50	p75	p90
Treatment Cohort	17204	0.70	0.46	0.00	0.00	1.00	1.00	1.00
Change in Number of Accounting Credits	17204	8.18	10.96	0.00	0.00	6.00	9.00	30.00
Change in Proportion of Accounting Credits	17204	0.02	0.09	-0.06	-0.04	-0.00	0.03	0.20
Proportion of Accounting Positions	17204	0.61	0.44	0.00	0.00	0.80	1.00	1.00
Proportion of Years in Workforce Spent in Accounting Positions	16892	0.63	0.50	0.00	0.00	0.90	1.00	1.00
Likelihood of Job Switch	17204	0.60	0.49	0.00	0.00	1.00	1.00	1.00
Proportion of Non-Accounting Job Switches	10312	0.40	0.45	0	0	0	1	1
Likelihood of Accounting Job Switch	10312	0.68	0.47	0	0	1	1	1
Likelihood of Non-Accounting Job Switch	10312	0.49	0.50	0	0	0	1	1
Average Salary	17203	111106.18	61132.47	52000.27	72537.49	97754.89	132997.70	185365.81
Average Seniority	17204	4.22	1.43	2.00	3.00	4.00	5.00	6.00

Panel B: Summary Statistics (Positions Within 10-Years Post-Licensure)

	Obs	Mean	SD	p10	p25	p50	p75	p90
Treatment Cohort	19561	0.66	0.47	0.00	0.00	1.00	1.00	1.00
Change in Number of Accounting Credits	19561	8.43	11.06	0.00	0.00	6.00	9.00	33.00
Change in Proportion of Accounting Credits	19561	0.02	0.09	-0.06	-0.04	-0.00	0.03	0.22
Proportion of Accounting Positions	19561	0.57	0.42	0.00	0.00	0.67	1.00	1.00
Proportion of Years in Workforce Spent in Accounting Positions	19214	0.60	0.50	0.00	0.00	0.71	1.00	1.00
Likelihood of Job Switch	19561	0.69	0.46	0.00	0.00	1.00	1.00	1.00
Proportion of Non-Accounting Job Switches	13547	0.44	0.43	0	0	0	1	1
Likelihood of Accounting Job Switch	13547	0.69	0.46	0	0	1	1	1
Likelihood of Non-Accounting Job Switch	13547	0.57	0.49	0	0	1	1	1
Average Salary	19560	121266.58	65489.15	57776.94	79674.90	107093.25	146876.80	202403.91
Average Seniority	19561	4.57	1.43	2.00	4.00	5.00	5.00	6.00

Panel C: Summary Statistics (All Positions in Post-Licensure Career)

	Obs	Mean	SD	p10	p25	p50	p75	p90
Treatment Cohort	24245	0.57	0.49	0.00	0.00	1.00	1.00	1.00
Change in Number of Accounting Credits	24245	8.92	11.24	0.00	0.00	6.00	9.00	33.00
Change in Proportion of Accounting Credits	24245	0.03	0.09	-0.06	-0.04	0.00	0.03	0.22
Proportion of Accounting Positions	24245	0.55	0.42	0.00	0.00	0.60	1.00	1.00
Proportion of Years in Workforce Spent in Accounting Positions	21755	0.57	0.50	0.00	0.00	0.60	1.00	1.00
Likelihood of Job Switch	24245	0.73	0.44	0.00	0.00	1.00	1.00	1.00
Proportion of Non-Accounting Job Switches	17819	0.48	0.42	0	0	0	1	1
Likelihood of Accounting Job Switch	17819	0.69	0.46	0	0	1	1	1
Likelihood of Non-Accounting Job Switch	17819	0.65	0.48	0	0	1	1	1
Average Salary	24244	129777.10	64690.80	66791.20	87134.35	113532.36	158454.30	215793.05
Average Seniority	24245	4.76	1.48	3.00	4.00	5.00	6.00	7.00

Panel D: Summary Statistics of Other Variables

	Obs	Mean	SD	p10	p25	p50	p75	p90
Number of CPA Licenses	2,507	164.34	363.14	2.00	10.00	34.00	148.00	396.00
Concentration of Skills (HHI)	20,303	0.34	0.20	0.13	0.18	0.29	0.45	0.63
Proportion of Accounting Skills	20,303	0.46	0.24	0.12	0.28	0.47	0.64	0.77

Table 2: Accounting-Specific Requirements and Accounting Courses Offered

This table reports the relationship between state-level accounting-specific education requirements for CPA licensure and the number of accounting courses offered by AACSB-accredited business schools. The dependent variable is the number of accounting courses offered by a school in a given year, constructed using historical course catalogs obtained from DegreeData. Accounting courses are identified based on accounting-related course codes (e.g., "ACCT," "ACC," "ACT"). Accounting-specific requirements are measured as the number of semester hours in accounting courses required for CPA licensure in the state in which the school is located. Panel A reports the total number of accounting courses offered, while Panel B breaks down the course offerings by type (i.e., advanced, principles, and non-principles). Panel C breaks down the likelihood of a course covering a specific type of content (i.e., advanced technical standards, financial statement analysis, etc.). Panel D reports the estimates for the effect of the accounting course requirements on the likelihood of completing an accounting masters, and on the likelihood of completing a business masters or an MBA. Panel D uses *Likelihood of Accounting Masters*$_i$ (Columns (1) and (2)) and *Likelihood of Business Masters/ MBA*$_i$ (Columns (3) and (4)) as the outcome variables. *Likelihood of Accounting Masters*$_i$ is defined as a binary variable that takes the value of 1, if licensee "i" has a master's degree in the field of Accounting, and takes the value of zero otherwise. *Likelihood of Business Masters/ MBA*$_i$ is defined as a binary variable that takes the value of 1, if licensee "i" has a master's degree in the field of Business or an MBA degree, and takes the value of zero otherwise. All regressions in Panels A through C include University and Year fixed effects as indicated in the table. Panel D includes State and Cohort fixed effects. Standard errors are clustered at the state level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and Number of Accounting Courses Offered

	Number of Accounting Courses Offered	
	(1)	(2)
Post-150 Hour Rule × Change in Number of Accounting Credits	0.389***	
	(0.124)	
Post-150 Hour Rule× Change in Prop. of Accounting Credits		51.306***
		(17.561)
Fixed Effects Structure	University, Year	University, Year
Treatment Variable	Num. of Credits	Prop. of Credits
Cluster Variable	State	State
Obs.	6,613	6,613
R^2	0.80	0.80

Panel B: Accounting-Specific Requirements and Number of Accounting Courses Offered (by Type)

	Advanced Accounting	Principles Course	Non-Principles Course	Advanced Accounting	Principles Course	Non-Principles Course
	(1)	(2)	(3)	(4)	(5)	(6)
Post-150 Hour Rule × Change in Number of Accounting Credits	0.051*	0.021	0.344***			
	(0.027)	(0.020)	(0.109)			
Post-150 Hour Rule × Change in Prop. of Accounting Credits				6.608*	2.458	45.217***
				(3.892)	(2.600)	(15.453)
Fixed Effects Structure	University, Year	University, Year	University, Year	University, Year	University, Year	University, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State
Obs.	5,109	5,489	6,591	5,109	5,489	6,591
R2	0.80	0.82	0.80	0.80	0.82	0.80

Panel C: Accounting-Specific Requirements and Accounting Topics Covered

	Technical Topics Covered	FSA Topics Covered	Introductory Topics Covered	Technical Topics Covered	FSA Topics Covered	Introductory Topics Covered
	(1)	(2)	(3)	(4)	(5)	(6)
Post-150 Hour Rule × Change in Number of Accounting Credits	0.001*	-0.000*	-0.000			
	(0.000)	(0.000)	(0.000)			
Post-150 Hour Rule × Change in Prop. of Accounting Credits				0.100**	-0.045	-0.038
				(0.049)	(0.027)	(0.044)
Fixed Effects Structure	University, Year	University, Year	University, Year	University, Year	University, Year	University, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State
Obs.	146,198	146,198	146,198	146,198	146,198	146,198
R2	0.05	0.04	0.08	0.05	0.04	0.08

Panel D: Accounting-Specific Requirements and Likelihood of Different Master's Degrees

	Likelihood of Accounting Masters		Likelihood of Business Masters/ MBA	
	(1)	(2)	(3)	(4)
Treatment Cohort × Change in Number of Accounting Credits	0.001*		-0.001*	
	(0.001)		(0.001)	
Treatment Cohort × Change in Prop. of Accounting Credits		0.193**		-0.118
		(0.090)		(0.070)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State Cohort
Treatment Variable	Num. of Credits	Prop. of Credits	Num. of Credits	Prop. of Credits
Method	OLS	OLS	OLS	OLS
Cluster Variable	State	State	State	State
Obs.	19,090	19,090	19,090	19,090
R2	0.00	0.00	0.00	0.00

Table 3: Accounting-Specific Requirements and Proportion of Career Spent in Accounting

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the career spent in accounting. Panel A uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Panel B uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. *Proportion of Accounting Positions*$_i$ is defined as the total positions licensee i held in accounting roles, divided by the total positions held by i. *Proportion of Years in Workforce Spent in Accounting Position*$_i$ is defined as the total years that licensee i has worked in accounting roles, divided by the total years licensee i has worked for. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. In both Panel A and Panel B, Column (3) uses *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (1) and Column (2) run the same regression as Column (3) using observations within 5 years and 10 years from the time of licensure respectively. Further, Column (6) in both Panel A and Panel B uses *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Column (4) and Column (5) run the same regression as Column (6) using observations within 5 years and 10 years from the time of licensure respectively. All columns in both panels include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and the Proportion of Accounting Positions

	Proportion of Accounting Positions					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	0.002***	0.002*	0.001**			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				0.260***	0.215**	0.183**
				(0.076)	(0.104)	(0.070)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	17,202	19,559	24,237	17,202	19,559	24,237
R^2	0.03	0.05	0.07	0.03	0.05	0.07

Panel B: Accounting-Specific Requirements and the Proportion of Tenure in Accounting

	Proportion of Years in Workforce Spent in Accounting Positions					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	0.002***	0.002*	0.001***			
	(0.001)	(0.001)	(0.000)			
Treatment Cohort × Change in Prop. of Accounting Credits				0.257***	0.196*	0.184***
				(0.078)	(0.106)	(0.063)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	16,862	19,184	21,709	16,862	19,184	21,709
R^2	0.03	0.05	0.07	0.03	0.05	0.07

Table 4: Accounting-Specific Requirements and Job Switching Behavior

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the job switching behavior of licensees. Panel A uses *Likelihood of Job Switch*$_i$ as the outcome variable. Panel B uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Panel C uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Panel D uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Likelihood of Job Switch*$_i$ is an indicator variable that takes the value of 1 if licensee i changes jobs within the given time period. The variable takes the value of 0 otherwise. *Proportion of Non-Accounting Job Switch*$_i$ is defined as the number of job switches to accounting roles divided by the total number of job switches. *Likelihood of Accounting Job Switch*$_i$ is an indicator variable that takes the value of 1 if licensee i switches to an accounting role within the time period. The variable takes the value of 0 otherwise. *Likelihood of Non-Accounting Job Switch*$_i$ is an indicator variable that takes the value of 1 if licensee i switches to a non-accounting role within the time period. The variable takes the value of 0 otherwise. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. In Panel A, Panel B, Panel C and Panel D, Column (3) uses *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (1) and Column (2) run the same regression as Column (3) using observations within 5 years and 10 years from the time of licensure respectively. Further, Column (6) in all panels uses *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Column (4) and Column (5) run the same regression as Column (6) using observations within 5 years and 10 years from the time of licensure respectively. All columns in all panels include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and the Likelihood of a Job Switch

	Likelihood of Job Switch					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	0.001	0.001	0.002***			
	(0.001)	(0.001)	(0.000)			
Treatment Cohort × Change in Prop. of Accounting Credits				0.115	0.123	0.215***
				(0.123)	(0.108)	(0.060)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	17,202	19,559	24,237	17,202	19,559	24,237
R^2	0.15	0.15	0.07	0.15	0.15	0.07

Panel B: Accounting-Specific Requirements and the Proportion of Job Switches Into a Non-Accounting Role

	Proportion of Non-Accounting Job Switch					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	-0.003***	-0.003**	-0.002**			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				-0.356***	-0.356**	-0.276**
				(0.087)	(0.137)	(0.109)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	10,310	13,543	17,816	10,310	13,543	17,816
R^2	0.03	0.04	0.07	0.03	0.04	0.07

Panel C: Accounting-Specific Requirements and the Likelihood of an Accounting Job Switch

	Likelihood of Accounting Job Switch					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	0.003***	0.003***	0.003***			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				0.433***	0.355***	0.333***
				(0.066)	(0.124)	(0.117)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	10,310	13,543	17,816	10,310	13,543	17,816
R^2	0.03	0.04	0.04	0.03	0.04	0.04

Panel D: Accounting-Specific Requirements and the Likelihood of a Non-Accounting Job Switch

	Likelihood of Non-Accounting Job Switch					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	-0.002**	-0.002**	-0.002*			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				-0.301**	-0.289*	-0.200*
				(0.118)	(0.147)	(0.111)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	10,310	13,543	17,816	10,310	13,543	17,816
R^2	0.02	0.03	0.08	0.02	0.03	0.08

Table 5: Accounting-Specific Requirements and Average Salary

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the average salary of licensees. Panel A uses *Average Salary*$_i$ as the outcome variable. *Average Salary*$_i$ is defined as the average salary as recorded in the Revelio Labs for licensee i over the time period. Panel B uses *Salary*$_{i,t}$ as the outcome variable. *Salary*$_{i,t}$ is defined as the salary recorded in IPUMS CPS data for individual i at time t. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. In Panel A Column (3) uses *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (1) and Column (2) run the same regression as Column (3) using observations within 5 years and 10 years from the time of licensure respectively. Further, Column (6) uses *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Column (4) and Column (5) run the same regression as Column (6) using observations within 5 years and 10 years from the time of licensure respectively. Columns (1) to (4) in Panel B use *Change in Number of Accounting Credits*$_i$ as the treatment variable. Columns (5) to (8) in Panel B use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Columns (1), (2), (5) and (6) use OLS regression with the natural logarithm of one plus *Salary*$_{i,t}$ as the outcome variable. Columns (3), (4), (7) and (8) use PPML regression with *Salary*$_{i,t}$ as the outcome variable. Columns (2) and (6) use weighted regressions. Columns (4) and (8) restrict the sample to survey participants aged between 20 and 30 years. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and Average Salary (Revelio)

	Average Salary					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	-0.004***	-0.002***	-0.002***			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				-0.471***	-0.285***	-0.219***
				(0.107)	(0.089)	(0.082)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	17,201	19,558	24,236	17,201	19,558	24,236
R^2	0.06	0.06	0.06	0.06	0.06	0.06

Panel B: Accounting-Specific Requirements and Salary (Current Population Survey Annual Social and Economic Supplement)

	Log(Salary)		Salary		Log(Salary)		Salary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-150 Hour Rule × Change in Num. of Accounting Credits	-0.010***	-0.010***	-0.004**	-0.007***				
	(0.003)	(0.003)	(0.002)	(0.002)				
Post-150 Hour Rule × Change in Prop. of Accounting Credits					-1.341***	-1.343***	-0.565**	-0.821***
					(0.371)	(0.348)	(0.244)	(0.219)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Condition	N/A	N/A	N/A	20-30 Years Old	N/A	N/A	N/A	20-30 Years Old
Model	OLS	OLS	Poisson	Poisson	OLS	OLS	Poisson	Poisson
Cluster Variable	State	State	State	State	State	State	State	State
Obs.	30,949	30,949	30,949	6,387	30,949	30,949	30,949	6,387
R^2	0.02	0.02			0.02	0.02		

Table 6: Accounting-Specific Requirements and Seniority and Promotion

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the seniority and promotion of licensees. Panel A's analysis uses *Maximum Seniority*$_i$ as the outcome variable. *Maximum Seniority*$_i$ is defined as the maximum seniority score (between 0 and 7) as recorded by Revelio Labs for licensee i over the time period. Panel B uses *Above Manager*$_i$ as an outcome, which is an indicator that takes a value of one if the individual ascends to a rank above the first tier of "manager," as defined by Revelio Labs. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. Column (3) uses *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (1) and Column (2) run the same regression as Column (3) using observations within 5 years and 10 years from the time of licensure respectively. Further, Column (6) uses *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Column (4) and Column (5) run the same regression as Column (6) using observations within 5 years and 10 years from the time of licensure respectively. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and Maximum Seniority Level Reached

	Maximum Seniority					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	0.001	0.001	0.005**			
	(0.003)	(0.002)	(0.002)			
Treatment Cohort × Change in Prop. of Accounting Credits				0.099	0.162	0.576**
				(0.352)	(0.259)	(0.266)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	Within 5 Years	Within 10 Years	All Positions	Within 5 Years	Within 10 Years	All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	17,202	19,559	24,237	17,202	19,559	24,237
R^2	0.05	0.06	0.06	0.05	0.06	0.06

	Above Manager					
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment Cohort × Change in Number of Accounting Credits	-0.000	-0.000	0.001			
	(0.001)	(0.001)	(0.001)			
Treatment Cohort × Change in Prop. of Accounting Credits				-0.014	-0.017	0.093
				(0.179)	(0.151)	(0.124)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Time From Licensure	Num. of Credits Within 5 Years	Num. of Credits Within 10 Years	Num. of Credits All Positions	Prop. of Credits Within 5 Years	Prop. of Credits Within 10 Years	Prop. of Credits All Positions
Cluster Variable	State	State	State	State	State	State
Obs.	17,202	19,559	24,237	17,202	19,559	24,237
R2	0.03	0.05	0.06	0.03	0.05	0.06

Table 7: Accounting-Specific Requirements and Accounting Performance

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the variables, measuring accountant quality. Panel A uses *Disciplinary Action*$_{s,c}$ as the outcome variable. *Disciplinary Action*$_{s,c}$ is defined as the count of disciplinary actions against licensees in state s licensed in year c. Panel B uses *Exam Pass Rates*$_{s,t}$ as the outcome variable. *Exam Pass Rates*$_{s,t}$ is defined as the passing rate for a specific CPA exam subject in state s in year t and month m. The subjects include Auditing (AUD), Business Law and Reporting (LPR), Financial Accounting and Reporting (FARE), and Accounting and Reporting (ARE). We use CPA exam performance data between 1995 and 2004. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. Column (1) to (4) in Panel A and B use *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (5) to (8) in Panel A and B use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. The specific type of disciplinary action and exam subject are described in each column of Panel A and Panel B, respectively. All columns include State and Year fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting-Specific Requirements and CPA Disciplinary Actions

	(1) All Actions	(2) Admin Actions	(3) Tax Actions	(4) Prof. Actions	(5) All Actions	(6) Admin Actions	(7) Tax Actions	(8) Prof. Actions
Treatment Cohort	-0.472	0.083	-0.498	-0.598	-0.142	0.244	-0.383	-0.420
	(1.273)	(0.931)	(0.345)	(0.396)	(1.036)	(0.832)	(0.280)	(0.273)
Treatment Cohort × Change in Num. of Accounting Credits	0.061	0.030	0.021	0.033				
	(0.066)	(0.037)	(0.016)	(0.026)				
Treatment Cohort × Change in Prop. of Accounting Credits					7.442	3.651	2.505	3.903
					(7.503)	(4.255)	(1.807)	(2.882)
Fixed Effects Structure	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable								
Obs.	816	816	816	816	816	816	816	816
R^2	0.57	0.51	0.42	0.52	0.57	0.51	0.42	0.52

Panel B: Accounting-Specific Requirements and CPA Exam Performance

	AUD	LPR	FARE	ARE	AUD	LPR	FARE	ARE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-150 Hour Rule × Change in Num. of Accounting Credits	0.011	0.033	-0.027	0.051				
	(0.045)	(0.052)	(0.069)	(0.042)				
Post-150 Hour Rule × Change in Prop. of Accounting Credits					1.621	4.763	-2.696	6.873
					(5.934)	(6.912)	(8.723)	(5.565)
Fixed Effects Structure	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State	State	State
Obs.	430	430	430	430	430	430	430	430
R^2	0.69	0.72	0.41	0.75	0.69	0.72	0.41	0.75

Table 8: Accounting-Specific Requirements and Listed Skills

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the skills listed on a licensee's LinkedIn profile. Column (1) and Column (2) use *Concentration of Skills*$_i$ as the outcome variable. Column (3) and Column (4) use *Proportion of Accounting Skills*$_i$ as the outcome variable. *Concentration of Skills*$_i$ is defined as the HHI of the skills listed on an individual's profile, based on the share of skills required for each occupation. *Proportion of Accounting Skills*$_i$ is measured by dividing the total number of accounting skills reported on licensee i's LinkedIn profile, by the total number of skills recorded. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. Column (1) and Column (3) use *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (2) and Column (4) use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Concentration of Skills		Proportion of Accounting Skills	
	(1)	(2)	(3)	(4)
Treatment Cohort × Change in Number of Accounting Credits	0.001*		0.001	
	(0.000)		(0.000)	
Treatment Cohort × Change in Prop. of Accounting Credits		0.080**		0.072
		(0.039)		(0.047)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort
	Num. of Credits	Prop. of Credits	Num. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State
Obs.	20,297	20,297	20,297	20,297
R^2	0.04	0.04	0.05	0.05

Table 9: Heterogeneous Impact of Accounting-Specific Requirements

This table reports results of the OLS regression investigating the heterogeneous effects of changes in accounting-specific credit requirements on the seniority and promotion of licensees. Column (1) and Column (5) use *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) and (6) uses *Average Salary*$_i$ as the outcome variable. Column (3) and Column (7) use *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) and Column (8) use *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. *Non-Minority*$_i$ is an indicator variable that takes the value of 1 if licensee i is identified as a non-white and non-asian CPA. The variable takes the value of 0 otherwise. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. Column (1), Column (2), Column (3) and Column (4) use all observations. Column (5), Column (6), Column (7) and Column (8) use observations within 5 years from the time of licensure. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Prop. Switches Non-Accounting	(5) Prop. Acct. Positions	(6) Average Salary	(7) Prop. Tenure Acct.	(8) Prop. Switches Non-Accounting
Treatment Cohort × Change in Prop. of Accounting Credits	0.331***	-0.368***	0.462***	-0.363**	0.361***	-0.513***	0.435***	-0.365**
	(0.080)	(0.142)	(0.105)	(0.137)	(0.101)	(0.130)	(0.130)	(0.141)
Treatment Cohort × Change in Prop. of Accounting Credits × Non-Minority	-0.275***	0.253*	-0.326***	0.153	-0.233**	0.083	-0.338***	0.103
	(0.088)	(0.136)	(0.103)	(0.144)	(0.099)	(0.175)	(0.106)	(0.187)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	All Positions	All Positions	All Positions	All Positions	Within 5 Years	Within 5 Years	Within 5 Years	Within 5 Years
Cluster Variable	State	State	State	State	State	State	State	State
Obs.	24,237	24,236	21,749	17,816	17,202	17,201	16,890	10,310
R^2	0.08		0.06	0.09	0.04		0.03	0.03

Table 10: Accounting-Specific Requirements and Number of CPA Licenses

This table reports results of the OLS regression of changes in accounting-specific credit requirements on the total number of CPA licenses in a state. The analysis uses *Total Number of CPA Licenses*$_{s,t}$ as the outcome variable. *Total Number of CPA Licenses*$_{s,t}$ records the total number of CPAs in state s at time t. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. Column (2) uses *Change in Number of Accounting Credits*$_i$ as the treatment variable. Column (2) uses *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Total Number of CPA Licenses	
	(1)	(2)
Post-150 Hour Rule × Change in Number of Accounting Credits	-0.029*	
	(0.017)	
Post-150 Hour Rule × Change in Prop. of Accounting Credits		-3.587
		(2.318)
Fixed Effects Structure	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Prop. of Credits
Cluster Variable	State	State
Obs.	2,493	2,493
R^2		

Table 11: Licensed Occupations' Course Requirements and Worker Outcomes

This table reports the results of the estimation regressing Tenure in Occupation and Wages on coursework specific licensing requirements. Panel A reports the results of the estimation regressing tenure in occupation on specific coursework requirements. All analyses in panel A use *Proportion in Occupation*$_{i,j}$ as the outcome variable. The independent variable of interest is *Requires Specific Coursework*$_{s,j}$. All tests in Panel A employ OLS regression with a varying fixed effect structures. Panel B reports the results of the estimation regressing individual wages on specific coursework requirements. The outcome variable is *Salary*$_{i,t}$. The independent variable of interest is *Requires Specific Coursework*$_{s,j}$. Columns (1) to (4) employ OLS regression using the natural log of 1 plus *Salary*$_{i,t}$ as the outcome variable. Columns (5) to (8) employ PPML regression using *Salary*$_{i,t}$ as the outcome variable. Models (1) to (8) use different fixed effect structures. Panel C reports the results of tests observing the moderation effects of various pre-licensure requirements such as degree requirements, licensing fees and number of exams. The moderator variables are *Degree Required*$_{s,j}$, *High Licensing Fee*$_{s,j}$ and *Number of Exams*$_{s,j}$. All columns in Panel C use OLS regression with *Proportion in Occupation*$_{i,j}$ as the outcome variable. Column (1) of Panel C presents the baseline results similar to those presented in Column (4) of Panel A. Columns (2), (3) and (4) introduce *Degree Required*$_{s,j}$, *High Licensing Fee*$_{s,j}$ and *Number of Exams*$_{s,j}$ as the moderator variables respectively. All lower order variables are included in all moderation tests. In column (5) we present the results of the "Horserace" test where we simultaneously employ all moderating variables in the same specification. We use the same fixed effect structure across all 5 columns. Descriptions of all variables are provided in Table A1. All standard errors are clustered at the State X Occupation level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Effect of Coursework Requirements on Tenure in Profession

	Tenure in Occupation			
	(1)	(2)	(3)	(4)
Requires Specific Coursework	0.020***	0.022***	0.020***	0.019***
	(0.005)	(0.006)	(0.005)	(0.005)
Fixed Effects Structure	State, Occupation, Cohort	State × Cohort, Occupation	Occupation × Cohort, State	State × Cohort, Occupation × Cohort
Method	OLS	OLS	OLS	OLS
Number of Occupations	17	17	17	17
Cluster Variable	State×Occupation	State×Occupation	State×Occupation	State×Occupation
Controls	Yes	Yes	Yes	Yes
Obs.	2,799,590	2,799,409	2,799,542	2,799,362
R^2	0.156	0.165	0.173	0.174

Panel B: Cross-Sectional Tests with Other Licensing Components

	Tenure in Occupation				
	(1)	(2)	(3)	(4)	(5)
Requires Specific Coursework	0.019***	0.015**	0.020***	-0.006	-0.018
	(0.005)	(0.006)	(0.007)	(0.010)	(0.014)
Requires Specific Coursework × Degree Required		0.016*			0.033***
		(0.010)			(0.010)
Requires Specific Coursework × High Licensing Fee			0.003		0.007
			(0.010)		(0.011)
Requires Specific Coursework × Number of Exams				0.019**	0.020**
				(0.008)	(0.009)
Fixed Effects Structure	State × Cohort, Occupation × Cohort	State × Cohort, Occupation × Cohort	State × Cohort, Occupation × Cohort	State × Cohort, Occupation × Cohort	State × Cohort, Occupation × Cohort
Number of Occupations	17	17	17	17	17
Cluster Variable	State×Occupation	State×Occupation	State×Occupation	State×Occupation	State×Occupation
Controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,799,362	2,799,362	2,799,362	2,758,615	2,758,615
R^2	0.174	0.174	0.174	0.175	0.175

Online Appendix

Occupation-Specific Education Requirements and Occupational Silos: Evidence from CPA Licensing Rules

by Anthony Le and Parth Shah

Online Appendix Sections

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A1 Supplementary Online Appendix Analyses

A1.1 Alternate Design — Displacement Shocks

To complement the main analyses, we implement an alternative design that tracks CPAs' career trajectories during periods of major labor-market disruption. In particular, we focus on two periods: the financial crisis (2007-2009) and the COVID-19 pandemic (2020). These periods were characterized by a large wave of involuntary separations (but are not specific to the CPA labor market), and thus offer a setting to examine whether CPAs with more accounting-specific training are less likely to switch out of the accounting occupation. These tests complement the main design because these nationwide shocks are not subject to the same accounting-specific forces that may determine the initial introduction/intensity of the credit requirements (e.g., lobbying from CPAs, fraud). Although we do not find any evidence of systematic correlations between these factors and the intensity of the credit requirement change in Table A8, the displacement-shock design helps to triangulate our findings in a different setting.

In this design, we estimate the following specification:

$$\begin{aligned} Y_{i,s,t} = \beta_1 \times PostCrisis_t \times \Delta Accounting\ Credits_{s,c} + \beta_2 PostCrisis_t \\ + \beta_3 \Delta Accounting\ Credits_{s,c} + \alpha_s + \alpha_c + \alpha_t + \epsilon_{i,c,s,t} \end{aligned}$$

We define $PostCrisis_t$ as equal to 1 if the year is after 2007 for the financial crisis sample, and zero otherwise. For the COVID-19 sample, we define the variable as equal to 1 if the year is after 2020, and zero otherwise. In the lax specification, we include cohort (i.e., year of licensure), state (i.e., state of licensure), and year fixed effects. In the more stringent specification, we include cohort (i.e., year of licensure) and state (i.e., state of licensure) $\times$ year fixed effects. The specification can be interpreted as tracking the career characteristics of CPAs licensed in the same state but who receive different levels of accounting-specific training due to differing cohorts (i.e., pre- and post-150-hour rule). We also focus on the 3 years before and after each displacement event.

In Table A9, we find evidence consistent with the idea that workers with more intense accounting-specific training are bound to the accounting occupation. Although the coefficients are not always statistically significant, they are highly consistent in magnitude with those in the main tests and imply the same insight: CPAs that were required to complete more accounting-specific education are more likely to be in an accounting position (relative to a non-accounting position) post-crisis, and conditional on switching

jobs during that period, are less likely to switch to a non-accounting job.

A1.2 Incumbent CPA Outcomes

In Table A11, we explore the effect of the requirements on incumbent CPAs' outcomes (i.e., workers who already had licenses at the time the rule was introduced). This test serves two purposes: (i) as a placebo test to determine whether the changes are specific to the entering cohorts who are actually affected by the rules, and (ii) to understand whether incumbent CPAs are better off post-rule change. We present two specifications: one that uses State $\times$ Cohort fixed effects, and one that uses Worker fixed effects. We find, in both specifications, that incumbent CPAs' outcomes are unaffected by the rule change across the three main outcomes of interest.

The results indicate that the rule change only affects the outcomes of new entrants (i.e., those who are affected by the rule change) and does not affect incumbent CPAs, who are not subject to the new requirements. Additionally, the results are consistent with incumbents rent-seeking incentives: the main text results suggest that new entrants are worse off (i.e., due to the silos and lower earnings premium) while the tests in Table A11 suggests that incumbents do not see any change in their outcomes (that is, in relative terms, incumbent CPAs in high-accounting intensity states face less qualified competition from new entrants). These overall results are consistent with incumbent CPAs protecting their rents in the profession by ensuring that newly entering accountants are less mobile and earn less. They are also consistent with the finding in Table A8 that state accountancy boards with many incumbent CPAs are more likely to push for the adoption of the stringent requirements.

A1.3 Alternative Occupational Classification

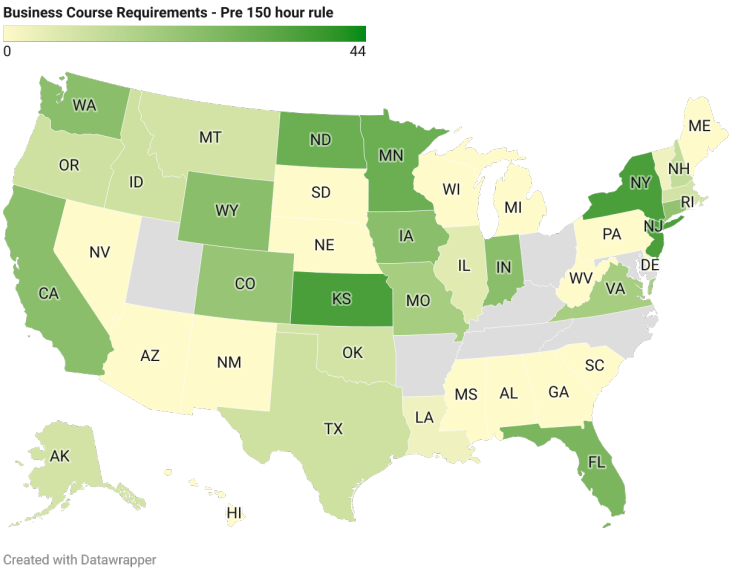
In Table A12, we replicate our main findings using an alternative classification of accounting jobs. One concern with our measure of "accounting" jobs is that it relies on Revelio Lab's occupational classifications. This process relies on Revelio correctly identifying a position's likely occupation, which they explain in detail in their data documentation. Their model incorporates data based on job descriptions, job titles, and work responsibilities to infer occupational classifications for each position. However, the model is inherently a black box, so we do not know the exact process by which occupations are assigned.

As a robustness exercise, we group positions (for the individuals in our sample) into

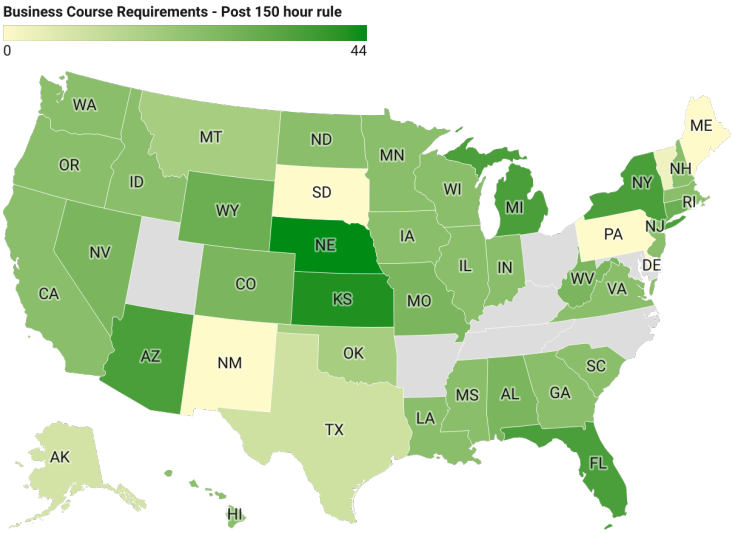
accounting and non-accounting jobs using raw job titles alone. These raw job titles are directly entered by the user and have not been processed by Revelio Labs. Using these job titles, we count the instances of the terms we use to search in Revelio's role_k1500, but instead apply them to raw job titles: accountant, accounting, tax, audit, financial reporting, controller, accounts receivable, accounts payable, bookkeeper, treasurer. The use of this list of terms applies a simple criterion without relying on Revelio's black-box model. In general, we find that the results in Table A12 are quantitatively and qualitatively similar to the results in the main analysis. We only replicate the results for outcomes that may be affected by the occupational classification, and find that the magnitudes and statistical significance are similar using this alternative classification scheme.

Figure A1: State-Level Business Course Requirements

This figure highlights the state-wise course requirements using a choropleth map. Panel A records the state-wise business course requirements before the 150-hour rule was adopted. Panel B records the state-wise business course requirements after the 150-hour rule was adopted.



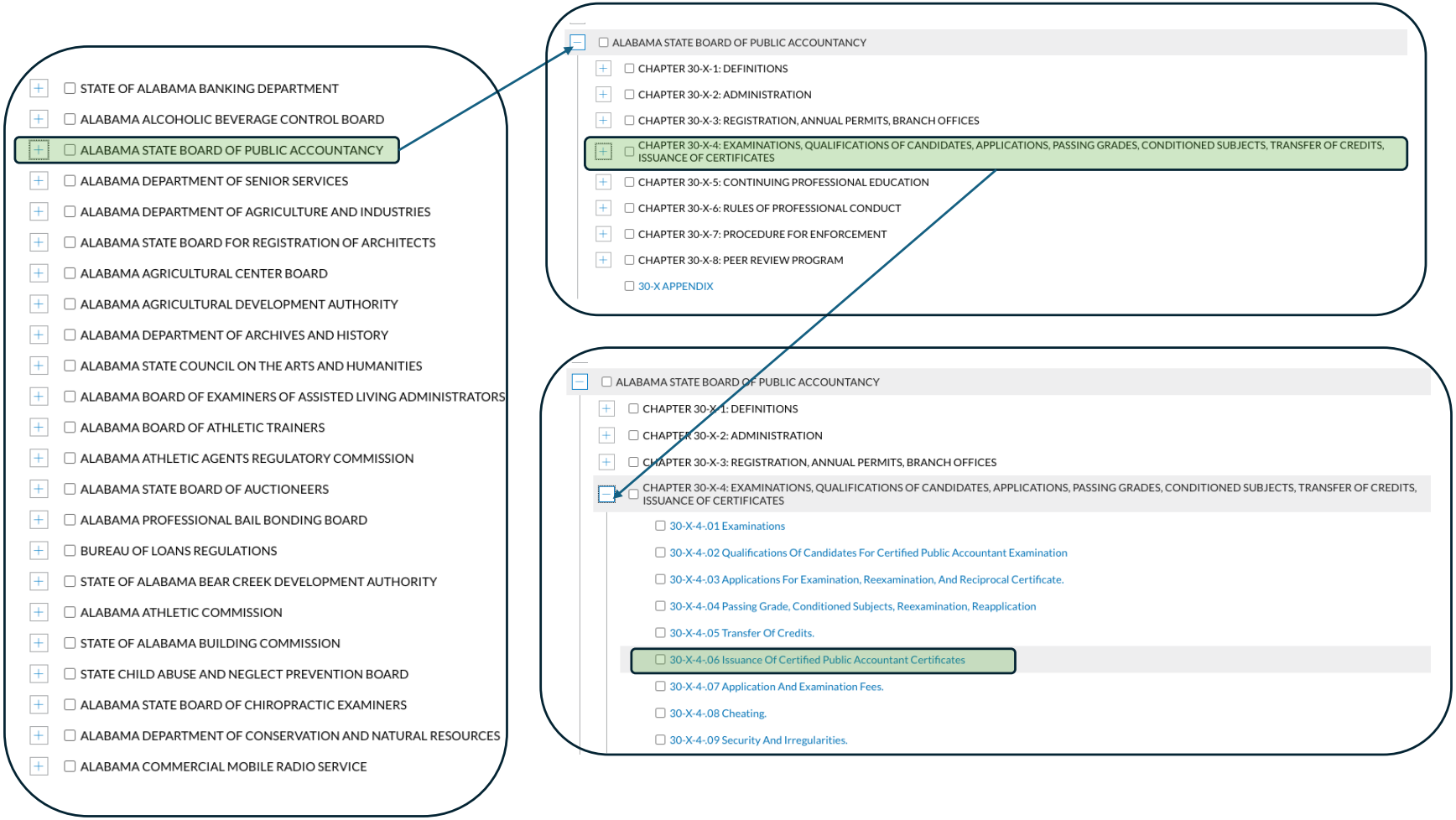
Panel A: State-wise Business Course Requirements - Before Adoption of 150-hour rule



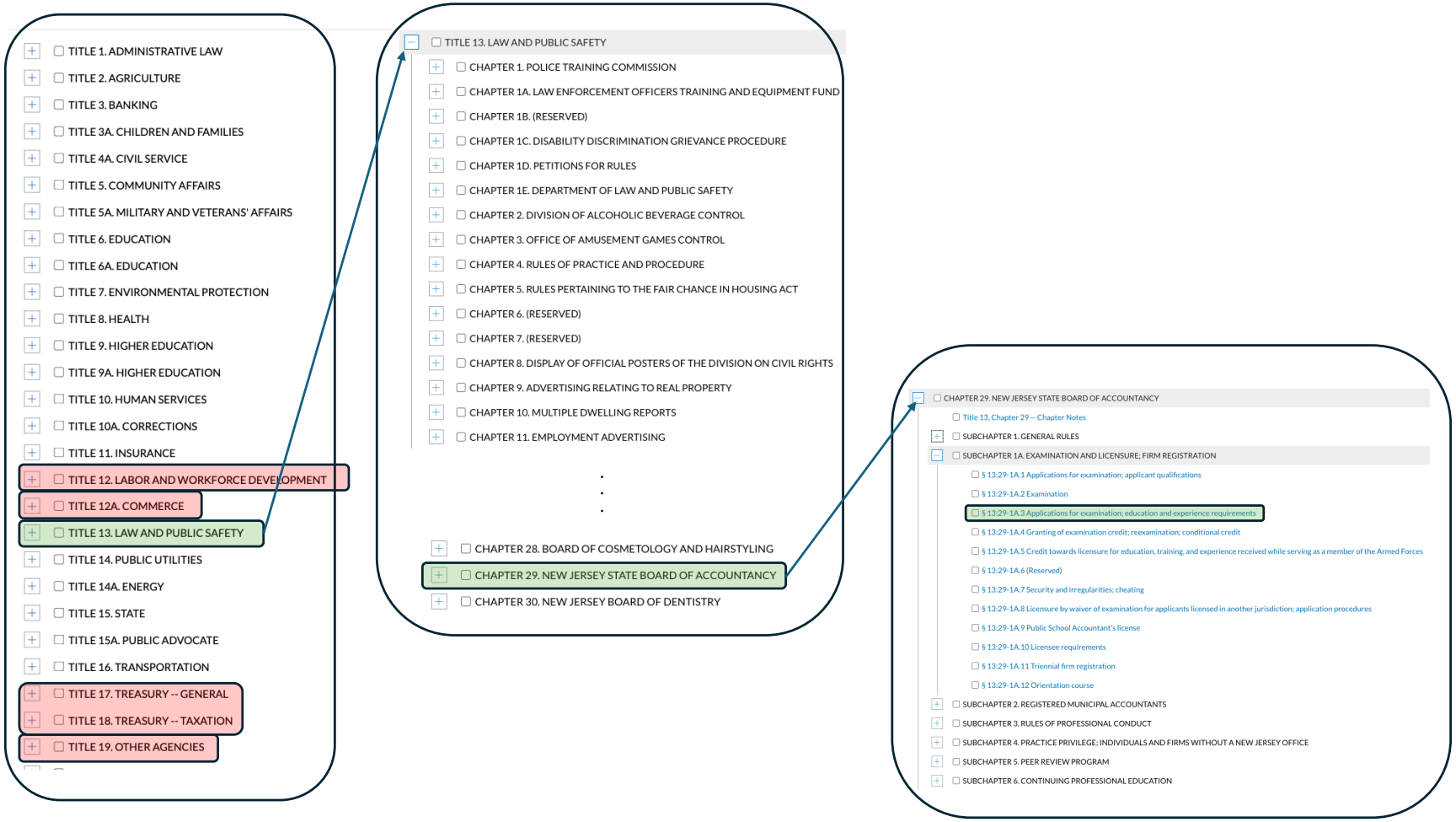
Panel B: State-wise Business Course Requirements - Post Adoption of 150-hour rule

Figure A2: Administrative Code Navigation

This figure highlights the navigation process from the administrative code sections to the CPA education requirements for Alabama and New Jersey. Panel A presents the navigation for Alabama and Panel B presents the navigation for New Jersey.



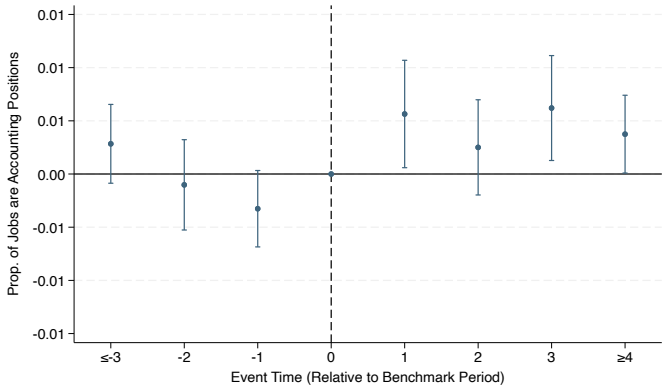
Panel A: Alabama Administrative Code Navigation



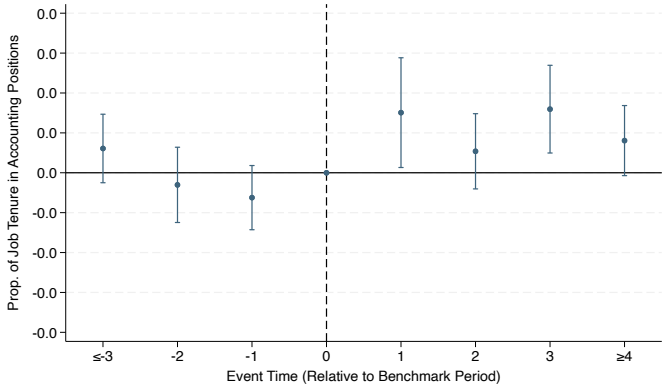
Panel B: New Jersey Administrative Code Navigation

Figure A3: Event Study Plots (Two-Way Fixed Effects)

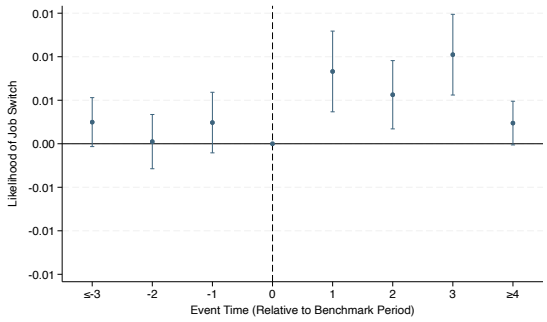
This figure plots event study coefficients for the research design discussed in Section 4.2 using a traditional TWFE design. Panel A uses Proportion of Accounting Positions as the outcome variable. Panel B uses Proportion of Tenure in Accounting as the outcome variable. Panel C uses Likelihood of Any Job Switch as the outcome variable. Panel D uses Proportion of Non-Accounting Job Switches as the outcome variable. Panel E uses Average Salary as the outcome variable. Panel F uses Average Seniority as the outcome variable. Panel G uses the Number of CPA Licenses as the outcome variable. The regressions include State and Year fixed effects, with standard errors clustered on the state level. The vertical dashed line indicates the point at which the treatment occurs, while the horizontal solid line represents a coefficient of 0. The excluded period is period t-1.



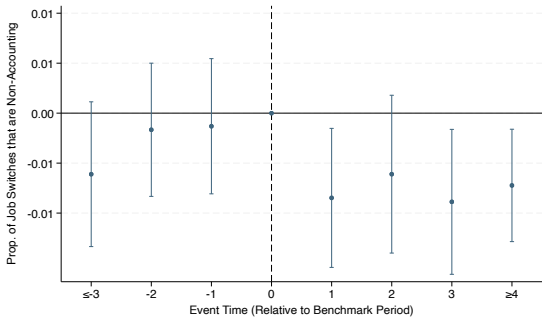
Panel A: Proportion of Accounting Positions



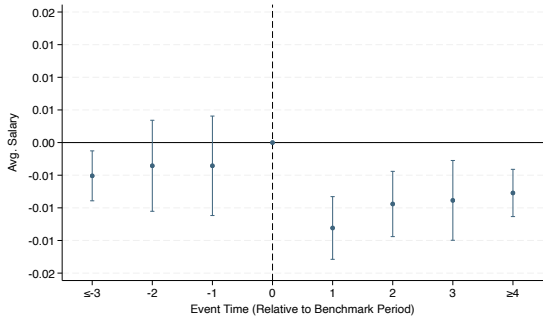
Panel B: Proportion of Tenure in Accounting



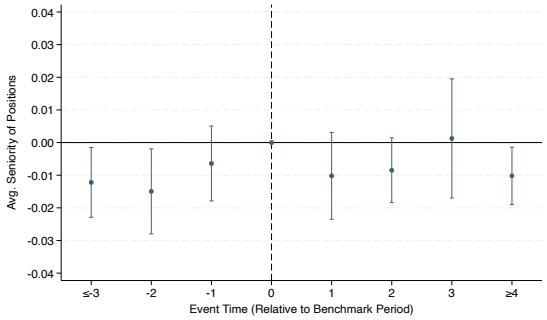
Panel C: Likelihood of Any Job Switch



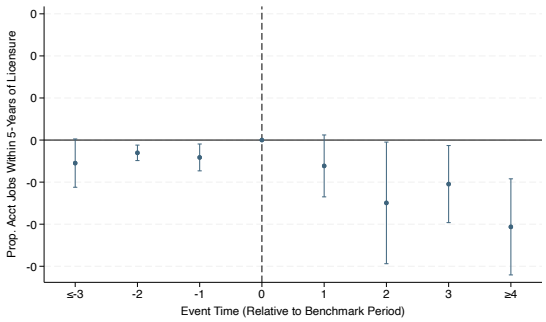
Panel D: Prop. Non-Accounting Job Switches



Panel E: Average Salary



Panel F: Average Seniority



Panel G: Number of CPA Licenses

Figure A4: Cross-Occupation Analyses: Matched Licensed Occupations

This figure reports the matched licensed occupations for the Revelio sample in the cross-occupation analyses conducted in Section 6.1. The figure reports the 17 matched licensed occupations in the Revelio sample.

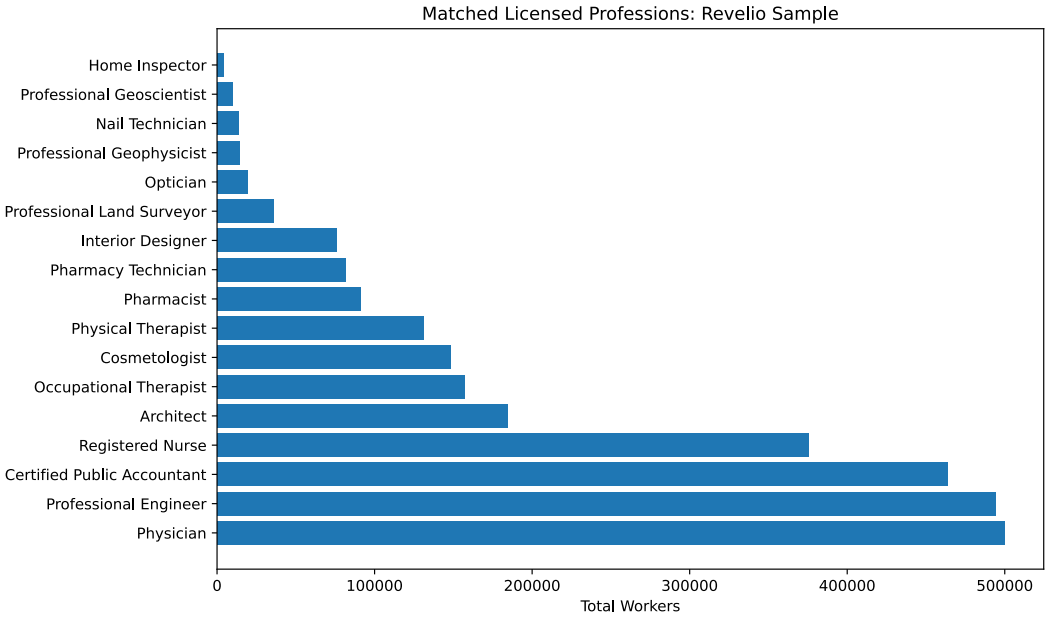


Table A1: Variable Definitions

This table presents the definitions of key variables used in the analysis. Panel A presents treatment variables capturing regulatory changes. Panel B presents outcome variables measuring professional mobility and career progression.

Variable Name	**Description**
Panel A: Treatment and Independent Variables	
Treatment Cohorts$_{s,t}$	Refers to whether the individual belongs to a treatment cohort, which is defined as a cohort of workers who obtain their license after their state has passed the 150-hour rule. It is an indicator variable that takes the value of 1 if a licensee's state of license s has adopted the 150-hour rule in year t.
Change in Number of Accounting Credits$_s$	The pre- and post-150 hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s.
Change in Number of General Business Credits$_s$	The pre- and post-150 hour rule difference in the absolute number of semester hours required to be completed in general business courses for licensure in state s.
Change in Prop. of Accounting Credits$_s$	The pre- and post-150 hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s.
Non-minority$_i$	This variable indicates the predicted non-minority status of licensee i. This variable is an indicator variable that takes the value of 1 if licensee i is identified as a non-white and non-asian CPA. The variable takes the value of 0 otherwise.
Supplementary Independent Variables	

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Variable Name	Description
Requires Specific Coursework$_{s,j}$	This variable is defined as 1, if OpenAi API (GPT 4o or GPT 5) is able to identify specific coursework requirements for licensure in profession j in state s. The variable takes the value of 0 if neither of the models are able to identify specific coursework requirements for profession j in state s.
Degree Required$_{s,j}$	This is a binary variable that takes the value of 1 if there is an educational degree requirement for licensure in profession j in state s. The variable takes the value of 0 otherwise.
High Licensing Fee$_{s,j}$	This is a binary variable that takes the value of 1 if the initial fee for licensure in profession j in state s is above the median fees of all professions in the sample. The variable takes the value of 0 otherwise.
Number of Exams$_{s,j}$	This variable is defined as the number of exams that an individual needs to pass for licensure in profession j in state s.
Panel B: Outcome Variables	
Career Trajectory Variables	
Proportion of Accounting Positions$_i$	This variable measures the share of roles that workers take on in the accounting profession relative to other occupations. This variable is defined as the total positions licensee i held in accounting roles, divided by the total positions held by i.
Proportion of Years in Workforce Spent in Accounting Position$_i$	This variable measures the share of time that workers spend in the accounting profession relative to other occupations. This variable is defined as the total years that licensee i has worked in accounting roles, divided by the total years licensee i has worked for.
Job Mobility Variables	

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Variable Name	Description
Likelihood of Job Switch$_i$	This variable indicates overall job mobility for a licensee i. This variable is an indicator variable that takes the value of 1 if licensee i changes jobs within the given time period. The variable takes the value of 0 otherwise.
Proportion of Non-Accounting Job Switch$_i$	This variable aims at capturing job mobility within the field of accounting. The variable is defined as the number of job switches to accounting roles divided by the total number of job switches.
Likelihood of Accounting Job Switch$_i$	This variable indicates job switch to accounting. This is an indicator variable that takes the value of 1 if licensee i switches to an accounting role within the time period. The variable takes the value of 0 otherwise.
Likelihood of Non-Accounting Job Switch$_i$	This variable indicates job switch to a non-accounting role. This is an indicator variable that takes the value of 1 if licensee i switches to a non-accounting role within the time period. The variable takes the value of 0 otherwise.
Proportion in Profession$_{i,j}$	This variable is defined as the total number of days individual i was employed in a licensed profession j, divided by the total days for which individual i has been employed in any profession.
Supplementary Outcome Variables	
Average Salary$_i$	This variable is defined as the average salary as recorded in the Revelio Labs for licensee i over the time period.
Salary$_{i,t}$	This variable is defined as the salary recorded in IPUMS CPS data for individual i at time t.
Average Seniority$_i$	This variable is defined as the average seniority score (between 0 and 7) as recorded by Revelio Labs for licensee i over the time period.

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Variable Name	Description
Disciplinary Action$_{s,c}$	This variable is defined as the count of disciplinary actions against licensees in state s licensed in year c.
Exam Pass Rates$_{s,t,m}$	This variable is defined as the passing rate for a specific CPA exam subject in state s in year t and month m. The subjects include Auditing (AUD), Business Law and Reporting (LPR), Financial Accounting and Reporting (FARE), and Accounting and Reporting (ARE).
Concentration of Skills$_i$	The Herfindahl Hirschman Index (HHI) for a worker's skills listed on their LinkedIn profile within a given area (grouped by Revelio Labs).
Proportion of Accounting Skills$_i$	This variable is calculated by dividing the total number of accounting skills reported on licensee i's LinkedIn profile, divided by the total number of skills recorded.
Total Number of CPA Licenses$_{s,t}$	This variable records the total number of CPAs in state s at time t.
Intend Accounting Career$_{i,s,t}$	This variable takes a value of one if the student intends to have a career in accounting, and zero otherwise.
Learn Interesting Things$_{i,s,t}$	Derived from the survey question: "In deciding to go to college, how important to you was each of the following reasons? **To learn more about things that interest me**." This variable takes a value of one if the student marked this reason as being "somewhat important" or "very important" and zero otherwise.
Satisfied with Accounting$_{i,s,t}$	Derived from the survey question: "Please rate your satisfaction with your college in each area: **Courses in your major field [Accounting]**" This variable takes a value of one if the student indicated that they were "satisfied" or "very satisfied" and zero otherwise.
Likelihood of Accounting Masters$_i$	An indicator variable that takes the value of 1, if licensee "i" has a master's degree in the field of Accounting, and takes the value of zero otherwise.

Continued on next page

Variable Name	**Description**
Likelihood of Business Masters/ MBA$_i$	An indicator variable that takes the value of 1, if licensee "i" has a master's degree in the field of Business or an MBA degree, and takes the value of zero otherwise.

Table A2: State-Level CPA Education Requirements

This table shows the state-wise credit hour requirements for accounting and business courses before and after the adoption of the 150-hours rules.

		Course-Specific Credit Hours					
		Post-150 hour rule		**Pre-150 hour rule**			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
Alabama	1995	33	27	0	0	Ala. Admin. Code r. 30-X-4-.02	
Alaska	2001	24	9	24	9	12 AAC 04.185	
Arizona	2004	36	36	0	0	A.R.S. § 32-721	
California	2014	44	24	24	24	16 CCR 11	
Colorado	2015	33	27	27	21	3 CCR 705-1 (2.5)	
Connecticut	2000	36	30	24	22	Regs., Conn. State Agencies § 20-280-22	
Delaware	2012	24	0	21	0	CDR 24-100	
Florida	1983	30	36	18	27	Fla. Admin. Code R. 61H1-27.002	

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		Course-Specific Credit Hours					
		Post-150 hour rule		Pre-150 hour rule			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
Georgia	1998	30	24	0	0	Ga. Comp. R. & Regs. r. 20-3-.08	
Hawaii	2001	24	24	18	0	HAR 16-71-17	
Idaho	2000	24	24	20	10	Idaho Admin. Code r. 24.30.01.107(01)(c)	State board allows candidates registering after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the course-specific semester hours requirement.
Illinois	2001	24	24	21	6	23 Ill. Adm. Code 1400.90	State board allows candidates registering after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the course-specific semester hours requirement.
Indiana	2000	24	24	24	24	24 Ind. Reg. 3989	
Iowa	2001	24	24	24	24	IAC 193A—3.2(542C)	State board allows candidates registering after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the course-specific semester hours requirement.

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		Course-Specific Credit Hours					
		Post-150 hour rule		Pre-150 hour rule			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
Kansas	1997	30	42	21	36	Volume 10, Number 23, Kansas Register	
Louisiana	1997	24	24	24	3	Volume 17, Number 1, Louisiana Register	
Maine	2003	15	0	0	0	CMR 02-280-003 and 32 M.R.S. § 12228	
Massachusetts	2002	24	24	15	9	252 CMR 2.01	
Michigan	2003	39	36	0	0	MICH. ADMIN. CODE R 338.5115	
Minnesota	2006	24	24	18	30	Minn. R. 1105.1500	
Mississippi	1995	24	24	0	0	§ 73-33-5 and 30 Miss. Code. R. 1-2.2	
Missouri	1999	33	27	18	18	20 CSR 2010-2.041	
Montana	1997	24	18	12	9	ARM 24.201.503	
Nebraska	1998	30	96	0	0	Nebraska Admin. Code Title 288, Ch. 9	

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		Course-Specific Credit Hours					
		Post-150 hour rule		Pre-150 hour rule			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
Nevada	2001	30	27	0	0	NAC 628.055	
New Hampshire	2014	30	24	12	12	N.H. Code Admin. Accy. R. 302.02 (2)	
New Jersey	2000	30	24	24	36	N.J.A.C. 13:29-1A.3	State board allows candidates registering after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the course-specific semester hours requirement.
New Mexico	2004	30	0	30	0	16.60.2.9 NMAC	
New York	2009	33	36	33	36	8 NYCRR § 52.13 and 8 NYCRR § 70.1	
North Dakota	2000	24	24	30	30	N.D. Admin. Code 3-01-02-01	Prior to the 150-hour rule, North Dakota required 30 semester hours in accounting and business law combined. We take a conservative approach and record the pre-150-hour requirement as 30 semester hours.
Oklahoma	2003	30	18	30	9	59 O.S. Section 15.8	
Oregon	2000	24	24	20	10	Oregon Administrative Rules 801-010-0050	

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		Course-Specific Credit Hours					
		Post-150 hour rule		Pre-150 hour rule			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
Pennsylvania	2011	36	0	24	0	Amendments to CPA Law - Act 73 of 2008	
Rhode Island	1999	24	15	24	6	400-RICR-00-00-1.4	State board allows candidates registering before and after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the accoutning specific semester hours requirement.
South Carolina	1997	24	24	24	0	S.C. Code Ann. § 40-2-35	State board allows candidates registering after the adoption of the 150-hour rule to hold a graduate degree with a concentration in accounting instead of completing the course-specific semester hours requirement.
South Dakota	1998	0	0	0	0	ARSD 20:75:02:04	
Texas	1997	20	0-10	20	0-10	22 TEXREG 3699	
Vermont	2014	39	3	12	3	26 V.S.A. § 71 and CVR 04-030-010	
Virginia	2006	30	24	24	18	18 VAC 5-21-30	
Washington	2000	24	24	24	24	Wash. Admin. Code § 4-30-060	

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		Course-Specific Credit Hours					
		Post-150 hour rule		Pre-150 hour rule			
State	**Adoption of 150-hour rule**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Accounting Courses Requirement**	**Business Courses Requirement**	**Administrative Code/ Legislative Statute**	**Notes**
West Virginia	2000	27	27	0	0	W. Va. Code § 30-9-8 and West Virginia Board of Accountancy-Board Rules	
Wisconsin	2001	24	24	0	0	497 Wis. Admin. Reg. 17	
Wyoming	2000	30	30	24	24	Wyoming Administrative Rules - Chapter 2 § 3	

Table A3: Post-2008 Changes Only (Data Availability Test)

This table reports results of the OLS regression of changes in accounting-specific credit requirements on various outcome variables using a sample of states that adopted the 150-hour rule post-2000. Column (1) uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Likelihood of Switch	(5) Prop. Switches Non-Accounting	(6) Likelihood of Acct. Switch	(7) Likelihood of Non-Acct. Switch
Treatment Cohort × Change in Prop. of Accounting Credits	0.273***	-0.157**	0.400***	0.250***	-0.321***	0.286**	-0.322***
	(0.043)	(0.062)	(0.073)	(0.072)	(0.093)	(0.121)	(0.067)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions
Cluster Variable	State	State	State	State	State	State	State
Obs.	18,952	18,951	17,099	18,952	14,086	14,086	14,086
R^2	0.06		0.05	0.07	0.07	0.04	0.07

Table A4: Post-2000 Changes + 3 Pre/Post Cohorts (Data Availability Test)

This table reports results of the OLS regression of changes in accounting-specific credit requirements on various outcome variables, using a sample of states that adopted the 150-hour rule post-2000 and only cohorts within +/- 3 years of rule adoption. Column (1) uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Likelihood of Switch	(5) Prop. Switches Non-Accounting	(6) Likelihood of Acct. Switch	(7) Likelihood of Non-Acct. Switch
Treatment Cohort × Change in Prop. of Accounting Credits	0.633***	-0.485***	0.888***	0.060	-0.555***	0.508**	-0.370*
	(0.085)	(0.145)	(0.130)	(0.167)	(0.112)	(0.180)	(0.187)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions
Cluster Variable	State	State	State	State	State	State	State
Obs.	3,383	3,383	3,141	3,383	2,660	2,660	2,660
R^2	0.03		0.03	0.03	0.04	0.02	0.04

Table A5: Replacing Zero-Credit Requirements with Typical Number of Credits

This table reports results of the OLS regression of changes in accounting-specific credit requirements on various outcome variables, having replaced "zero" credit requirements with a typical number of required accounting credits. In this analysis, 0 credit requirements are replaced with 21 credit hours before measuring *Change in Prop. of Accounting Credits*. Column (1) uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Likelihood of Switch	(5) Prop. Switches Non-Accounting	(6) Likelihood of Acct. Switch	(7) Likelihood of Non-Acct. Switch
Treatment Cohort × Change in Prop. of Accounting Credits	0.453***	-0.245	0.738***	0.561***	-0.595**	0.539*	-0.661***
	(0.156)	(0.218)	(0.229)	(0.196)	(0.235)	(0.283)	(0.185)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time From Licensure	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions	All Positions
Cluster Variable	State	State	State	State	State	State	State
Obs.	24,237	24,236	21,749	24,237	17,816	17,816	17,816
R^2	0.06		0.05	0.07	0.07	0.04	0.08

Table A6: Horserace Between Accounting and General Business Credits

This table reports results of the OLS regression of changes in accounting-specific credit requirements and changes in general-business credit requirements on various outcome variables. Column (1) uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Number of General-Business Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in general-business courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Number of Accounting Credits*$_i$ and *Change in Number of General-Business Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Likelihood of Switch	(5) Prop. Switches Non-Accounting	(6) Likelihood of Acct. Switch	(7) Likelihood of Non-Acct. Switch
Treatment Cohort × Change in Number of Accounting Credits	0.001*	-0.001	0.003**	0.001	-0.004***	0.004***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Treatment Cohort × Change in Number of General Business Credits	-0.000	-0.000	-0.000	0.000	0.002	-0.001	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits	Num. of Credits
Cluster Variable	State	State	State	State	State	State	State
Obs.	24,237	24,236	21,749	24,237	17,816	17,816	17,816
R^2	0.06		0.05	0.07	0.07	0.04	0.08

Table A7: Lawyer Placebo Test

This table reports results of the OLS regression of changes in accounting-specific credit requirements on various outcome variables that pertain to lawyers as a placebo group. Column (1) uses *Proportion of Legal Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Legal Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Legal Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Legal Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Legal Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Prop. Legal Positions	(2) Average Salary	(3) Prop. Tenure Legal	(4) Likelihood of Switch	(5) Prop. Switches Non-Legal	(6) Likelihood of Legal Switch	(7) Likelihood of Non-Legal Switch
Treatment Cohort × Change in Prop. of Accounting Credits	-0.019	-0.062	-0.024	-0.003***	0.013	0.018	0.008
	(0.019)	(0.075)	(0.019)	(0.001)	(0.018)	(0.017)	(0.023)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State	State
Obs.	931,215	931,162	916,158	931,215	922,888	922,888	922,888
R^2	0.01		0.01	0.66	0.01	0.01	0.02

Table A8: Determinants Models and Main Tests with State-Level Controls

This table reports the results of determinants models for the changes in accounting-specific credit, and the OLS regression of changes in accounting-specific credit requirements on various outcome variables with state-level control variables. In Panel A, we include all of the controls from the 150-hour rule determinants model in Sutherland et al. (2024) and Cascino et al. (2021), except for certain CPA board variables (which stem from a survey and we do not have access to). In Panel B, we re-run our main tests, including all time-varying determinants as control variables. In Panel B, we also include a control for the introduction of cross-state CPA mobility provisions, which are studied in Cascino et al. (2021). Column (1) uses *Proportion of Accounting Positions*$_i$ as the outcome variable. Column (2) uses *Average Salary*$_i$ as the outcome variable. Column (3) uses *Proportion of Years in Workforce Spent in Accounting Position*$_i$ as the outcome variable. Column (4) uses *Likelihood of Job Switch*$_i$ as the outcome variable. Column (5) uses *Proportion of Non-Accounting Job Switch*$_i$ as the outcome variable. Column (6) uses *Likelihood of Accounting Job Switch*$_i$ as the outcome variable. Column (7) uses *Likelihood of Non-Accounting Job Switch*$_i$ as the outcome variable. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All columns use *Change in Prop. of Accounting Credits*$_i$ as the treatment variable. All columns include State and Cohort fixed effects, and standard errors are clustered at the state level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1) Any Change	(2) Positive Change	(3) Total Change	(4) Any Change	(5) Positive Change	(6) Total Change
Board Size	-0.181*	-0.113	-0.034	-0.175*	-0.112	-0.148
	(0.091)	(0.099)	(0.221)	(0.097)	(0.121)	(0.203)
Board %CPAs	0.481	0.510	1.150	0.679	0.654	1.374
	(0.732)	(0.692)	(1.385)	(0.699)	(0.690)	(1.458)
AAER (t-1)	0.056	0.036	0.049			
	(0.074)	(0.067)	(0.197)			
Split Government (t-1)	-0.026	-0.174	-0.095			
	(0.160)	(0.175)	(0.395)			
Democratic Governor (t-1)	-0.060	-0.195	0.095			
	(0.194)	(0.213)	(0.511)			
Wage Growth (t-1)	1.052	0.155	-10.702			
	(3.702)	(3.888)	(8.447)			
Employment Growth (t-1)	-0.912	-0.287	-4.530			
	(3.267)	(3.419)	(6.391)			
Job Creation (t-1)	0.346	0.410	0.532			
	(0.806)	(0.826)	(2.437)			
Unemployment Rate (t-1)	0.056	0.077	-0.070			
	(0.085)	(0.089)	(0.218)			
Establishment Birth (t-1)	-0.065	-0.019	0.309			
	(0.178)	(0.178)	(0.488)			
GDP per Capita (t-1)	0.193	0.241	-0.230			
	(0.141)	(0.146)	(0.354)			
Population (t-1)	-0.230	-0.335	-0.357			
	(0.697)	(0.714)	(2.085)			
Late Adopter	-0.047	-0.040	0.203	0.108	0.107	0.418
	(0.343)	(0.352)	(0.693)	(0.307)	(0.312)	(0.649)
AAER (5-Years Average)				0.059	0.036	0.001
				(0.040)	(0.045)	(0.097)
Split Government (5-Years Average)				0.203	-0.009	0.144
				(0.239)	(0.312)	(0.681)
Democratic Governor (5-Years Average)				0.149	-0.040	-0.094
				(0.227)	(0.289)	(0.594)
Wage Growth (5-Years Average)				6.631	7.818	9.315
				(7.403)	(7.475)	(13.045)
Employment Growth (5-Years Average)				-4.098	-3.657	-13.970
				(4.663)	(4.788)	(9.915)
Job Creation (5-Years Average)				-0.000	-0.000	0.000
				(0.000)	(0.000)	(0.000)
Unemployment Rate (5-Years Average)				0.032	0.053	-0.015
				(0.083)	(0.088)	(0.219)
Establishment Birth (5-Years Average)				-0.048	0.003	0.159
				(0.171)	(0.179)	(0.544)
GDP per Capita (5-Years Average)				0.071	0.147	-0.190
				(0.142)	(0.158)	(0.351)
Population (5-Years Average)				0.428	0.189	-0.672
				(0.668)	(0.758)	(2.334)
SE	Robust SE	Robust SE	Robust SE	Robust SE	Robust SE	Robust SE
Obs.	41	41	41	41	41	41
R^2	0.211	0.221	0.165	0.277	0.218	0.136

Panel B: Main Tests with State-Level Controls

	(1) Prop. Acct. Positions	(2) Average Salary	(3) Prop. Tenure Acct.	(4) Likelihood of Switch	(5) Prop. Switches Non-Accounting	(6) Likelihood of Acct. Switch	(7) Likelihood of Non-Acct. Switch
Treatment Cohort × Change in Prop. of Accounting Credits	0.251**	-0.280***	0.288***	0.219**	-0.346***	0.354***	-0.229*
	(0.101)	(0.087)	(0.100)	(0.092)	(0.097)	(0.104)	(0.120)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State	State
Obs.	12,776	12,776	21,749	12,776	10,129	10,129	10,129
R^2	0.03		0.05	0.02	0.04	0.02	0.04

Table A9: Alternate Design (Displacement Shocks)

This table presents results from an alternative research design examining CPAs' career outcomes during periods of major labor-market disruption. We focus on two displacement shocks: the financial crisis (post-2007) and the COVID-19 pandemic (post-2020). The specification estimates the interaction between an indicator for the post-crisis period (*PostCrisis*) and the proportion of credits required to be accounting for the state & cohort that the CPA graduated in (i.e., there are differences depending on whether the CPA obtained their license pre- and post-150-hour rule). The dependent variables mirror those in the main analyses and include: Proportion of Accounting Positions and the Likelihood of Non-Accounting Job Switch. The analysis is restricted to a three-year window before and after each displacement event. In the baseline specification, regressions include State (of licensure), Cohort (year of licensure), and Year fixed effects. In the more stringent specification, regressions include Cohort fixed effects and State × Year fixed effects. Standard errors are clustered at the state level. Coefficients are reported with standard errors in brackets below. ***, ** and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Likelihood of Being in Accounting Job		Likelihood of Non-Accounting Job Switch		Likelihood of Being in Accounting Job		Likelihood of Non-Accounting Job Switch	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post Financial Crisis × Prop. Required Accounting Courses	0.179***	0.183***	-0.265*	-0.151				
	(0.051)	(0.065)	(0.136)	(0.140)				
Post COVID-19 × Prop. Required Accounting Courses					-0.011	0.073**	-0.059	-0.270*
					(0.032)	(0.029)	(0.148)	(0.157)
Fixed Effects Structure	State of Licensure, Cohort of Licensure, Year	State of Licensure x Year, Cohort of Licensure	State of Licensure, Cohort of Licensure, Year	State of Licensure x Year, Cohort of Licensure	State of Licensure, Cohort of Licensure, Year	State of Licensure x Year, Cohort of Licensure	State of Licensure, Cohort of Licensure, Year	State of Licensure x Year, Cohort of Licensure
Treatment Variable	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Time Frame								
Cluster Variable	State of Licensure	State of Licensure	State of Licensure	State of Licensure	State of Licensure	State of Licensure	State of Licensure	State of Licensure
Obs.	120,773	120,773	22,963	22,958	209,017	209,017	37,912	37,908
R2	0.06	0.06	0.07	0.08	0.06	0.06	0.05	0.05

Table A10: Accounting Course Requirements and Student Characteristics (Selection of Students)

This table examines whether changes in accounting-specific credit requirements around the adoption of the 150-hour rule affect the average characteristics of students majoring in accounting. The analysis tests for selection effects by estimating the relationship between changes in state-level accounting course requirements and measures of student interest and ability. The dependent variables are: Intend Accounting Career, Interest in Accounting, Accounting Important, and High Math Ability, constructed from student-level survey responses from the Higher Education Research Institution's (HERI) The Freshman Survey and College Senior Survey. Intend Accounting Career is an indicator equal to one if a student reports intending to pursue a career in accounting at the start of their undergraduate studies. Interest in Accounting captures the importance of interest in the student's field of study in their college decision. High Math Ability is an indicator for students reporting high quantitative aptitude, based on their self assessment. All survey responses are recorded at the time that the student enters college (i.e., as a freshman), but the students and their majors represent a set of accounting seniors. The key independent variable is either Post-150-hour rule × Change in Number of Accounting Credits or Post-150-hour rule × Change in Prop. of Accounting Credits. Change in Number of Accounting Credits is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required in accounting courses for CPA licensure in state s. Change in Prop. of Accounting Credits is defined as the pre- and post-150-hour rule difference in the proportion (relative to total required semester hours) of accounting-specific credits. Post-150-hour rule is an indicator equal to one for years after the implementation of the 150-hour rule in a given state. All regressions include State and Year fixed effects. Standard errors are clustered at the state level and are reported in parentheses below the coefficients. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Intend Accounting Career	Interest in Accounting Important	High Math Ability	Intend Accounting Career	Interest in Accounting Important	High Math Ability
	(1)	(2)	(3)	(4)	(5)	(6)
Post-150 Hour Rule × Change in Number of Accounting Credits	-0.001	0.001	0.000			
	(0.000)	(0.000)	(0.000)			
Post-150 Hour Rule × Change in Prop. of Accounting Credits				-0.086	0.074	0.045
				(0.067)	(0.062)	(0.049)
Fixed Effects Structure	State, Year	State, Year	State, Year	State, Year	State, Year	State, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State
Obs.	6,436	7,522	14,189	6,436	7,522	14,189
R2	0.01	0.01	0.01	0.01	0.01	0.01

Table A11: Accounting Course Requirements and Incumbent CPA Outcomes

This table reports regressions examining whether changes in accounting-specific credit requirements around the adoption of the 150-hour rule affect the labor market outcomes of incumbent CPAs (i.e., those already licensed at the time of the rule change). Panel A presents specifications with State × Cohort and Year fixed effects. Panel B presents specifications with Worker and Year fixed effects. The outcome variables include: (i) an indicator for holding an accounting job in a given year, (ii) annual salary, and (iii) an indicator for switching to a non-accounting position. Columns (3) and (6) are restricted to job switches only, whereas Columns (1), (2), (4) and (5) pertain to all positions. In each panel, Columns (1)–(3) use the interaction between Post-150-hour rule and Change in Number of Accounting Credits as the treatment variable, while Columns (4)–(6) use the interaction between Post-150-hour rule and Change in Proportion of Accounting Credits. Change in Number of Accounting Credits is defined as the pre- and post-150-hour-rule difference in the absolute number of required accounting semester hours in state s. Change in Proportion of Accounting Credits is defined as the corresponding change in the share of total required credits that must be completed in accounting courses. Standard errors are clustered at the state level and are reported in parentheses below the coefficients. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Accounting Course Requirements and Incumbent CPA Outcomes (State × Cohort FE)

	Likelihood of Accounting Job	Salary	Likelihood of Non-Accounting Switch	Likelihood of Accounting Job	Salary	Likelihood of Non-Accounting Switch
	(1)	(2)	(3)	(4)	(5)	(6)
Post-150 Hour Rule × Change in Number of Accounting Credits	0.000	-0.000	-0.001			
	(0.000)	(0.001)	(0.000)			
Post-150 Hour Rule × Change in Prop. of Accounting Credits				0.036	-0.075	-0.075
				(0.060)	(0.125)	(0.057)
Fixed Effects Structure	State x Cohort, Year	State x Cohort, Year	State x Cohort, Year	State x Cohort, Year	State x Cohort, Year	State x Cohort, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State
Obs.	356,385	356,385	42,759	356,385	356,385	42,759
R2	0.12		0.10	0.12		0.10

Panel B: Accounting Course Requirements and Incumbent CPA Outcomes (Worker FE)

	Likelihood of Accounting Job	Salary	Likelihood of Non-Accounting Switch	Likelihood of Accounting Job	Salary	Likelihood of Non-Accounting Switch
	(1)	(2)	(3)	(4)	(5)	(6)
Post-150 Hour Rule × Change in Number of Accounting Credits	-0.000	0.000	-0.000			
	(0.001)	(0.001)	(0.000)			
Post-150 Hour Rule × Change in Prop. of Accounting Credits				-0.028	-0.009	-0.045
				(0.072)	(0.124)	(0.055)
Fixed Effects Structure	Worker, Year	Worker, Year	Worker, Year	Worker, Year	Worker, Year	Worker, Year
Treatment Variable	Num. of Credits	Num. of Credits	Num. of Credits	Prop. of Credits	Prop. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State
Obs.	356,329	356,329	40,184	356,329	356,329	40,184
R2	0.66		0.52	0.66		0.52

Table A12: Replication of Results with Alternative Occupational Classification

This table reports results presented in Table 3 and Table 4, using an alternative method of measuring accounting position. In this Table, instead of Revelio's mapped role assigned to an individual's position in a firm, we use the exact position that the individual posts on their LinkedIn profile. Columns (1) to (4) presents the results from Table 3, using the alternative measure of accounting positions. The table uses *Proportion of Accounting Positions*$_i$ (Columns (1) and (2)) and *Proportion of Years in Workforce Spent in Accounting Positions*$_i$ (Columns (3) and (4)) as the outcome variable. Columns (5) to (8) presents the results from Table 4, using the alternative measure of accounting positions. Table further uses *Likelihood of Accounting Job Switch*$_i$ (Columns (5) and (6)) and *Likelihood of Non-Accounting Job Switch*$_i$ (Columns (7) and (8)) as the outcome variable. *Change in Number of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the absolute number of semester hours required to be completed in accounting courses for licensure in state s. *Change in Prop. of Accounting Credits*$_i$ is defined as the pre- and post-150-hour rule difference in the proportion (relative to total credit hours required) of semester hours required to be completed in accounting courses for licensure in state s. Descriptions of all variables are provided in Table A1. All estimations include State and Cohort fixed effects. All standard errors are clustered at the state level and are reported in a bracket below the coefficients. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Prop. Acct. Positions		Prop. Tenure Acct.		Likelihood of Acct. Switch		Likelihood of Non-Acct. Switch	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment Cohort × Change in Number of Accounting Credits	0.002***		0.001*		0.001*		-0.001**	
	(0.001)		(0.001)		(0.001)		(0.001)	
Treatment Cohort × Change in Prop. of Accounting Credits		0.231***		0.181**		0.182*		-0.152**
		(0.076)		(0.082)		(0.100)		(0.071)
Fixed Effects Structure	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort	State, Cohort
Treatment Variable	Num. of Credits	Prop. of Credits	Num. of Credits	Prop. of Credits	Num. of Credits	Prop. of Credits	Num. of Credits	Prop. of Credits
Cluster Variable	State	State	State	State	State	State	State	State
Obs.	22,192	22,192	19,752	19,752	15,173	15,173	15,173	15,173
R2	0.09	0.09	0.08	0.08	0.03	0.03	0.08	0.08