Research Briefs
IN ECONOMIC POLICY

CATO INSTITUTE

October 24, 2018 | Number 136

Occupational Licensing and Accountant Quality

Evidence from the 150-Hour Rule

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The quality of corporate financial reporting is of central importance to capital market participants, regulators, and scholars. The demand for audits (as well as regulation of accounting and auditing standards) arises from information asymmetries that exist between management and financial statement users. Without independent audits, management could exploit its information advantage and misrepresent the firm's underlying economic performance. As a result, the regulation of financial reporting and auditing services has been a widely examined topic. However, the quality of independent audits is a function of not only the quality of auditing standards established by regulators and the quality of procedures established by accounting firms based on these standards, but also the quality and expertise of the accountants responsible for the audits.

Given the vital role that auditors play in ensuring financial reporting quality, the emergence of occupational licensing requirements (e.g., the Certified Public Accountant exam, educational requirements, and experience requirements) for those conducting audits (i.e., CPAs) is not surprising. However, the paucity of evidence concerning the effect of licensing requirements on the quality and preparation of those who enter the accounting profession is somewhat surprising. I take a first step to fill this void by examining the effect changes in the restrictiveness of licensing requirements for CPAs have on the supply and quality of those who enter the accounting profession.

The minimum educational requirement for CPA licensure has historically been 120 semester hours of college coursework, typically completed in four years. Approximately four decades ago, the accounting profession began debating the advantages of implementing a 150-semester-hour requirement for licensure. The stated objective of this requirement was to enhance the quality of work performed by CPAs by bringing better CPAs into the profession. The 150-hour requirement (hereafter, "the Rule") has now been adopted and is in force in all 54 U.S. jurisdictions. My analysis relies on the Rule's staggered adoption to provide insight into the effects of increases in licensing restrictiveness on the individuals who prepare and audit financial statements.

The relation between licensing rules and outcomes is not without significant tension. Proponents of professional licensure justify these laws as a means to protect the public

Editor, Jeffrey Miron, Harvard University and Cato Institute

against incompetent, unprepared, or irresponsible practitioners. This public-interest view of licensing asserts that administrative procedures regulate the quality of labor in the market. The regulator screens entrants to the profession and bars those whose skills or character traits suggest a tendency toward low-quality output, thus raising the lower tail of the quality distribution and providing a minimum guaranteed level of quality and safety to consumers. From this public-interest perspective, the Rule, with its additional 30 credit hours of education, arguably serves as a screening mechanism to separate high-ability CPAs from low-ability CPAs through their willingness to acquire the additional education. Thus, if the public-interest view motivates the Rule's implementation, the quality of individuals in the profession should be raised via a reduction in the supply of candidates.

On the other hand, critics of professional licensure argue that licensing merely secures higher rents for those in the occupation by raising prices and, in particular, harming consumers who may not be able to afford their preferred level of service. This capture/private-interest perspective views licensing as mainly a rent-seeking barrier to entry introduced by current members of the profession to limit the supply of new entrants and extract monopoly rents. This view of licensing predicts that the Rule reduces the number of entrants while maintaining the average candidate quality, or even lowering the quality, if the incremental time cost of the Rule leads to high-ability students switching to other disciplines because of their higher opportunity cost of time. Moreover, in addition to the null quality effects, this hypothesis predicts an increase in rents for grandfathered CPAs after the Rule's adoption.

The main obstacle to studying CPAs' labor market outcomes is the lack of available data on individuals' employment and education histories. Available empirical measures of aggregate job-to-job and cross-industry transitions in the labor literature are typically constructed using census data. Yet, using census data for accounting professionals stretches the limits of the surveys, given their low coverage of accounting professionals and their inability to disentangle CPAs from bookkeepers. Moreover, previous studies in accounting rely on National Association of State Boards of Accountancy (NASBA) data to examine the supply effects of the Rule. While these studies find reductions in the number of candidates sitting for the exam, they do not provide direct evidence of the Rule's quality effects given the limitations of the data. I circumvent this challenge by constructing a new, comprehensive panel data set of career paths for more than 10,000 CPAs from 11 states who post their resumes on a major professional networking website. My sample spans the past four decades and provides a unique overview of the employment and educational histories of individual CPAs, which allows me to examine differences between the labor market outcomes of CPAs who are subject to the Rule and those who are not. Specifically, I measure average tenure, number of positions, and time until promotion for each individual. These measures allow for explicit tests of the quality of CPAs on the full sample of CPAs, as well as on a matched sample where CPAs subject to the Rule are matched based on graduation year and gender to non-Rule CPAs.

I begin my analysis by using an extensive panel data set of first-time CPA test takers from NASBA for the years 1984–2004 to reexamine changes in the supply of CPA candidates. Using a difference-in-differences specification, I find a 15 percent reduction in the number of candidates taking the exam for the first time following the Rule's enactment. Yet, I find that the decrease does not come solely from a reduction in the number of low-ability candidates (those who fail all four sections in a sitting) but also from a reduction in the number of high-ability candidates (those who pass all four sections in a sitting). The extra year of education appears to be costly for high-ability candidates, potentially due to their higher opportunity cost of time, which leads to fewer of them taking the exam. The reduction in both high- and low-ability candidates renders inferences regarding the quality of individuals inconclusive. Furthermore, it is not clear that reductions in the number of low-ability candidates taking the exam should be seen as increasing quality in the labor market, since these individuals fail the exam and do not enter the market in the first place.

To overcome this ambiguity, I turn to examining individuals' long-run labor market outcomes as proxies for their quality. Descriptively, I find that the Rule had an effect on the employment focus of CPAs, such that Rule CPAs are comparatively more likely to be employed at a Big 4 public accounting firm, more likely to specialize, and more likely to have more graduate degrees. With respect to quality effects, I find no significant difference in the tenure at firms and no difference in the time to promotion. To the extent that promotions and tenure proxy for CPA quality, the lack of significant differences between the two groups casts doubt on the Rule's ability to improve the quality of CPAs and better protect the public interest. A possible explanation for this result is that the breadth of options through which the educational requirement can be fulfilled (e.g., a master's degree or separate courses) allows low-ability CPAs to opt for less rigorous nondegree programs. At the same time, the increased time needed to satisfy the requirement may create incentives for high-quality candidates to pursue other careers.

The lack of a significant effect on individual quality is consistent with the theory that the Rule limits competition and allows CPAs to extract higher wage rents. However, if the extra year of education had no value to the individuals, and if the reductions in supply came purely from low-ability types (who would have failed the CPA exam anyway) choosing not to pursue a career in accounting, the Rule would not be expected to lead to a significant effect on wages. To provide evidence on CPAs' rent extraction, I use data from the Current Population Survey (CPS) to examine the Rule's effect on the wages of grandfathered CPAs—that is, those who obtained their licenses before the Rule. Specifically, I examine whether accountants in states that adopted the Rule extract rents in excess of what can be explained by their education. In a difference-in-differences specification, I document a 9 percent earnings premium for CPAs in Rule states, relative to equally educated CPAs in non-Rule states. These effects are stronger in the case of grandfathered CPAs, who did not invest in the extra year of schooling. Collectively, my evidence implies that the Rule lowered the supply of CPAs and increased wages without significantly improving the average quality of CPAs. These inferences are consistent with theories that view licensing requirements as a means of rent extraction.

My research is subject to several caveats. The long-term labor market outcome measures in my analysis rely on individuals' being promoted based on some quality differential. Thus, my tests are limited to the extent that promotions in firms do not incorporate quality. Additionally, inferences based on resume data are subject to concerns about selection and accuracy, given the voluntary nature of the profiles and the reporting errors or biases that may be present in the resumes. However, the pervasive use of the website by individuals for credible networking, as well as job-search purposes, provides some assurance as to the integrity of the data posted. Moreover, unlike lying on a resume—which only a prospective employer will see and cannot easily verify—lying on one's profile is publicly visible.

Overall, the Rule's supply restriction, its increase in wage rents, and the lack of a quality effect cast doubt on the benefits of licensing restrictions in U.S. labor markets. Similarly, the relative merits of increases in mandatory educational requirements for other high-skill licensed professions have also come under criticism. For example, recent calls to reduce medical school from four to three years have been based on the scarcity of new medical students and the high cost of their schooling. Given the similarity in rigor and human capital requirements that CPAs and these other professions face, the Rule experiment serves as a setting for considering the costs and benefits of changes in mandatory education in other high-skill professions.

NOTE

This research brief is based on John M. Barrios, "Occupational Licensing and Accountant Quality: Evidence from the 150-Hour Rule," Becker Friedman Institute Working Paper no. 2018-32, May 2018, https://bfi.uchicago.edu/sites/default/files/research/WP_2018-32.pdf.