

Post-Graduate Educational Requirements and Entry into the CPA Profession

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Forty-one states require educational requirements for CPA licensure to include 30 credit hours beyond the baccalaureate degree. This study, using state-level panel data of CPA examination pass rates, examines two hypothesized effects of this requirement: one, it improves the quality of new CPAs, and two, it restricts entry into the profession reducing the supply of potential CPAs. Empirical findings reveal that raising minimum educational requirements increases the success rate of first-time CPA exam takers, leading to improved entrant quality. However, increased success rates are associated with significant declines in the number of exam takers and, hence, reduced supply.

I. Introduction

The accounting profession is comprised of two major sectors—a regulated sector of certified public accountants (CPAs), and an unregulated sector that includes all other accountants. This study examines two questions associated with adopting laws and regulations increasing the minimum required level of educational attainment prior to entry into the regulated sector of the accounting profession. This sector requires certification before an occupational license is issued.

First, do the increased educational requirements improve the quality of CPAs? Although quality measurement is often difficult, I use the increase or decrease in the success of first-time takers of the CPA exam to evaluate whether the quality of the pool of potential CPAs has improved or declined. Commentary offered in the annual editions of the *CPA Candidate Performance on the Uniform CPA Examination* suggests that the success of first-time takers of the CPA exam increases in states adopting the 150-hour requirement. I am unaware of research by others examining the effect of the 150-hour requirement on pass rates over time.

Second, do the additional educational requirements affect the supply of CPAs? A recent study shows a reduction in the number of accounting baccalaureate degrees conferred in states where the 150-hour requirement has been implemented (Boone and Coe, 2002). This research extends that study by measuring how the 150-hour requirement affects the number of people taking the CPA exam for the first time.

The answers to these questions will provide insights to legislatures, regulatory bodies, other occupations or professions, and potential entrants about possible outcomes resulting from similar laws and regulations. This study is organized to provide background for this research, discuss economic theory and relevant literature, provide empirical analysis, and finish with a summary and conclusion.

II. *Background*

Those seeking employment in the regulated sector must meet their state's entry requirements. Those choosing the unregulated sector must meet only their employer's requirements. CPAs, working through their professional organizations at national and state levels, developed and legislatively implemented a uniform accountancy act. One provision of this act is a minimum educational attainment, generally referred to as the "150-hour requirement" by accountants. Through state licensing regulations, the CPA profession increased, and to some extent standardized, the educational requirements for candidates prior to their taking the national certification examination.

The development of the accounting profession in the United States, particularly public accounting,¹ is presented in Flesher et al. (1996). A description of the 150-hour requirement, the aspect of occupational licensing of interest in this study follows.

The 150-Hour Requirement. The guidelines from the American Institute of Certified Public Accountants (AICPA) and the National Association of State Boards of Accountancy (NASBA) for implementing the 150-hour requirement offer four alternatives for students and colleges and universities. The substance of the alternatives is that one must hold at least a baccalaureate degree and complete at least 150 semester hours of college credit, including the 24 hours of accounting and 24 hours of non-accounting business courses (AICPA/NASBA, 1991).

III. *Theory and Literature Review*

The theory predicting the impact of the 150-hour requirement versus a 120-hour requirement on the success rate and supply of potential CPAs is derived from two areas of microeconomic theory—human capital and occupational regulation—and from the accounting literature related to CPA exam success.

Human Capital. Human capital can be viewed as skills acquired in formal classroom settings or as skills acquired after the completion of schooling via on-the-job training. The effect of education is generally modeled as the acquisition of skills that employers likely find useful in employees obtaining a specific level of education. Potential employees will seek to attain additional education so long as the marginal benefit of the additional education exceeds the marginal cost of obtaining it (Becker, 1964). Herein, the benefits of additional education should be in the form of improved performance in the qualifying examinations for entrance to the accounting profession as a CPA.

Occupational Regulation. Restrictions on the ability of sellers to enter markets are a means of reducing the supply of goods, services, or resources. In the resource mar-

ket, occupational licensing in the labor market has “a long and distinguished tradition in economics” (Kleiner, 2000). Government may restrict an individual’s entrance into a particular economic activity if that individual does not meet certain criteria (Friedman, 1962). In the case of professional services such as medicine, law, dentistry, and accounting, occupational licensing is a barrier to entry (Gellhorn, 1956). For these professions, licensing requires successful completion of a certification exam. A change in regulation requiring additional education prior to taking a certification exam should further reduce the supply of entrants.

How increased regulation affects potential entrants depends on the additional steps needed for occupational entrance. For CPAs, the 150-hour requirement is an increase in regulation. Increasing the minimum schooling by 30 semester hours of collegiate course work imposes immediate out-of-pocket costs on potential entrants as well as the possibility of forgone earnings while the meeting new requirements. After completing the additional schooling and incurring additional costs, the potential entrants can attempt to pass the certification exam. Rather than complete the additional requirement, potential entrants may choose to enter unregulated employment. In their study of Canadian professionals, Muzondo and Pazderka (1980) used increased educational requirements to measure increased restriction on entry.

Personal Attributes and Their Contribution to Success Rates on the CPA Exam. Previous studies of candidate success on the uniform CPA examination have focused on individual performance on the exam. A common approach in this literature is the analysis of human capital attributes of candidates and exam performance, with the individual’s exam score as the dependent variable. Individual candidate data were obtained from questionnaires collected prior to taking the exam. The exam scores were subsequently matched to the candidates and their characteristics.

Completion of a baccalaureate degree was positively related to candidate success (Sanders, 1972). Graduate school attendance was not significantly related to success in one study (Reilly and Stettler, 1972), but positively related in others (Sanders, 1972; Titard and Russell, 1989). Completing a concentration of accounting courses in formal education did not significantly contribute to candidate success in studies by Reilly and Stettler (1972) and Leathers and Sullivan (1978), but positively influenced success rates in the study by Dunn and Hall (1984). Participation in CPA exam review courses was shown to improve candidate success rates (Sullivan, 1972; Leathers and Sullivan, 1978; Titard and Russell, 1989), while other studies (Reilly and Stettler, 1972; Dunn and Hall, 1984) indicate that CPA review courses do not contribute to candidate success. How work experience relates to candidate success is mixed. Studies by Reilly and Stettler (1972), Sanders (1972), and Dunn and Hall (1984) suggest that experience is not a significant factor in candidate success, yet Leathers and Sullivan (1978) show that experience is negatively related to candidate success, and Titard and Russell (1989) indicate the opposite result.

Extending the research described above, I focus on how the 150-hour requirement affects potential CPAs. My study examines the success of CPA exam candidates in the presence, or absence, of the 150-hour requirement for the years 1985 to 2001.

During this time period, the number of states adopting the 150-hour requirement prior to taking the CPA exam rose from one to thirty-four (Appendix Table 1).² The personal attributes tested are based on the regulatory environment the exam candidates face, following Muzondo and Pazderka (1980).

IV. *Empirical Analysis*

The 150-hour requirement should affect the pass rates on the uniform CPA exam and the supply of CPAs. My pass rate is the percentage of the individuals taking the uniform CPA examination in a particular state for the first time who pass all parts taken. Supply is measured by the number of first-time takers of the CPA exam.

Data Description. Each observation in the data set represents the performance of the group of first-time CPA exam candidates taking the semi-annual uniform CPA examination in each of the states and the District of Columbia. The individual first-time CPA candidates do not reappear in the observation for a particular state.³

The dependent variable in the model is the success rate of first-time candidates which is constructed by dividing the number of first-time candidates who are listed as passing all parts taken⁴ on the uniform CPA examination by the total number of first-time candidates taking the exam at that time in that state. The independent variables represent the regulatory environment faced by the first-time candidates in their respective states.⁵ The educational requirement is measured by the presence or absence of the 150-hour requirement, the requirement for a concentration in accounting or an accounting major, and the inclusion of academic credit for CPA examination coaching courses offered by a college or university as part of the minimum hours of college credit or the concentration of accounting or an accounting major. The experience requirement is the state's minimum required experience, in years, associated with the lowest level of required educational attainment.⁶ Other regulatory aspects of the exam qualification environment include whether candidates are permitted to take less than the entire exam on their first attempt, whether they are required to obtain minimum non-passing scores for conditioning,⁷ whether some parts of the exam are used by another class of accountants licensed by that state, and whether candidates are required to be residents of the state in which they are sitting for the exam.

Data Sources. The data for first-time pass rates are obtained from the annual editions of the *CPA Candidate Performance on the Uniform CPA Examination* for the examination dates beginning with the May 1985 exam through November 2001.⁸ The specific state requirements for admission to the CPA exam were obtained by reviewing the *Digest of State Accountancy Laws and State Board Regulations* (AICPA, 1983, 1985, 1987/1988), by reading state accountancy laws and regulations, by reviewing the respective jurisdiction's web page for CPA examination candidates, and by consulting with Board of Accountancy representatives of the respective jurisdictions, as needed. State population is reported in the *Statistical Abstract of the United States*.

A summary of the data used in this research is shown in Table 1. Florida was the only state that required 150 college credit hours for admission to the CPA exam during

Table 1
Summary Description of Data

Variable	Mean	Std. Dev.	Min	Max
<i>Number of first-time sitters passing all parts taken</i>	84.274	155.579	0	1,553
<i>Number of first-time sitters</i>	449.540	646.426	–	5,054
<i>Success rate of first-time sitters</i>	0.168	0.077	0	0.505
<i>150 credit hours required</i>	0.136	0.343	0	1
<i>Minimum experience requirement, in years, associated with the minimum education</i>	0.398	1.252	0	6
<i>Accounting concentration required</i>	0.878	0.327	0	1
<i>Minimum score required on parts not passed to receive partial credit</i>	0.826	0.380	0	1
<i>Residence required for admission to CPA exam</i>	0.432	0.496	0	1
<i>CPA review courses permitted as part of accounting concentration</i>	0.249	0.432	0	1
<i>Less than four parts of the CPA exam required for first sitting</i>	0.102	0.302	0	1
<i>Non-CPAs' use of the CPA exam for qualification for licensure</i>	0.201	0.401	0	1
<i>New exam format</i>	0.473	0.499	0	1
<i>Time trend</i>	17.568	9.793	1	34
<i>State resident population, in thousands</i>	5,061.034	5,598.186	454	34,501

Note: There are 1,725 observations for all variables.

the entire period covered by this study. Other requirements for admission to the CPA exam vary by state and through time as states have adopted of the 150-hour requirement.

Methodology. The impact of the 150-hour requirement on the pass rates of first-time takers of the uniform CPA examination is estimated using the grouped probit model

$$\text{Prob}(\text{success}_{it}) = f(\alpha 150req_{it} + X_{it}\beta + \varepsilon_{it}), \quad (1)$$

where success_{it} is the pass rate of the group of first-time candidates on the uniform CPA exam in state i on exam date t ; $150req_{it}$ is the presence of the 150-hour requirement in state i on exam date t ; X_{it} is explanatory variables including the presence of a regulatory condition, other than the 150-hour requirement, in state i on exam date t ; and ε_{it} is the regression error. Dummy variables were also established to account for differences by state. The reference state is Florida. A time trend was also established by setting the May 1985 exam date at one (1.0) and incrementing the time variable by one (1.0) for each semiannual exam. The state variables and the time trend are included in X_{it} .

In the model a positive coefficient on the 150-hour requirement variable (α) indicates that the first-time pass rate increases when the regulation is implemented. No previous empirical studies have shown the degree to which the pass rates have increased over time as a result of adopting the 150-hour requirement.

The model also includes factors that earlier studies have shown to affect first-time pass rates, a time trend, and recognition of the negative impact of changing the examination format approximately half way through the time covered by this study.⁹ Previous studies of pass rates on the CPA exam related individual candidate characteristics to individual performance. This research differs, for I focus on the impact of regulatory requirements faced by groups of candidates on the groups' performance on the CPA exam.

Results. The model is estimated using a grouped probit estimation which provides a weighted least squares estimation of the probit function to account for the different size groups each observation represents (Maddala, 1983). The results of the econometric analysis are presented in Table 2.

The coefficient of the 150-hour requirement, α , is positive which indicates that the probability of passing all parts taken by first-time CPA exam takers increases in states where the 150-hour requirement is implemented. This increase in success rates attributable to the 150-hour requirement is 38.4 percent (an increase in the success rate from 16.6 percent to 22.97 percent).¹⁰

The state fixed effects, which are available on request, indicate significant differences in pass rates across states. The reference group to which all observations are compared is a group of candidates who hold a baccalaureate degree that does not include an accounting concentration or accounting major and does not have a minimum experience requirement prior to taking the CPA exam for the first time.

The minimum required work experience, in years, associated with the minimum required educational level is included to account for the benefits or costs associated with the required work experience. Based on the mixed results in the earlier studies, the

Table 2
Probit Estimation Results

Variable	
150 credit hours required	0.233*** (0.022)
Minimum experience requirement, in years, associated with the minimum education	-0.081*** (0.020)
Accounting concentration required	0.138*** (0.036)
Minimum score required on parts not passed to receive partial credit	-0.173*** (0.026)
Residence required for admission to CPA exam	-0.090* (0.054)
CPA review courses permitted as part of accounting concentration	-0.256*** (0.074)
Less than four parts of the CPA exam required for first sitting	-0.171*** (0.053)
Non-CPAs' use of the CPA exam for qualification for licensure	-0.163*** (0.038)
New CPA exam format	-0.114*** (0.015)
Time trend	-0.005*** (0.001)
Constant	-0.605*** (0.056)
Number of observations	1,715
F statistic	60.81
R-squared	0.688
Adjusted R-squared	0.677

Notes: ***(*) Significant at the 1 (10) percent level. Standard errors are in parentheses. The coefficients for state indicator variables are available on request.

expected effect of a minimum work requirement is uncertain. Requiring work experience prior to attempting the CPA exam for the first time reduces pass rates. This reinforces the suggestion that the time spent obtaining experience results in diminished test-taking skills (Leathers and Sullivan, 1978).

The requirement of minimum accounting and business education courses measures knowledge specific to success on the CPA exam which should positively affect

the success rate. The specific knowledge gained as a result of completing an accounting concentration prior to attempting the CPA exam increases the first-time sitters' success rate. A plausible reason for this phenomenon is that the CPA exam is considered an academic exam.

The final human-capital-related regulatory condition is the inclusion by some states of CPA exam preparation or coaching courses offered by colleges and universities as credit toward the accounting concentration.¹¹ The estimated effect of exam preparation courses on success rates is negative and statistically significant. Allowing credit for review courses may suggest either these courses substituted for other academic courses or these courses provide no additional knowledge to those individuals who prepare for the exam in this way.

Other, nonhuman capital, regulatory variables are described below. Requiring a minimum score on the parts of the CPA exam not passed in order to receive credit on the parts of the CPA exam passed requires higher performance on parts not passed. The presence of a residency requirement in a less restrictive state will keep individuals from a more restrictive state from using the less restrictive state as a port of entry to the CPA certificate and license. In some jurisdictions, candidates were permitted to attempt less than all four parts of the CPA exam on their first sitting. Some states offered parts of the CPA exam as a licensing mechanism for other classes of regulated accountants. In these states, the other classes of regulated accountants had the option of taking one or more parts of the CPA exam, as required, to be licensed as a non-CPA regulated accountant in those states. In 1994, the format for the CPA exam changed, as discussed previously.

Imposing minimum scores for conditioning has a negative and statistically significant impact on success. The reduction in the pass rate is consistent with expectations that success will be more difficult when faced with additional conditions.

Requiring residency for candidates resulted in a negative and statistically significant coefficient. Residency requirements imposed by states with less restrictive regulations may successfully restrict access to the CPA profession in those states. Alternatively, states that do not impose residency requirements allow access to individuals who are better prepared for success on the CPA exam. These nonresident candidates may include established accountants from other countries or candidates from other, more restrictive, states.

Allowing candidates to take less than all four parts of the exam shows a decrease in first-time sitters' success rates when included in the estimation. This is neither consistent with the annual report of *CPA Candidate Performance on the Uniform CPA Exam* nor with the view that preparing for less than the full CPA exam will improve a candidate's chances of success.

Where parts of the CPA exam are used for licensing other classes of registered accountants in some states, the empirical results show a negative and significant coefficient. This may imply that the candidates for this other class of licensure are less

prepared to take the CPA exam as the result of less stringent regulatory or educational requirements.

The change in format resulted in a reduction of the first-time sitters' pass rate, which is consistent with the commentary offered in the annual editions of *CPA Candidate Performance on the Uniform CPA Examination*. The time trend shows a small and significant negative trend in overall first-time sitters' pass rates. This may be reflecting the reduced success rate that occurs for the exam immediately prior to implementation of the 150-hour requirement and the number of states implementing the 150-hour requirement late in the time frame of this study.

Another Look at Pass Rates. Table 2 shows that the first-time pass rates in states increased following adoption of the 150-hour requirement. Regressing the number of first-time sitters against the 150-hour requirement and the regulatory conditions used in the success rate estimation shows a statistically significant reduction in the number of first-time sitters while controlling for state and time differences. Regressing the number of first-time exam passers against the 150-hour requirement and the regulatory conditions used in the success rate estimation indicates that the number of first-time candidates passing all parts taken remains essentially the same while controlling for state and time differences. To account for population differences among the states, these regressions were weighted by resident population. The first-time pass rates increase because fewer individual candidates are attempting to take the exam rather than more individual candidates passing the exam. Robust estimation results are shown in Table 3.

Implications of the Impact of the 150-Hour Requirement on Supply of CPAs. Given that the number of CPAs passing the exam under the 150-hour requirement remains unchanged, one could argue that the 150-hour requirement has not affected the supply of CPAs. This argument ignores the contribution of repeat candidates to the ranks of CPAs. Potential CPAs may take the certification exam a number of times. The exam is not a one-time, "all or nothing" qualification exam. The conditioning requirements and the length of time by which candidates must pass the remaining parts of the CPA exam vary across states. Given the opportunity to take the exam multiple times, a reduction in the number of first-time candidates reduces the number of repeat-exam candidates. After accounting for repeat candidates, a counterargument can be made that given the same persistence rate and pass rate of repeat candidates, the 150-hour requirement ultimately reduces the number of CPAs.

It is uncertain as to whether the completion of the 150-hour requirement represents the acquisition of a signal (Spence, 1973) rather than the acquisition of additional human capital (Becker, 1964). In this case, the number of successful candidates did not increase after the introduction of the 150-hour requirement. This new regulation did reduce the number of first-time candidates, suggesting that those less likely to succeed chose not to pursue the CPA certificate when faced with increased regulation. This reduction in candidates could be viewed as an improvement in the quality of the pool of potential CPAs.

Table 3

OLS Estimation Results of the Impact of the 150-Hour Requirement on the Number of First-Time Takers and First-Time Passers of the CPA Exam

Independent Variable	Dependent variable– Number of first-time CPA exam takers	Dependent variable– Number of first-time CPA exam takers passing all parts taken
<i>150 credit hours required</i>	–349.710*** (82.414)	23.929 (16.229)
<i>Minimum experience requirement, in years, associated with the minimum education</i>	–40.151 (43.511)	–41.315*** (8.604)
<i>Accounting concentration required</i>	207.847*** (50.736)	72.279*** (14.284)
<i>Minimum score required on parts not passed to receive partial credit</i>	51.716 (151.054)	–61.935** (26.022)
<i>Residence required for admission to CPA exam</i>	–76.002 (70.455)	–53.462*** (15.814)
<i>CPA review courses permitted as part of accounting concentration</i>	109.535* (61.394)	7.744 (16.524)
<i>Less than four parts of the CPA exam required for first sitting</i>	–16.934 (166.627)	–28.748 (34.852)
<i>Non-CPAs' use of the CPA exam for qualification for licensure</i>	36.282 (141.321)	–96.346*** (29.322)
<i>New CPA exam format</i>	–487.703*** (88.250)	–168.253*** (30.946)
<i>Time trend</i>	11.265*** (4.182)	0.575 (1.399)
Number of observations	1,725	1,725
F-statistic	124.78	44.82
R-squared	0.915	0.846

Notes: ***(**,*) Significant at the 1 (5, 10) percent level. Standard errors are in parentheses. Results have been adjusted for state fixed effects and weighted by state population. The coefficients for state indicator variables are available on request.

V. Summary and Conclusion

I examine how the 150-hour requirement affects CPA examination candidates. Since CPA examination candidates are the entrants to the CPA profession, their behavior in response to the 150-hour requirement provides insights into the effect of the 150-hour

requirement on the supply of workers to that labor market. First-time sitters' pass rates were regressed on the 150-hour requirement, factors that other researchers have identified as contributing to the success of first-time sitters on the CPA exam, state fixed effects, and a time trend. Additional analysis was performed to determine if the 150-hour requirement affects the number of first-time sitters, the number of successful first-time sitters, or both.

Empirical results show an increase in the success rate and a decline in the number of the first-time takers of the CPA exam. A greater success rate on the exam suggests a quality improvement in the pool of those taking the exam for the first time in states that have adopted the 150-hour requirement. The reduction in the number of first-time takers of the CPA exam ultimately reduces the supply of CPAs to the accounting profession. This still does not answer the question whether increased success on the CPA exam in those states with the 150-hour requirement is the result of additional human capital (additional learning in the extra 30 semester hours of college credit), the result of signaling by CPA exam candidates, or some combination of both.

Future research is needed before making policy recommendations. One subject to be addressed is whether CPA exam candidates differentiate between the educational requirements for access to the exam and for licensure. Other studies may focus on the impact of the 150-hour requirement on the earnings of CPAs, or the success of graduate degree holders relative to baccalaureate degree holders.

This particular research on the impacts of differing regulatory requirements on candidate performance uses grouped observations. Using individual candidate data, the differences in actual human capital acquisition relative to minimum required human capital may provide additional insights to CPA exam performance and candidate behavior.

Candidates facing the increased requirements of the 150-hour requirement may choose to take the exam in a neighboring state without the 150-hour requirement, subject to limitations of residency requirements. The impact of this activity is costly in the sense that the candidate incurs travel costs; however, it may be rational if the candidate is not successful in completing the CPA exam and avoiding the costs associated with the additional required education. Future research on the costs and benefits to the candidate and to the states may provide information to guide the behavior of candidates and future regulatory actions by the states.

Appendix Table 1
States That Have Passed the 150-Hour Education Requirement

State	Enacted Date	Effective Date	State	Enacted Date	Effective Date
Alabama	1989	1/1/1995	Montana	1989	7/1/1997
Alaska	1991	1/1/2001	Nebraska	1991	1/1/1998
Arizona	1999	6/30/2004	Nevada	1993	1/1/2001
Arkansas	1990 (regulation)	1/1/1998	New Hampshire	†	
California	2001	1/1/2006	New Jersey	1995	7/2/2000
Colorado	‡		New Mexico	1999	7/1/2004
Connecticut	1992	1/1/2000	New York	1998	8/1/2009
Delaware	†		North Carolina	1997	1/1/2001
District of Columbia	1995	1/2/2000	North Dakota	1993	1/1/2000
Florida	1979	8/1/1983	Ohio	1992	1/1/2000
Georgia	1991	1/1/1998	Oklahoma	1998	7/1/2003
Hawaii	1977	12/31/1978	Oregon	1997	1/1/2000
Idaho	1993	7/1/2000	Pennsylvania	1996	1/1/2000
Illinois	1991	1/1/2001	Rhode Island	1992	7/1/1999
Indiana	1992	1/1/2000	South Carolina	1991	7/1/1997
Iowa	1992	1/1/2001	South Dakota	1992	1/1/1998
Kansas	1990	6/30/1997	Tennessee	1987	4/14/1993
Kentucky	1990	1/1/2000	Texas	1989	8/31/1997
Louisiana	1990	12/31/1996	Utah	1981	7/1/1994
Maine	1997	10/2/2002	Vermont	†	
Maryland	1993	7/1/1999	Virginia	1999	7/1/2006
Massachusetts	1998	7/1/2002	Washington	1995	7/1/2000
				(regulation)	
Michigan	1998	7/1/2003	West Virginia	1989	2/15/2000
Minnesota	2000	7/1/2006	Wisconsin	1996	1/1/2001
Mississippi	1990	2/1/1995	Wyoming	1993	1/1/2000
Missouri	1993	6/30/1999			

Notes: Table of jurisdictions that have enacted language that provides for the 150-hour education requirement. Compiled by the AICPA State Societies and Regulatory Affairs Committee as of November 10, 2003. (Source: http://www.aicpa.org/download/states/150_Hour_Education_Requirement.pdf) † The 150-hour requirement has not been adopted. ‡ Colorado adopted the 150-hour requirement and then allowed it to expire, without implementation, under the law's sunset provision.

NOTES

*This research is based on a chapter in the author's dissertation. I thank Bernt Bratsberg for his guidance in conducting this research. Additionally, I thank Don Ballante and Antoinette James Criss for helpful comments on drafts of this paper. Any errors are mine.

¹Public accounting is that part of the accounting profession in which certified public accountants (CPAs), working for private firms, provide accounting services to the general public.

²By the end of 2001, thirty-seven states had adopted the 150-hour requirement for licensure. Three of those states—Hawaii, Montana, and North Carolina—did not require the CPA exam candidates to meet the 150-hour requirement prior to taking the CPA exam. Colorado had enacted the 150-hour requirement, but allowed the law's sunset provisions to eliminate the requirement prior to its implementation.

³A candidate may appear in another state's count of first-time CPA exam candidates if the individual moves from one state to another.

⁴In five states the first-time candidates are not required to take all four parts of the uniform CPA exam on their first sitting. In those states, a candidate who takes fewer than four parts of the exam and passes all of the parts attempted is listed as passing all parts taken.

⁵Note that the requirements for taking the exam are not always as restrictive as those for licensure. The experience requirement for licensure is not generally imposed on exam candidates although experience obtained before taking the exam is generally considered for licensure. The exception is when experience is used in lieu of the minimum education requirement for taking the exam.

⁶Educational attainment required for admission to the CPA exam varies from state to state. A high school diploma, completion of a minimum number of college credit hours, earning a degree, or some combination of both may be required. For example, Minnesota offers five different education and experience combinations from which candidates may choose for admission to the CPA exam. These are a masters' degree with an accounting concentration and no experience, a baccalaureate degree with an accounting concentration with no experience, a baccalaureate degree without an accounting concentration and one year of work experience, two years of college work and three years of experience, or a high school diploma and five years of experience. All Minnesota observations are assumed to have met the lowest educational attainment, high school graduation, and the experience requirement associated with that level of educational attainment, five years.

⁷Conditioning is the terminology commonly used to refer to the granting of partial credit on the CPA exam. Many states that require the candidate receive a minimum score, typically 50 percent, on parts of the exam not passed to receive credit for parts of the exam on which a passing score, at least 75 percent, was received. Some states require a candidate to pass two parts for conditioning, while others require a candidate to pass only one part of the exam for conditioning. Some states waive the minimum score requirement for conditioning if the candidate receives passing scores on three of the four parts of the exam at the same sitting.

⁸The first publication of these results was in 1986 for the 1985 candidate performance.

⁹The uniform CPA examination was administered semi-annually over a two-and-a-half-day period and consisted of four parts—practice, auditing, business law, and theory—through the end of 1993. Beginning in 1994, the reformatted uniform CPA examination was administered semi-annually over a two-day period and consisted of four parts—accounting and reporting—taxation, managerial, governmental and not-for-profit (ARE), auditing (AUDIT), business law and professional responsibilities (LPR), and financial accounting and reporting (FARE).

¹⁰The expected impact of the 150-hour requirement on the success rate is measured by the change in the percentage of the normal distribution that lies to the left of the value of $z + \alpha$. The mean for the first-time pass rate for all observations where the 150-hour requirement is not in effect is 16.6 percent or 0.1660 which is equivalent to $z = -0.97$. The value of $z + \alpha$ is $-0.97 + 0.2328 = -0.7372$ which is rounded to -0.74 . The probability of z being less than or equal to $z + \alpha$ is 0.2297 for an increase of 0.0637 or 6.37 percent in the success rate due to the implementation of the 150-hour requirement.

¹¹I control for those states that allow completion of a college or university sponsored course for academic credit as part of the hours needed to satisfy the state's required accounting credit hours. If a candidate takes a CPA review course offered by a commercial provider or by an employer, he or she does not receive credit toward the accounting concentration. In that case, those candidates take more credit hours in accounting subjects that may provide more depth or breadth of knowledge.

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