

JABM

JOURNAL of
ACCOUNTING, BUSINESS and MANAGEMENT

- The Effect of Manufacturing Technology Type on Cost Structure: Evidence from Egypt**
Mohamed E. Abulezz and Ramy G. Sherief 1-14
- Geographical Diversification Effects on Banks' Performance: Evidence from Islamic Banks of some Selected Countries**
Faten Zoghalmi 15-29
- The Effect of the Tax Cuts and Jobs Act on the Choice between Traditional and Roth IRAs**
Brian Nichols and Chioma Nwogu 30-48
- Corporate Diversification and CEO Compensation: Evidence from the Moderating Effect of Firm Performance**
Hwei Cheng Wang, Ya Ying Chou Yeh, Michael D. Slaubaugh, and Chih Chi Fang 49-59
- The Effect of Celebrity Endorsement on Brand Image in Determining Purchase Intention**
Soraya Tsamara Adiba, Agus Suroso, and Nur Choirul Afif 60-73
- CPA Experience Requirements and Service Quality: Experience from the US**
Jack Armitage and Shane Moriarity 74-83
- The Impact of Contingency Factors on the Sophistication of Costing Systems: Evidence from Tunisia**
Hanan Moalla and Achref Mezouel 84-100
- Corporate Social Responsibility, Corporate Life Cycle, and Dividend Policy**
Eman Abdel-Wanis 101-115

CPA Experience Requirements and Service Quality: Experience from the US

Jack Armitage*
Shane Moriarity†

Abstract

This study examines the requirement of obtaining prior practical experience to obtain a license to provide professional assurance services. Disciplinary sanctions imposed by the American institute of certified public accountants (AICPA) is used to compare differing state experience requirements required for licensing. The study uses the per capita number of sanctions for substandard professional service as a proxy for the quality of professional service being provided in each state. The results revealed consistent associations between the length of minimum state experience requirements for licensure and the proxy. While the results suggest that experience provides society with a benefit, the results do not quantify it and the justification for adopting a specific experience requirement still requires a judgmental assessment of the trade-off between the costs that the requirement imposes and the benefits it will bestow.

Keywords: AICPA, experience requirement, CPAs, service quality, disciplinary sanctions, and substandard performance.

I. INTRODUCTION

Applying the famous quote of Albert Einstein to licensure of CPAs in the United States raises the question of which requirements enhance performance. While the need for an understanding of a professional knowledge base is obvious, the effect experience plays in reducing substandard performance is not clear.

A distinguishing characteristic of a profession is the demand by society that members of the profession provide high quality service to serve the public interest. To help assure that its members deliver competent expert service, professions develop minimum standards for entry and continued membership. Failure to conform to these standards may result in public censure or in extreme cases expulsion from the profession. However, each of the standards ostensibly adopted to strengthen professional practice imposes a cost on those wishing to practice the profession. At the extreme, an arbitrary standard may simply be a barrier to entry. For standards to be warranted they must be shown to provide benefits.

The primary source of voluntary standards for the professional practice of accounting in the United States is the American institute of certified public accountants (AICPA). In contrast, mandatory standards for the granting and maintenance of a license to practice are set by the individual states. The standards encompass such factors as minimal educational achievement, demonstration of basic technical competence (such as performance on a professional examination), the acquisition of practical skills through supervised experience, staying abreast with current developments (through continuing professional education), and the pursuit of principled practice (through formal ethics

* University of Nebraska Omaha, 6001 Dodge Street, Omaha NE 68182, USA. 1.402.554.2912. E-mail: jarmitage@unomaha.edu.

† Emeritus Professor. The University of Oklahoma, 660 Parrington Oval, Norman, OK 73019-0390, USA. E-mail: smoriarity@actrix.co.nz.

programs). The minimum benchmarks for meeting the expectations have changed as society and the profession have evolved. Some have disappeared (such as the prohibition against advertising) while the codification of others is relatively recent (mandatory ethics instruction). Still others (such as the level of education needed) have been adjusted over the years as views on relevant costs and benefits change. This study examines one of the requirements to obtain a license to provide professional assurance services: the level of prior practical experience required for licensure.

II. LITERATURE REVIEW

2.1. Historical Development

The first licensing for CPAs in the United States occurred in the state of New York in 1896. Other states soon added public accountancy laws with nearly all states passing licensing requirements for CPAs by the early 1920s. Initially most jurisdictions required a high school diploma to become a CPA. However, since the majority of the population did not have that level of education, many jurisdictions began to substitute practical experience for education.

It was not until the 1950s that the profession seriously began to address the experience requirements for CPA licensure (Bremser et al., 1977). During this period the profession moved to require even more formal education for a CPA license. But significant variations were adopted across the different jurisdictions regarding the appropriate mix of academic and practical preparation. As a result, the chairman of the AICPA board of examiners in 1951 called for the development of uniform experience requirements (Carey, 1970).

In 1961, the AICPA created the committee on qualifying experience to draft a uniform requirement. The committee recommended two years of experience for holders of a bachelor's degree. It recommended a reduction in the requirement by at least one year for candidates with sufficient education beyond the bachelor's degree. Later in the same decade, the AICPA established the committee on education and experience requirements for CPAs to readdress these issues. Among its recommendations was a recommendation that no experience be required for candidates with at least five years of college study (AICPA, 1969). However, the academic community disagreed and a few years later the American accounting association (AAA) issued a report that stated experience should be required for everyone who wished to obtain a license to practice (AAA, 1972).

In 1984, the AICPA and the national association of state boards of accountancy (NASBA) created the model public accountancy Bill --renamed the uniform accountancy act (UAA) in 1992 (AICPA & NASBA, 2007). The current eighth edition of the UAA is found on the NASBA website (NASBA, 2018) among the many issues addressed, the UAA recommended a one-year experience requirement for CPA licensure.

To date, uniformity in experience requirements has not been achieved. The diverse set of recommendations has resulted in a range of different experience requirements across states. The current study examines whether the different requirements are associated with a measurable difference in the quality of professional practice across states. If there is no difference in practice quality, there may be no need for a practical experience requirement. If a difference in practice quality is detected it may help identify the best benchmark for a uniform experience requirement.

2.2. Literature

Prior research that examines whether experience requirements are desirable is mixed. Surveys have shown widespread support for a practical experience requirement among both academics (Booker et al., 2013) and practitioners (Harper, 1975; Johnson, 1978; and Moreland & Angur, 2006). However, support is not universal. Roberts (1994) expressed concern that an experience requirement could restrict entry into the field and argued that experience does not assure competence. An early AAA (1972) reported that some accountants viewed an experience requirement as being a form of apprenticeship and thus not professional, others thought that while experience is beneficial, the experience gained in the first year or two is of doubtful value so it should not be a requirement. This report also expressed concern that an experience requirement would discourage competent individuals from pursuing a career as a CPA. Colgan (2012) shared the concern that the requirement would discourage people from entering the profession. He also worried that the variation in requirements across states might encourage people to migrate to the states with the easiest requirements to meet.

While opinions have been gathered on the desirability of experience requirements, there has been relatively little research examining whether experience requirements have a measurable impact on the quality of professional performance being provided. Thomas et al. (1998) used the percentage of a practice devoted to governmental clients as an estimate of a practitioner's relevant governmental experience. This experience measure was calculated for 41 practitioners who were the subject of enforcement actions by the Texas state board of accountancy for substandard service to governmental accounting and audit clients. The experience measures for these practitioners were compared to similar measures of governmental experience for a sample of 348 practitioners who were not subject to an enforcement action. The study found that practitioners subject to enforcement actions had, on average, only 11.2% of their practice devoted to governmental clients versus 27.2% for those practitioners not subject to enforcement actions. The authors concluded that their finding is consistent with relevant experience being associated with better professional service.

Colbert and Murray (1999) looked at a different measure of the quality of professional service. They used peer review reports as a measure of audit quality. In their sample of 281 files they found no relationship between education or experience requirements on the quality of audits performed.

The mixed results for the value of experience provide the motivation for the current study. It examines whether differences in state experience requirements for a CPA license are associated with differences in the quality of professional accounting service delivered in the states. The quality of service provided in a state is assessed using the rate of sanctions imposed by the AICPA for substandard professional service on members in the state. The study finds a negative association between higher experience requirements and the rate of sanctions imposed for substandard professional service.

III. RESEARCH SAMPLE AND METHODOLOGY

3.1. Data Sources

The study relies on three sets of data: AICPA disciplinary sanctions (AICPA, 2016), state experience requirements, and state census information. The database of AICPA disciplinary sanctions collected by Armitage and Moriarity (2016) was one source, which includes all AICPA disciplinary sanctions imposed during the years 1980 through 2014, and was supplemented with the 2015 data by the current authors. Information on experience requirements for each state at the start of the study (1980) were taken from a

summary provided in Gleim's CPA review (Gleim & Delaney, 1980). Data for the requirements at the end of the period were taken from the website *Crushthecpaexam* (2016). Data on the population of each state was used to standardize the rate of sanctions. Population data were taken from US Census Bureau data for 1980, 1990, 2000, and 2010 (Wikipedia, 2016).

The database on AICPA disciplinary sanctions includes sanctions for substandard professional service, failure to meet continuing education requirements, engaging in criminal activities, non-cooperation with an investigation, failure to comply with a directive, and professional practice violations (not filing forms or paying fees). Consistent with the opinion provided by Krom (2016) sanctions associated with the delivery of accounting services was selected as the paramount measure of service quality. Thus, sanctions for substandard professional service were the focus of the study. These are instances of professional practice deemed not to have met generally accepted expectations. There were 923 sanctions for substandard professional service reported for the years 1980 through 2015. Five cases involve persons in foreign locations, one case involves a person from the district of Columbia and one case did not report where it occurred. These seven cases were deleted leaving a population of 916 cases traceable to specific states.

3.2. Methodology

To make statistically meaningful comparisons of attributes across groups requires that each group consist of several similar members over the period being studied. 'State experience requirement' is the characteristic of interest that varies across groups for this study. However, identifying a level of similarity that yields groupings amenable for statistical analysis is complicated.

State requirements vary in level but also vary in how educational achievement affects the necessary level. For example, Table 1 provides a summary of the level of experience required in each state in 1980. The first column indicates the experience required for an individual with a high level of educational achievement (often 150 hours of university credit). The second column indicates how many years of experience are required for persons with lesser educational achievement (in a few cases it may be very little). The last column indicates how many states fit each pattern. With 17 different patterns being observed across only 50 states, cell sizes are typically too small to make statistically meaningful comparisons across these groups.

Insert Table 1 here.

State requirements also vary across time because state boards occasionally adjust their regulations. When a change is made the effect of the change is slow to be felt. In a state that for 25 years has required one year of supervised experience for licensing, most of the practitioners in the state will have had that experience. In contrast, initially following the adoption of a one-year experience requirement in a state with no prior requirement, only the most recently licensed practitioners will have the experience. Thus, states that have the same requirement in place at a specific point in time might still be considered dissimilar. Attempting to match closely states in groups with similar requirements over time again leads to groups too small for analysis.

Table 1**Summary of State Experience Requirements for CPA Licensing in 1980**

Number of Years of Experience Required (varies by highest formal educational level achieved)		Number of States
Minimum	Maximum	
0	0	6
0	1	2
0	2	1
0	3	1
0	4	1
1	1	3
1	2	9
1	3	4
1	4	4
1	6	2
1½	1½	1
2	2	4
2	3	2
2	4	6
2	5	2
2	6	1
2	9	1

These observations led to the adoption of a grouping of states that capture only two basic similar characteristics over the thirty-six-year time span of the study. The grouping uses the minimum level of supervised experience required by each state (i.e., for persons with the highest level of educational achievement). It also forms groups based on having a similar minimal level of experience in place at the beginning of the study period and a similar level in place at the end of the period. Table 2 provides a summary of the number of states in each group formed by these criteria, while Table 3 identifies the states in each group.

Table 2**Patterns of State Experience Requirements for CPA Licensure: 1980 and 2015**

Minimum Years of Experience Required in		Number of States
1980	2015	
0	0	1
0	1	10
1	1	20
1	2	2
1½	1	1
2	1	13
2	2	3

Insert Table 3 here.

The number of sanctions for substandard professional service was accumulated by year across the states comprising each of the seven groups identified in Table 2. To control for differences in population across states, the number of sanctions was deflated by the population of the states using census data for the year nearest the year of the sanctions. This provides each group's average number of sanctions per million of

population. It would have been preferable to deflate the number of sanctions by the number of AICPA members in each state each year. Unfortunately, the AICPA does not maintain historical membership data by state.

In terms of measurement scale (nominal, ordinal, interval and ratio), the groups can only be compared ordinally. Consequently, it is not appropriate to use regression on the entire set of groups. Instead, t-tests are used to compare the average number of sanctions per million of population over the 36-year study horizon. To control for changes that occurred over time in the AICPA’s code of professional ethics, the general regulatory environment in the US and similar nationwide factors, the comparisons were made using matched-pairs t-tests with the matching done by year.

Table 3
Minimum CPA Experience Requirements in 1980 and 2015 by State

Minimum Experience Requirement in Years		List of States	Minimum Experience Requirement in Years		List of States
1980	2015		1980	2015	
0	0	Colorado	1½	1	Wisconsin
0	1	Florida	2	1	Alabama
		Hawaii			Alaska
		Illinois			Arizona
		Kansas			California
		Maryland			Delaware
		Missouri			Georgia
		North Dakota			Kentucky
		Oklahoma			Massachusetts
		West Virginia			Michigan
		Wyoming			New Jersey
					South Carolina
					Vermont
					Virginia
1	1	Arkansas	2	2	Connecticut
		Idaho			Indiana
		Iowa			Nebraska
		Louisiana			
		Minnesota			
		Mississippi			
		Montana			
		New Hampshire			
		New Mexico			
		New York			
		North Carolina			
		Ohio			
		Oregon			
		Pennsylvania			
		Rhode Island			
		South Dakota			
		Tennessee			
		Texas			
		Utah			
		Washington			
1	2	Maine			
		Nevada			

IV. EMPIRICAL RESULTS

Two comparisons of the number of sanctions for substandard professional service across jurisdictions with different experience requirements are summarized in Figures 1 and 2. For convenience, the groups are referred to with a couplet (x, y) where x is the minimum experience requirement in 1980 and y is the requirement for 2015. Figure 1 compares the states that had the same minimum experience requirements in both 1980 and 2015. It shows a consistent pattern. When the experience requirement increases from (0, 0) to (1, 1) the sanctions per million of population in the groups decreases from 0.1246 to 0.0926. When experience increases from (1, 1) to (2, 2) the sanctions per million of population decreases again to 0.0849. While the decreases may seem large, they are not statistically significant at traditional levels because of the small number of observations in each group: just one in (0, 0) and 3 in (2, 2). This is the cell size problem previously discussed.

Figure 1

Substandard Professional Service Sanctions per Million of Population in States with Consistent Minimum Experience Requirements in 1980 and 2015

	States with experience requirements:					
	1980	2015	1980	2015	1980	2015
Required Experience (years)	0	0	1	1	2	2
Sanctions per Million Population	0.1247		0.0926		0.0849	
Differences			-0.0321		-0.0077	
			-0.0398			

Figure 2

Substandard Professional Service Sanctions per Million Population in Groups Containing Ten or More States with Similar Minimum Experience Requirements

	States with experience requirements:					
	1980	2015	1980	2015	1980	2015
Required Experience (years)	0	1	1	1	2	1
Sanctions per Million Population	0.1040		0.0926		0.0817	
Differences			-0.0114		-0.0109	
			-0.0223*			

Note: * Confidence level is 95%, p-value < 0.05.

Figure 2 ignores the small groups. It compares the groups identified in Table 2 that include ten or more states. The results again show a consistent pattern with fewer sanctions being imposed in states with higher experience requirements. Moving from group (0, 1) to (1, 1) the sanctions per million of population declines from 0.1040 to 0.0926 and declines again to 0.0779 when moving from (1, 1) to (2, 1). With the larger number of observations in each group, the (0, 1) versus (2, 1) comparison is statistically significant.

The association observed between state experience requirements and sanctions may arise from some common underlying factor. Krom (2016) indicates that three events must occur for a sanction to be publicly reported. Someone must observe/discover a potential wrongful act, the act must be reported to the appropriate authority, and based

on its investigation the authority must impose a sanction. It is possible that there is a systematic difference in the rate at which each of these events occurs in a state, and the experience requirement level established by that state. That is, states which choose to adopt shorter experience requirements may also choose to invest less in monitoring professional behaviour or be more lenient in dismissing complaints for substandard professional service. Because the AICPA relies on fact finding by state boards for a significant proportion of its sanctions (averaging 26% from 1980 to 2015) any such systematic difference would be reflected in the results reported above. To gain insight into the likelihood of the existence of such a systematic relationship, the sanctions imposed against AICPA members for criminal activity were examined. While the surveys mentioned previously indicate that many people think an association between practical experience and service quality is credible, a linkage between practical experience and criminal activity seems improbable. If sanctions for criminal actions are found to be associated with state experience requirements, both associations may reflect systematic differences in the monitoring and sanctioning activities across states.

The analysis of criminal sanctions proceeded in the same manner as the analysis of substandard professional service. There were 679 sanctions imposed on AICPA members for criminal activity from 1980 through 2015: all traceable to specific states. The comparison of sanctions per million of population for states with different experience requirements are presented in Figures 3 and 4. Similar to Figure 1, Figure 3 presents the results for criminal sanctions for the states with the same experience requirements in both 1980 and 2015. There is almost no difference in the sanction rate and unlike the consistent negative association observed for substandard service, sanctions for criminal activity increase when moving from (0, 0) to (1, 1) but then decrease from (1, 1) to (2, 2). A similar result is seen in Figure 4, which compares groups consisting of ten or more states. Once again, the pattern of comparisons for criminal activity is not consistent. There is an increase in sanctions per million of population between (0, 1) to (1, 1) and an almost equal decrease between (1, 1) to (2, 1). The net result is almost no difference in sanctions per million of population for (0, 1) and (2, 1). Taken together the results suggest there is no association between sanctions imposed for criminal activity and states' minimum experience requirements. In turn, this provides some comfort that differences in state experience requirements do not systematically vary with state monitoring and sanctioning activities.

Figure 3
Sanctions for Criminal Activity per Million of Population in States with Consistent Minimum Experience Requirements in 1980 and 2015

	States with experience requirements:					
	1980	2015	1980	2015	1980	2015
Required Experience (years)	0	0	1	1	2	2
Sanctions per Million Population	0.0774		0.0785		0.0715	
Differences			+0.0011		-0.007	
			-0.0059			

Figure 4
Sanctions for Criminal Activity per Million Population in Groups Containing Ten or More States with Similar Minimum Experience Requirements

	States with experience requirements:					
	1980	2015	1980	2015	1980	2015
Required Experience (years)	0	1	1	1	2	1
Sanctions per Million Population	0.0612		0.0785		0.0650	
Differences		+0.0173*		-0.0135*		
		+0.0038				

Note: * Confidence level is 95%, p-value < 0.05.

V. CONCLUSION

This study used the number of AICPA sanctions for substandard professional service as a proxy for the quality of professional accounting services being offered across states. The study revealed consistent associations between the length of minimum state experience requirements for licensure and the proxy. On balance, the findings suggest that a practical accounting experience requirement provides a benefit through its association with superior professional service. Thus, there may be value in pursuing a uniform requirement across jurisdictions. However, two important caveats are in order. While experience is associated with improved service it does not fully explain differences in service quality across states. Other factors, such as the level of required education, the amounts and types of required CPE and the rigor of enforcement by state boards, are involved and enhancements to them may provide greater and more cost-effective improvements in service quality, so these are areas that need further research. Second, while the results suggest that experience provides society with a benefit the results do not quantify it. This also is any area needing further research. The justification for adopting a specific experience requirement still requires a judgmental assessment of the trade-off between the costs that the requirement imposes and the benefits it will bestow.

REFERENCES

- American Accounting Association. (1972). Report of the committee to examine the 1969 report of the AICPA committee on education & experience requirements for CPAs. *Accounting Review*, 47, 237-257.
- American Institute of Certified Public Accountants & National Association of State Boards of Accountancy. (2007, July). *Uniform accountancy act* (5th ed.). New York: American Institute of Certified Public Accountants & Nashville, National Association of State Boards of Accountancy.
- American Institute of Certified Public Accountants. (1969). *Report of the committee on education and experience requirements for CPAs* (The beamer committee report). New York: American Institute of Certified Public Accountants.
- American Institute of Certified Public Accountants. (2016). *Website address for sanctions*. Retrieved March 15, 2018 from <http://www.aicpa.org/FORTHEPUBLIC/DISCIPLINARYACTIONS/Pages/default.aspx>.
- Armitage, J. L., & Moriarity, S. R. (2016). An examination of AICPA disciplinary actions: 1980-2014. *Current Issues in Auditing*, 10(2), A1-A13.

- Booker, Q., Daniels, B. W., & Ellis, Y. (2013, August). Education and experience requirements to become a CPA: An examination of educators' views. *The CPA Journal*, 83(8), 61-66.
- Bremser, W. G., Brenner, V., & Dascher, P. E. (1977). The feasibility of professional schools: An empirical study. *The Accounting Review*, 52(2), 465-73.
- Carey, J. L. (1970). *The rise of the accounting profession: To responsibility and authority, 1937-1969*. New York: American Institute of Certified Public Accountants (AICPA).
- Colbert, G., & Murray, D. (1999, November). State accountancy regulations, audit firm size and auditor quality: An empirical investigation. *Journal of Regulatory Economics*, 16(3), 267 -285.
- Colgan, M. (2012, June 22). Is it finally time to revise experience requirements to become a CPA? *Central Penn Business Journal*, 28(26), 15.
- Crushthecpaexam. (2016). *CPA requirements by state*. Retrieved January 11, 2019, from <http://crushthecpaexam.com/cpa-license-requirements/>.
- Gleim, I. N., & Delaney, P. R. (1980). *CPA examination review* (7th ed.): *Outlines and study guides* (vol. 1). New York: John Wiley & Sons Inc.
- Harper, J. C. (1975). *The relationship between demographic attributes and opinions of certified public accountants on education and experience requirements controversies*. Unpublished Ph.D. Dissertation, University of Utah, Salt Lake City, Utah.
- Johnson, S. B. (1978). *An investigation of the recommendations made by the committee on education and experience requirements of the American Institute of Certified Public Accountants*. Unpublished Ph.D. Dissertation, Mississippi State University, Starkville, Mississippi.
- Krom, C. L. (2016). Disciplinary actions by state boards of accountancy 2008-2014: Causes and outcomes. *Accounting & the Public Interest*, 16(1), 1-27.
- Moreland, K. A., & Angur, M. (2006, September). The importance of work experience to accountants' professional development. *The Journal of American Academy of Business*, 9(2), 8-13.
- NASBA. (2018, January). *Uniform accountancy act and rules* (8th ed). Retrieved February 15, 2018, from <https://nasba.org/app/uploads/2018/02/Uniform-Accountancy-Act-%E2%80%93-Eighth-Edition-%E2%80%93-January-2018.pdf>.
- Roberts, S. J. (1994). Reconsidering CPA experience requirements. *The CPA Journal*, 64(12), 42-45.
- Thomas, C. W., Davis, C. E., & Seaman, S. L. (1998, December). Quality review, continuing professional education, experience and substandard performance: An empirical study. *Accounting Horizons*, 12(4), 340-362.
- Wikipedia. (2016). *United States Census Data*. Retrieved March 12, 2018 from https://en.wikipedia.org/wiki/United_States_Census_Bureau.