

**AN EXAMINATION OF PASS RATES FOR
CANDIDATES WITHOUT ADVANCED DEGREES
ON THE COMPUTERIZED CERTIFIED PUBLIC
ACCOUNTANT (CPA) EXAM: ASSOCIATION TO
ADVANCE COLLEGIATE SCHOOLS OF
BUSINESS (AACSB)-ACCREDITED VS.
UNACCREDITED INSTITUTIONS**

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ABSTRACT

This study examines pass rates on the computerized Certified Public Accountant (CPA) exam by comparing the results for candidates with bachelor's degrees from the Association to Advance Collegiate Schools of Business International (AACSB)-accredited institutions to candidates with bachelor's degrees from unaccredited institutions. The comparison includes both business-only-accredited and accounting-accredited institutions. When we examined computerized CPA exam passing rates for a four-year period (2005 to 2008), we found that candidates with bachelor's degrees from accounting-accredited schools outperformed candidates with bachelor's degrees from business-accredited only and unaccredited schools. Furthermore, candidates with bachelor's degrees from business-accredited schools outperformed candidates with bachelor's degrees from unaccredited schools. These results support previous findings from the paper-and-pencil and computerized formats of the CPA exam, which showed

candidates from accredited schools outperformed candidates from unaccredited schools.

Key words: Computerized CPA examination, AACSB accreditation, accounting accreditation, CPA exam pass rates

Data availability: Both authors are willing to share the data in this paper

INTRODUCTION

This study investigates whether computerized CPA exam pass rates for candidates with bachelor's degrees from AACSB-accredited business schools in the United States differ from the pass rates for candidates with bachelor's degrees from unaccredited schools. The study focuses on candidates with bachelor's degrees because 1) an advanced degree is not required to sit for the exam, 2) a majority of candidates take the exam without an advanced degree, and 3) some bachelor's degree candidates opt to achieve 150 credit hours without pursuing an advanced degree. The National Association of State Boards of Accountancy (NASBA) reports results for candidates with only a bachelor's degree as well as results for candidates with advanced degrees.

The AACSB grants accreditation for undergraduate and graduate business administration and accounting programs. According to the AACSB website (<http://www.aacsb.edu/accreditation>), "AACSB Accreditation is known, worldwide, as the longest standing, most recognized form of specialized/professional accreditation an institution and its business programs can earn." The accreditation standards "challenge post-secondary educators to pursue excellence and continuous improvement throughout their business programs." With accreditation, institutions confirm their commitment to the quality and continuous improvement of their program(s). The AACSB standards cite job acceptance rates for graduates over the most recent five-year period as an example of evidence that can be used to demonstrate the effectiveness of career development support for accreditation purposes, which is part of continuous improvement.

One of the AACSB accounting standards states that if the accounting academic unit's mission, expected outcomes, and strategies include the preparation of graduates in any accounting degree program for professional certification examinations, these accounting graduates must demonstrate success on such certification exams at or above state, provincial, or national norms and among peer institutions. Accounting is a discipline that has a uniform, comprehensive exam, the CPA exam, which is taken by many students at or after graduation. An increase in an institution's CPA exam passing rates can result in increased demand by employers for a school's accounting graduates, which can help to satisfy the AACSB standards.

While prior studies have found that schools with accounting and business accreditation have higher CPA exam pass rates than do non-accredited schools (e.g., Marts et al. 1988; Barilla et al., 2008), most of these studies used CPA exam pass rates when the exam was a paper-and-pencil exam with a different format. Beginning in April 2004, the exam was changed to a computerized format and is administered continuously for a two-month window each quarter. In addition to the format change, the rules for candidates to pass and receive credit for passing has changed. Findings of prior studies may no longer hold as candidates are allowed to take one

section at a time; therefore, the results for these candidates may look somewhat different than those for candidates under the paper-and-pencil format. Findings of prior studies may not hold anymore as candidates have more time to study for each part of the exam under the new computerized format.

In this study, we examined pass rates on the computerized CPA exam of candidates with bachelor's degrees from accounting-accredited, business-accredited and unaccredited schools of business for a four year period from 2005 to 2008. The results of our study show that candidates with bachelor's degrees from accounting-accredited schools outperformed candidates with bachelor's degrees from business-accredited only and unaccredited schools, and that candidates with bachelor's degrees from business-accredited schools outperformed candidates with bachelor's degrees from unaccredited schools.

The remainder of this paper is organized as follows: the next section presents the background, literature review, and hypotheses, followed by the methods and results sections. The final section presents conclusions, limitations, and possible direction for future studies.

BACKGROUND, LITERATURE REVIEW, AND HYPOTHESES

Accounting accreditation was added by the AACSB in 1980 to promote the development of accounting education programs that produce high-quality graduates (AACSB). Barilla et al. (2008, p.270) state that "the standards also make it clear that a high-quality program is one that prepares students to serve those needs of society that are met by the discipline and profession of accounting and that placement and later career success are key indications of the quality of accounting graduates." Kren et al. (1993) show that AACSB accreditation standards contribute to maintaining quality in accounting education. One of the measures that is directly related to the placement and later career success of accounting graduates and the quality of accounting education is the passing rate on the CPA exam.

The CPA exam is a comprehensive, four-part professional exam that is developed by the American Institute of CPAs (AICPA) and administered by the National Association of State Boards of Accountancy (NASBA). The exam tests a candidate's understanding of and ability to apply authoritative accounting literature, and whether they possess the level of technical knowledge and skills necessary for initial licensure. The four parts of the exam are Auditing and Attestation (4 hours); Financial Accounting and Reporting (4 hours); Regulation (3 hours); and Business Environment and Concepts (3 hours). The testing year is divided into four "windows" of three months each, and each window is divided into two consecutive months of testing, followed by one month in which no tests are administered. Candidates may take one or more parts of the exam during each three-month window but may take each part only once during the window. Each part of the exam that a candidate takes is called an "event." After candidates pass every part of the exam, they must meet the education and experience requirements specified by the licensing jurisdiction.

Although the CPA exam maintains this uniform structure, prior studies show that the use of CPA exam pass rates to assess program quality is mixed. Taylor and Rudnick (2005) report that the most common and universally-accepted outcome assessment for accounting students is the pass rate of graduates on the CPA exam. The authors point out that many accounting programs are designed to help students pass the exam because of pressure to obtain a respectable passing rate. Allen and Woodland (2006, p. 175) found that "many schools use CPA exam results as a measure of success, publishing these results in correspondence with donors, future

students and alumni. Although CPA examination preparation is rarely a stated goal of an accounting program, pass rates are nonetheless useful and important measures.” A survey by Hindi and Miller (2007) shows that use of scores on standardized tests (such as CPA, CMA) ranked fifth out of eight items in the various instruments that accounting departments use to assess program quality.

Some studies have compared the performance of candidates from schools with accounting accreditation with schools without accreditation or with business-only accreditation. Marts et al. (1988) used the results from the 1985 and 1986 CPA exam to conduct a two-part study of how CPA exam candidates who graduated from AACSB-accredited accounting programs performed in comparison to candidates from accounting programs that were not AACSB-accredited. Marts et al. found that graduates from AACSB accounting-accredited programs performed significantly better on the CPA exam than graduates from schools that did not have AACSB business-only accreditation. In the second part of the study, the authors found that graduates from AACSB accounting-accredited programs did not perform significantly better on the CPA exam than graduates from schools that had business-only accreditation. Boone et al. (2006), using the paper-and-pencil exam, found only weak evidence of an association between program-level pass rates and college-level or separate AACSB accounting program accreditation.

Other studies have focused on accredited versus unaccredited programs. Using the results of the 1985-2003 paper-and-pencil CPA exam, Barilla et al. (2008) compared candidate performance in AACSB business-accredited-only programs with that of non-AACSB-accredited programs. They found that increased CPA exam pass rates are associated with AACSB-accredited programs. Howell and Heshizer’s survey (2006) concludes that AACSB accreditation status substantially influences CPA exam pass rates. Meanwhile, Morgan et al. (2008) found that AACSB-accredited schools demonstrated a 6% to 8% higher CPA exam success rate on each of the four separate parts of the computerized CPA exam. Grant et al. (2002) report a similar positive relationship between AACSB business school accreditation and CPA exam performance on the pre-computerized CPA exam. Morgan (2011) showed that newly-accredited business schools demonstrated greater improvements to average CPA exam success rates than did a comparably-sized group of unaccredited business schools. Finally, studies by Marts et al. (1988), Grant et al. (2002), Howell and Heshizer (2006), Morgan et al. (2008) and Morgan (2011) suggest that AACSB accreditation and success rates on the uniform CPA exam are related.

Based on prior literature, then, we developed three hypotheses, in null form, related to the CPA exam pass rates, as follows:

- H1:** There is no difference in CPA exam performance between candidates with bachelors degrees from institutions with AACSB business accreditation only and candidates from institutions without AACSB business accreditation.

- H2:** There is no difference in CPA exam performance between candidates with bachelors degrees from institutions with AACSB accounting accreditation and candidates from institutions without AACSB business accreditation.

- H3:** There is no difference in CPA exam performance between candidates with bachelors degrees from institutions with AACSB accounting accreditation and candidates from institutions with AACSB business accreditation only.

METHODS

We obtained CPA exam passing data from the 2005 through 2008 editions of the National Association of State Boards of Accountancy (NASBA) *Performance of Candidates without Advanced Degrees by Accounting School*. The information summarized by the NASBA for the computerized format of the exam is for the four windows in each calendar year. Since introducing the computerized format, the NASBA has continuously changed the way that CPA exam pass rate data is presented in order to provide more relevant information.

To test this study's hypotheses, we used the 2005 through 2008 CPA passing rates, which were published in subsequent years and cover the four two-month windows of the exam. We did not use 2004 because it was the first year of the computer-based CPA exam and may have included confounding effects from the previous year (e.g., transition-based confounding effects). For each part of the exam in 2005, the NASBA published the percent of events (exam parts) passed versus the number of events attempted for each section area of the exam. For years 2006 through 2008, the NASBA did not publish a percentage of passing for each section of the exam. Instead, the NASBA has published the number of passing events and total events for each section of the exam, and from these data we calculated the passing percentage rate. We calculated the percentage of students passing for each section by dividing number of passing events to total events.

The 2005 through 2008 data represent the performance of candidates with bachelor's degrees. The data sets include only schools with at least five candidates taking the exam. In order to preserve the anonymity of the individuals in the group, the NASBA does not report groups of fewer than five candidates. In addition, as discussed previously, the 2005 through 2008 data for the computer-based exam differ from those of the paper-based exams because the format is based on number of events, which includes both first-time and repeat candidates. This study uses data for first-time and repeat candidates as presented in Appendix J of the annual editions of the *Performance of Candidates without Advanced Degrees by Accounting School* published by the NASBA (2006-2009).

Accounting and business accreditation data were obtained from the AACSB website. If an institution of higher education was accredited during 2005-2008, we included it both for its year of accreditation as well as subsequent years. For example, if a university received business accreditation prior to 2005 and accounting accreditation in 2007, we coded that university as having business accreditation for all four years of 2005 through 2008, but accounting accreditation for years 2007 and 2008. To control for the aptitude of candidates at each school, we conducted internet searches and visited school websites to ascertain the 75th percentile SAT

TABLE 1

Number of Schools for Hypothesis Testing

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Schools with CPA exam pass rate	924	1,016	1,077	1,111
Schools with no reported SAT exam	<u>203</u>	<u>275</u>	<u>297</u>	<u>282</u>
Total schools for analyses	721	741	780	829
Schools without accreditation	<u>367</u>	<u>367</u>	<u>402</u>	<u>444</u>
Accredited schools	354	374	378	385
Schools with accounting accreditation	<u>139</u>	<u>141</u>	<u>139</u>	<u>144</u>
Schools with business accreditation only	<u><u>215</u></u>	<u><u>233</u></u>	<u><u>239</u></u>	<u><u>241</u></u>

Note: The number of observations for each year is affected by the number of candidates taking the CPA exam because schools with fewer than five candidates are not included in the NASBA publications.

scores of entering freshmen at the school.^{1,2} The number of schools for testing the hypotheses appears in Table 1.

As Table 1 shows, the number of schools whose candidates participated in the CPA exam during the years 2005 through 2008 ranged from 924 to 1,111. We could not obtain SAT scores for 1,057 observations, resulting in a sample size of 3,071 observations for the current study's analysis. Out of 3,071 schools, 1,580 lacked AACSB accreditation; 928 had AACSB business accreditation; and 563 had both business and accounting accreditation. In addition, Table 1 shows that the number of schools with CPA exam candidates increased each year from 2005 to 2008. In particular, the number of candidates from schools with no accreditation increased in 2007 and 2008.

RESULTS

Descriptive statistics for the number of observations, SAT scores, and raw scores for each section of the CPA exam performance appear in Table 2, broken down by the year. Table 2 indicates that SAT scores (total for verbal and mathematical sections) were higher for schools with accounting accreditation, followed by schools with business accreditation only and schools with no accreditation. In addition, Table 2 shows that the percentage of candidates passing each section of the exam is higher for schools with accounting accreditation, followed by schools with business accreditation and schools with no accreditation. A one-way analysis of variance indicated significant differences ($p < .05$) between schools with accounting accreditation, business accreditation, and no accreditation on SAT scores. With a few exceptions from 2005 to 2006 (FAR, no accreditation and business-only; AUD, accounting; and BEC, business and

¹SAT scores are reported at the 25th and 75th percentiles. The upper number is for the 75th percentile of students who enrolled in the college. For example, a math SAT score of 620 at the 75th percentile means that 75% of enrolled students achieved a math score of 620 or lower (in other words, 25% of enrolled students scored at or above a score of 620 on the math section).

²SAT scores were obtained from http://collegeapps.about.com/od/collegeprofiles/College_Profiles.htm, <http://www.parchment.com/c/college/search/browse/> and <https://bigfuture.collegeboard.org/>

TABLE 2**Descriptive Statistics**

Variable	Year	No Accreditation			Business Accreditation			Accounting Accreditation			Total		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
SAT	2005	367	1150.2	102.50	215	1200.3	131.08	139	1248.8	97.09	721	1184.2	117.16
	2006	367	1151.9	101.30	233	1194.6	142.18	141	1247.0	96.13	741	1183.4	120.27
	2007	402	1153.8	103.92	239	1195.4	141.94	139	1246.6	97.05	780	1183.1	120.80
	2008	444	1154.8	108.97	241	1197.0	142.47	144	1245.7	96.01	829	1182.8	122.46
	Total	1,580	1152.8	104.36	928	1196.8	139.49	563	1247.0	96.31	3,071	1183.3	120.22
FAR	2005	363	0.3679	0.2248	215	0.4110	0.1768	139	0.4403	0.1279	717	0.3949	0.1972
	2006	366	0.3657	0.2269	232	0.3983	0.1926	141	0.4509	0.1357	739	0.3922	0.2039
	2007	401	0.4005	0.2225	239	0.4490	0.1841	139	0.5079	0.1280	779	0.4346	0.2008
	2008	441	0.4400	0.2212	241	0.4711	0.1409	144	0.5120	0.1295	826	0.4616	0.1955
	Total	1,571	0.3960	0.2255	927	0.4332	0.1834	563	0.4780	0.1340	3,061	0.4223	0.2013
AUD	2005	367	0.3753	0.2226	215	0.4194	0.1822	139	0.4789	0.1360	721	0.4084	0.2004
	2006	366	0.3804	0.2147	233	0.4295	0.1742	141	0.4667	0.1305	740	0.4123	0.1916
	2007	402	0.4240	0.1996	239	0.4704	0.1857	139	0.5149	0.1234	780	0.4544	0.1869
	2008	440	0.4462	0.2179	241	0.4948	0.1586	144	0.5441	0.1154	825	0.4774	0.1906
	Total	1,575	0.4087	0.2157	928	0.4546	0.1777	563	0.5041	0.1298	3,066	0.4396	0.1944
REG	2005	366	0.3302	0.2060	214	0.3769	0.1526	139	0.4350	0.1288	719	0.3644	0.1824
	2006	366	0.3791	0.2200	232	0.4051	0.1629	141	0.4434	0.1293	739	0.3996	0.1898
	2007	400	0.4117	0.2051	239	0.4531	0.1647	139	0.4995	0.1144	778	0.4401	0.1826
	2008	443	0.4340	0.2095	241	0.4634	0.1545	144	0.5237	0.1200	828	0.4582	0.1842
	Total	1,575	0.3915	0.2135	926	0.4262	0.1624	563	0.4757	0.1285	3,064	0.4174	0.1882
BEC	2005	366	0.3313	0.2247	215	0.3976	0.1949	139	0.4626	0.1523	720	0.3764	0.2097
	2006	366	0.3374	0.2052	233	0.3784	0.1894	141	0.4462	0.1570	740	0.3710	0.1959
	2007	401	0.3752	0.2120	239	0.4161	0.2006	139	0.4886	0.1432	779	0.4080	0.2020
	2008	441	0.3995	0.2121	241	0.4584	0.1810	144	0.5122	0.1443	826	0.4363	0.1975
	Total	1,574	0.3630	0.2152	928	0.4133	0.1935	563	0.4776	0.1510	3,065	0.3993	0.2028

Note 1: FAR, AUD, REG, and BEC means represent average percentages based on number of events passed divided by the total number of events for each section.

Note 2: N is the number of observations and SAT is the total SAT score for verbal and math.

accounting), Table 2 shows increases in passing rates from 2005 to 2008. This seems to suggest that in succeeding years, candidates were becoming more confident and/or familiar with the computerized format of the exam.

To test this study's hypotheses, multiple regression analysis was used, with three control variables: number of candidates, total SAT scores (verbal and mathematical), and the year of the CPA exam. The number of candidates was controlled since the NASBA, when ranking schools, deletes schools with fewer than twenty candidates on the assumption that a higher passing percentage rate is easier to achieve with fewer candidates (NASBA, 2006, p.12). SAT scores were included since candidates with higher performance ability may also perform better on the exam regardless of their accounting education. The year of the exam was controlled to ensure that minor changes in the exam format as well as familiarity of candidates with the computerized exam format would not affect the results. We used dummy variables for the years, with year 2005 as the reference year. We then ran three multiple regression analyses, using dummy variables for accreditation, to test hypotheses 1 through 3. The results appear in Tables 3, 4, and 5.³

The results in Tables 3, 4, and 5 show that total SAT scores had a statistically significant effect on the CPA exam pass rate for all three hypotheses, indicating that prior student performance ability affects results on the CPA exam regardless of business and accounting accreditation. For H1 (business accreditation only vs. no business accreditation), the number of candidates was significant for three sections: Financial Accounting and Reporting (FAR), Auditing (AUD), and Business Environment and Concepts (BEC). The sign of the coefficient for the number of candidates was negative, suggesting that the more candidates there are, the lower the passing rate is. For H2 (accounting accreditation vs. no accreditation) and H3 (accounting accreditation vs. business accreditation), the number of candidates was not significant for any section of the exam. Tables 3, 4, and 5 also show differences in CPA exam passing rates among different years. Except for the Regulation (REG) section of the exam, there were no differences between years 2005 and 2006 in passing rates. The results for 2007 and 2008 differed significantly from those of 2005 on all parts of the exam for all three hypotheses.

Hypothesis 1, 2 and 3 suggest that there is no difference between candidates from schools with business accreditation only and candidates from schools without business accreditation (H1), from schools with AACSB accounting accreditation and candidates from schools without AACSB business accreditation (H2), and from schools with business and accounting accreditation and candidates from schools with business accreditation only (H3). The results in Tables 3, 4 and 5 reject these hypotheses. The results in Table 3 show that the sign of the coefficients for business accreditation is positive and significant for all sections of the CPA exam, suggesting that candidates from schools with business accreditation performed better on all four sections of the computerized CPA exam than candidates from schools without business

³We tested for multicollinearity, residual autocorrelation, normality, and linearity assumptions of regression analysis. The results showed no multicollinearity among variables [with the lowest tolerance value of .628 and the highest variance inflation factor (VIF) value of 1.591, where a value more than 2 is considered problematic], no autocorrelation (Durbin-Watson statistics show values from 1.669 to 1.878 where values close to zero and four indicate strong positive and negative correlation), no violation of normality assumptions (all histograms indicate a normal dependent variable distribution for each value of the dependent variables) and no violation of linearity assumption [plots of the standardized residuals (*ZRESID) against the standardized predicted values (*ZPRED) support the linearity assumption].

TABLE 3

H1: Multiple Regression Analysis of CPA Exam Pass Rates: Business-Only Accreditation vs. No Accreditation

Variable	FAR		AUD		REG		BEC	
	β	t-value	β	t-value	β	t-value	β	t-value
Constant	-0.260	-6.475***	-0.317	-8.382***	-0.227	-6.113***	-0.555	-14.857***
NCAN	0.000	-2.004*	0.000	-0.236*	0.000	-1.518	0.000	-3.119**
SAT	0.001	16.021***	0.001	18.672***	0.000	15.409***	0.001	24.405***
AACSB-BUS	0.021	2.352*	0.027	3.292***	0.018	2.256*	0.026	3.230***
Year 2006	-0.006	-0.484	0.008	0.708	0.042	3.911***	-0.003	-0.238
Year 2007	0.035	3.099**	0.050	4.688***	0.080	7.600***	0.036	3.378***
Year 2008	0.068	6.053***	0.073	6.883***	0.098	9.417***	0.066	6.328***
Model F	55.960	p<.000	75.104	p<.000	60.649	p<.000	117.000	p<.000
R ²	0.119		0.153		0.127		0.220	
Adj. R ²	0.117		0.151		0.125		0.218	
N	2,498		2,503		2,501		2,502	

Significance: *** $\leq .001$; ** $\leq .01$; * $\leq .05$

Note 1: NCAN = Number of students; SAT - Total SAT score for verbal and math; AACSB-BUS = Business accreditation only

Note 2: AACSB-BUS is coded as one for business-accredited schools, and zero otherwise.

Note 3: For years 2006-2008, 2005 was used as the base year. Years are dummy variables set to the values of 1 and 0.

Note 4: Total observations for the H1 analysis is 2,508. The number of observations for the analyses varied because some schools did not have enough candidates (more than 5) for that section of the CPA exam for all four years (2005-2008).

TABLE 4

H2: Multiple Regression Analysis of CPA Exam Pass Rates: Accounting and Business Accreditation vs. No Accreditation

Variable	FAR		AUD		REG		BEC	
	β	t-value	β	t-value	β	t-value	β	t-value
Constant	-0.259	-5.242***	-0.352	-7.595***	-0.249	-5.348***	-0.558	12.105***
NCAN	0.000	-0.497	0.000	-1.704	0.000	-0.940	0.000	-1.310
SAT	0.001	12.806***	1.000	15.997***	0.001	12.784***	0.001	19.658***
AACSB-ACC	0.036	3.001**	0.046	4.056***	0.045	3.944***	0.052	4.601***
Year 2006	0.001	0.106	0.000	0.034	0.038	3.285***	0.000	-0.016
Year 2007	0.041	3.388***	0.045	3.971***	0.077	6.704***	0.039	3.415***
Year 2008	0.072	5.978***	0.069	6.185***	0.100	8.874***	0.063	5.628***
Model F	48.715	p<.000	70.040	p<.000	57.080	p<.000	100.719	p<.000
R ²	0.121		0.165		0.138		0.221	
Adj. R ²	0.118		0.162		0.136		0.219	
N	2,134		2,138		2,138		2,137	

Significance: *** \leq .001; ** \leq .01; * \leq .05

Note 1: NCAN = Number of students; SAT - Total SAT score for verbal and math; AACSB-ACC = Accounting and business accreditation

Note 2: AACSB-ACC is coded as one for accounting-accredited schools, and zero otherwise.

Note 3: For years 2006-2008, 2005 was used as the base year. Years are dummy variables set to the values of 1 and 0.

Note 4: Total observations for the H2 analysis is 2,143. The number of observations for the analyses varied because some schools did not have enough candidates (more than 5) for that section of the CPA exam for all four years (2005-2008).

TABLE 5

**H3: Multiple Regression Analysis of CPA Exam Pass Rates:
Accounting and Business Accreditation vs. Business-Only Accreditation**

Variable	FAR		AUD		REG		BEC	
	β	t-value	β	t-value	β	t-value	β	t-value
Constant	-0.309	-8.129***	-0.291	7.984***	-0.204	-5.891***	-0.567	-15.025***
NCAN	0.000	-0.562	0.000	-1.065	0.000	-0.046	0.000	-0.442
SAT	0.001	19.051***	0.000	19.937***	0.000	17.078***	0.001	25.909***
AACSB-ACC	0.180	2.080*	0.001	2.570**	0.027	3.447***	0.026	3.056**
Year 2006	-0.001	-0.122	0.021	0.408	0.023	2.298*	-0.015	-1.360
Year 2007	0.052	4.795***	0.004	4.639***	0.074	7.469***	0.025	2.293*
Year 2008	0.067	6.208***	0.075	7.162***	0.089	8.995***	0.060	5.537***
Model F	79.199	p<.000	86.690	p<.001	77.271	p<.001	138.325	p<.000
R ²		0.243		0.260		0.238		0.359
Adj. R ²		0.240		0.257		0.235		0.356
N		1,490		1,491		1,489		1,491

Significance: *** $\leq .001$; ** $\leq .01$; * $\leq .05$

Note 1: NCAN = Number of students; SAT - Total SAT score for verbal and math; AACSB-ACC = Accounting and business accreditation

Note 2: AACSB-ACC is coded as one for accounting-accredited schools, and zero otherwise.

Note 3: For years 2006-2008, 2005 was used as the base year. Years are dummy variables set to the values of 1 and 0.

Note 4: Total observations for the H3 analysis is 1,491. The number of observations for the analyses varied because some schools did not have enough candidates (more than 5) for that section of the CPA exam for all four years (2005-2008).

accreditation. The results in Table 4 indicate that the sign of the coefficients for accounting accreditation is positive and significant for all sections of the CPA exam, suggesting that candidates from schools with accounting accreditation performed better on all four sections of the computerized CPA exam than did candidates from schools without business accreditation. Finally, the results in Table 5 show that the sign of the coefficients for accounting accreditation is positive and significant for all sections of the CPA exam, suggesting that candidates from schools with accounting accreditation performed better on all four sections of the computerized CPA exam than did candidates from schools with business accreditation only.

CONCLUSIONS, LIMITATIONS, AND FUTURE DIRECTION

The purpose of this study is to determine if there is a difference between computerized CPA exam pass rates for candidates with bachelor's degrees from schools with AACSB business-only accreditation, AACSB accounting accreditation and no AACSB accreditation. We examined computerized CPA exam results for the four-year period of 2005 through 2008 and find that candidates with bachelor's degrees from accounting-accredited schools outperformed candidates from business-accredited and unaccredited schools, and that candidates from business-accredited only schools outperformed candidates from unaccredited schools. Since accreditation appears to affect candidates' performance on the CPA exam, these results suggest that obtaining accounting and business accreditation may improve the performance of candidates from non-accredited schools. This could be due to the quality of education and continuous improvement needed for initial accreditation and re-accreditation. As Barilla et al. (2008) suggest, the cost of business and accounting accreditation seems "a small sacrifice to achieve a higher CPA exam pass rate."

The study has several limitations. First, the data include both first-time and repeat candidates who have passed a part or parts of the exam. Beginning in 2011, the NASBA presents separate data for first-time and repeat candidates; however, our study does not reflect this. Future studies can examine if our findings hold for first time candidates. Second, problems with omitted and uncontrolled variables may exist. Third, the study does not consider business accreditation agencies other than the AACSB. Future studies can examine if other business accreditations affect CPA exam pass rates. Finally, this study only examines the exam performance of candidates with a bachelor's degree only. We did not include candidates with advanced degrees because such candidates are generally stronger and could introduce confounding effects on the results of the study. Future studies can examine if the same findings hold for candidates with advanced degrees.

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