

Contents lists available at ScienceDirect

J. of Acc. Ed.

journal homepage: www.elsevier.com/locate/jaccedu

Main article

A pragmatic model to estimate journal quality in accounting

Michele Matherly^{a,1}, Rebecca Toppe Shortridge^{b,*}

^a Department of Accountancy, Xavier University, 3800 Victory Parkway, Cincinnati, Ohio 45207-5161, USA ^b Department of Accountancy, Northern Illinois University, DeKalb, Illinois 60115, USA

ARTICLE INFO

Keywords: Journal quality Journal rankings Research productivity Accounting publications

ABSTRACT

This article presents a model to estimate the relative quality of publication outlets based on objective journal characteristics. Our model improves upon the one proposed by Bean and Bernardi [Bean, D. F., & Bernardi, R. A. (2005). Estimating the ratings of journals omitted in prior quality ratings. Advances in Accounting Education, 7, 109-127.] in three important ways. First, we develop a dependent variable that is a composite score based on five prior journal perception studies. Second, our model considers different independent variables; audience, journal availability, inclusion in the Social Sciences Citation Index (an independent measure of quality), and the journal's submission fee. This combination of variables increases the model's explanatory power by 21% compared to Bean and Bernardi's average R^2 . Finally, the results of our model are more consistent with those of prior perception studies. We also apply the model to recent accounting faculty publications, which provides a comparative rating of more than 200 journals. We expect our model for estimating journal quality to help faculty, promotion and tenure committees, and university administrators evaluate the quality of journals where accounting faculty publish, an important aspect of assessing research productivity.

© 2009 Elsevier Ltd. All rights reserved.

1. Introduction

The primary purpose of this research is to develop a model to estimate the relative quality of publication outlets used by accounting faculty. Evaluating journal quality is an important consideration when assessing faculty research productivity. Universities must assess faculty productivity to make

¹ Tel.: +1 513 745 3165.

0748-5751/\$ - see front matter @ 2009 Elsevier Ltd. All rights reserved. doi:10.1016/j.jaccedu.2009.07.001

^{*} Corresponding author. Tel.: +1 815 753 6097.

E-mail addresses: matherlym@xavier.edu (M. Matherly), shortridge@niu.edu (R.T. Shortridge).

decisions regarding promotion, tenure, merit pay, and hiring (Arlinghaus, 2002; Bonner, Hesford, Van der Stede, & Young, 2006; Read, Rama, & Raghunandan, 1998). Business and accounting programs must document the research productivity of their faculty as part of the accreditation process. Moreover, faculty research productivity enhances department reputation, makes programs more attractive to potential faculty, students, and recruiters, and provides a mechanism for continual improvement (Sinning & Dykxhoorn, 2001). Thus, measuring research productivity is important for faculty, departments, and universities. An essential aspect of evaluating research productivity is assessing the quality of faculty publications, which is generally accomplished by gauging the quality of the journal in which the article is published.

This paper extends prior research that evaluates the quality of journals in which accounting faculty publish. Specifically, we re-examine the model developed by Bean and Bernardi (2005) to estimate the relative quality of journals. We also extend several papers that have estimated journal quality by relying on faculty perceptions. Previous papers assessing research productivity generally evaluated a limited set of journals (Ballas & Theoharakis, 2003; Hasselback, Reinstein, & Schwan, 2002; Lowensohn & Samelson, 2006; Zivney, Bertin, & Gavin, 1995). For example, both Ballas and Theoharakis (2003) and Hasselback et al. (2002) provide rankings for 40 journals. Our research develops a model that can be used to estimate *relative* journal quality for hundreds of publications, thus expanding the set of journals for which research productivity can be objectively evaluated.

This study extends Bean and Bernardi's (2005) work in three significant ways. First, we derived our model by utilizing a *composite* quality perception score developed from five prior perception studies. Bean and Bernardi (2005) used the perception scores from nine individual studies as dependent variables but focused on the results from the most recent perception study available at the time, Ballas and Theoharakis (2003). By utilizing a composite score, our dependent variable is not subject to biases that perhaps result from the rankings in one perception study. Further, we refine the objective journal characteristics used by Bean and Bernardi (2005) as prediction variables. Our characteristics include a measure for the type of audience (article length), the availability of the journal, inclusion in the *Social Sciences Citation Index*, and the journal's submission fee. The resulting model explained 22.7% to 46.5% of the variation in journal quality scores, depending on which of nine perception scores is used. Finally, the estimated quality scores from our model more closely reflect those from prior studies reporting accounting faculty perceptions of journal quality.

In Section 2, we provide an overview of prior literature. Section 3 develops our model by discussing the dependent and independent variables, describing the sample of journals used to estimate the model, and presenting our quality model. In Section 4, we apply our quality model to the publications of a sample of accounting faculty and compare our results to those of Bean and Bernardi (2005). We discuss the contributions and limitations of our study in Section 5.

2. Literature review

Prior studies have measured research productivity using varying methods, the simplest of which is to count the number of publications (Chung, Pak, & Cox, 1992; Heck, Jensen, & Cooley, 1990; Zivney et al., 1995). While counting is objective, it has two major weaknesses; most counts include only a limited number of journals and counting fails to consider the quality of the journal where the article is published. To address the quality of publications, several studies (Everett, Klamm, & Stoltzfus, 2004; Hasselback & Reinstein, 1995; Hasselback et al., 2002) attempted to weight each article by the quality of the publishing journal. This process requires an overall quality assessment for numerous journals. Two primary methods have been used to measure journal quality; citation analysis (Brown & Gardner, 1985; Dyckman & Zeff, 1984; Smith & Krogstad, 1988) and faculty perceptions (Ballas & Theoharakis, 2003; Brown & Huefner, 1994; Herron & Hall, 2004; Johnson, Reckers, & Solomon, 2002; Jolly, Schroeder, & Spear, 1995; Lowensohn & Samelson, 2006; Smith, 1994).

Citation analysis assumes that the number of citations received by a particular journal is indicative of its quality. Citation analysis as a measure of quality presents several problems: some journals and authors may be quoted merely because of their reputation and not the actual quality of the articles published, articles are frequently cited in an effort to refute their claims, and in many cases, only the first author is included in the citation count, therefore failing to give credit to co-authors.

Faculty perceptions of journal quality have been obtained by asking faculty to assign a quality score to accounting journals. This method assumes that faculty members are familiar with a wide range of publishing opportunities. However, the increasing number of publication outlets makes faculty assessments of quality challenging. To enhance the respondents' familiarity with the journals being evaluated, some studies limit the journal selection to sub-disciplines within accounting (e.g., Baldwin, Morris, & Scheiner, 2000; Ballas & Theoharakis, 2003; Herron & Hall, 2004; Lowensohn & Samelson, 2006). This restriction makes it difficult to compare ratings when sub-groups of faculty within accounting harbor divergent perceptions of a journal's quality. For example, in the Herron and Hall (2004) study, respondents provided their perceptions of journal quality using *The Accounting Review* as an anchor with a quality score of 100. Tax faculty rated *Critical Perspectives on Accounting* with a score of 67. Meanwhile, auditing faculty gave the same journal a rating of 47. If a department evaluated the productivity of two faculty publishing in *Critical Perspectives on Accounting*, which of the ratings should they use; 67, 47, or the average? Finally, as with citations, faculty perception studies typically include a limited number of journals.

To address these issues, Bean and Bernardi (2005) developed a model to estimate the quality ratings of journals using readily available quantitative data. Their model regressed three journal characteristics on the quality perception scores from Ballas and Theoharakis (2003). Bean and Bernardi (2005) hypothesized that age, acceptance rate, and audience were indicative of journal quality. Their model predicts that as a journal ages its quality rating increases, that a higher acceptance rate indicates a lower journal quality, and that a journal targeted to an academic audience is perceived to be of higher quality than a journal targeted to a practitioner audience. Bean and Bernardi (2005) evaluated their three-variable model using quality scores (the dependent variable) from nine different perception studies. The adjusted R^2 for their model varied from 22.7% to 46.5% across the nine studies, with an average of 35.9%.

We agree with the premise of the Bean and Bernardi (2005) model, but also believe that it can be refined to improve the estimation of journal quality scores. First, two of their explanatory variables raise concerns. Acceptance rate was only significant at the 5% level in one of their nine models. This result implies that in the other eight models, the journal quality score was dependent on two variables, age and audience. Age, as a predictor of journal quality, is troublesome since some newer journals (e.g., *Review of Accounting Studies*) are highly regarded.

Further, Bean and Bernardi (2005) included primarily accounting journals in their estimation process. Our sample of accounting academics published in over 400 journals, almost half of which were outside the accounting discipline. Thus, we extend Bean and Bernardi's (2005) model to consider a wider range of publications outside of accounting, which is consistent with the research output of our surveyed accounting faculty.

Another limitation of the model proposed by Bean and Bernardi (2005) is that it can yield negative quality scores. The predicted quality score from their model decreases as acceptance rate increases. Journals targeted to practitioner audiences also receive lower quality scores than academic journals. When these two factors are combined, Bean and Bernardi's predicted quality score can become less than zero. For example, *Internal Auditing* is a practitioner journal that began publication in 1986 and has an acceptance rate of 75% (Cabell & English, 2004a). Using Bean and Bernardi's (2005) model, this journal's predicted quality score equals -0.82 (=1.207 + 0.01 * 19 years -0.024 * 75 acceptance -0.417 * 1 practitioner). It is unclear how negative quality scores, such as the one for *Internal Auditing*, should be interpreted.

A final limitation of the Bean and Bernardi (2005) model is that it relies on the quality scores from Ballas and Theoharakis (2003) for the dependent variable. We evaluated the distribution of the Average Rank Position (ARP) of Ballas and Theoharakis (2003) and compared it to the distribution of the rankings for the five perception studies (Brown & Huefner, 1994; Herron & Hall, 2004; Johnson et al., 2002; Jolly et al., 1995; Smith, 1994) that we used for our composite score. In Ballas and Theoharakis (2003), only 7.5% of journals received quality scores over 75 and only 17.5% received scores greater than 50. Meanwhile, for the five papers we relied on, over 38% of the journals received scaled scores of 75 or more and over 80% received scaled scores of greater 50. In addition, the average scaled

score for the *Journal of Accountancy* was 60.5, almost double the scaled score (37) that this journal received in Ballas and Theoharakis (2003). Based on these shortcomings, we propose a model to estimate journal quality that we believe improves on the one proposed by Bean and Bernardi (2005).

3. Development of quality model

We begin this section by discussing our choice of dependent and independent variables. Next, we describe the sample of journals used to develop the model. In the last subsection, we present our model for estimating the relative quality of journals.

3.1. Selection of dependent and independent variables

The composite score used for the dependent variable in our quality model encompasses journal quality perception scores over an extended time period. The advantage of a composite score is that it includes the opinions of a diverse group of faculty over time, thus minimizing some of the limitations inherent in a single study. We developed our composite score from two relatively recent studies: Herron and Hall (2004) and Johnson et al. (2002); and three older studies: Jolly et al. (1995), Brown and Huefner (1994), and Smith (1994).² When necessary, we restated a study's perception scores so that *The Accounting Review* equals 100, which allows us to combine the results from these studies into a single score. Thus, the dependent variable for our estimation model is the average scaled score reported across these five studies.

We considered various journal traits as potential independent variables for our quality model. Similar to Bean and Bernardi's (2005) audience variable, we first considered a dummy variable, Reader, to indicate whether a journal targets primarily an academic or practitioner audience. We collected the data for this variable from *Cabell's Directory of Publishing Opportunities*. We also evaluated a second journal feature that reflects audience, namely the average article length, Length. We compute Length as the average length of the main articles listed in the journal's table of contents. Correlation analysis reveals that Reader and Length are highly correlated (r = 0.64) and are similarly correlated with other journal attributes that are consistent with audience type, including acceptance rate, percent of invited articles, and whether or not review comments are provided. These results suggest that Reader and Length both express a similar trait related to audience. However, Length also captures the fact that articles published in higher quality academic (practitioner) journals are frequently longer than those published in lower quality academic (practitioner) journals. Consequently, we use Length in our regression model as the audience-related variable.

We include journal availability as a quality characteristic since highly regarded journals are likely to be more widely accessible. We measure availability as the number of popular electronic search engines that reference the journal. Conversations with university librarians led us to select three such search engines: *ABI-Inform, EBSCOhost* (sponsor of *Business Source Premier* and *Business Source Complete*), and *H. W. Wilson*. We relied on the Abstracting/Indexing & Article Access information in *Ulrich's Periodicals Directory* to identify which search engines referenced each journal.³ Journals received one point for each search engine, creating a range of zero (included in no search engines) to three (included in all three search engines). We assume that journals included in more search engines will be more widely recognized and thus will have higher perceived quality scores.

Lastly, we considered two additional quantitative indicators of quality: inclusion in *Social Sciences Citation Index* (SSCI) and the article submission fee. SSCI, a component of Thomson Reuters provides citation coverage of the most influential journals in a wide range of social sciences. The editorial staff of Thomson Reuters reviews thousands of journals for potential inclusion in SSCI and selects approximately 10–12% of those reviewed (Thomson Reuters, 2009). The purpose of the review process is to

² We excluded Ballas and Theoharakis (2003) from our composite journal quality scores because their Average Rank Position exhibits substantially different dispersion and skewness than other perception studies, making their results not comparable to other studies.

³ Ulrich's Periodicals Directory did not provide abstracting information for approximately 15 journals. We collected the data for these journals by querying the three search engines.

identify the most significant journals in a discipline by evaluating the journal's citation data, publishing standards, and editorial content. Thus, inclusion in SSCI is an external indicator of journal quality. In our model, we capture SSCI as a dichotomous variable, where a value of one indicates a journal is included in SSCI.

Submission fee is our final quantitative measure of journal quality. We collected Fee from *Cabell's Directory of Publishing Opportunities* (Cabell & English, 2004a, 2004b, 2004c, 2004d), since this source conveniently reports the submission fees for a wide array of journals. Fee captures multiple dimensions of journal quality. First, a majority of accounting and finance journals that are perceived to be high quality charge a submission fee. Specifically, in the Herron and Hall (2004) study, the average fee for the accounting and finance journals with quality scores of 85 or more is \$113 and \$199, respectively. In addition, nine of the twelve highest ranked accounting journals charge a submission fee and four of the five highest ranked finance journals charge a submission fee. Further, most of the journals published by the American Accounting Association (AAA) charge at least \$75 for submitting an article. Meanwhile, the accounting and finance journals that are ranked in the lower quartile of the Herron and Hall (2004) study have an average submission fee of \$7 and \$25, respectively.

One reason the higher quality journals charge a submission fee may be to discourage authors from submitting papers that do not have a legitimate chance of being accepted for publication. While some might argue that submission fees are paid by departments and so do not influence submission, this is not always true. Many universities, especially non-doctoral granting schools, do not pay submission fees. Further, department chairs have limited budgets and may discourage continual submissions to journals with fees if their faculty members are seldom successful at publishing in these journals.

A second aspect of journal quality encompassed by Fee is the ability to distinguish among business disciplines. In the Herron and Hall (2004) study, only two of the marketing and management journals ranked in the top quartile charged a submission fee, neither of which exceeded \$50. In contrast, about 70% of accounting and finance journals in the top quartile charged a submission fee. Prior research suggests that faculty members with different specialty areas within accounting (e.g., financial, managerial, or auditing) often rank journals differently (Herron & Hall, 2004; Lowensohn & Samelson, 2006). Consequently, it seems likely that accounting academics might also perceive marketing and management journals to have different quality than those published within accounting. Thus, the Fee variable also captures the potential differences in quality perceptions among business disciplines (accounting and finance versus marketing and management).

3.2. Sample of journals used to estimate the quality model

We used the journals from five prior perception studies as estimation journals to develop the predictive model. Descriptive statistics for the estimation journals appear in Table 1, Panel A. The mean AvgQuality of the 124 estimation journals was 67.66 and ranged from a low of 38 to a high of 113. The Length of the articles in the estimation journals varied from 3.25 pages to almost 34 pages, with a mean Length of approximately 18 pages. As discussed previously, practitioner journals tend to publish relatively short articles (mean 9 pages) compared to academic journals (mean 21 pages). The ABI_EB_W variable indicates that the estimation journals are widely available on electronic search engines (mean 1.86), with 77% available on at least one of the three options. Of the estimation journals, 31% are included in SSCI, which is higher than SSCI's 10–12% acceptance rate for journals. This result is not surprising since our sample relies on prior perception studies that tend to include a limited number of journals and favor academic journals. Our last indicator of journal quality is the submission fee charged by our estimation journals. The average Fee charged by the estimation journals is \$25.05 with a range of \$0 (83 journals) to \$400 (*Journal of Financial Economics*).

3.3. Quality model

The regression model based on our analyses is:

$$AvgQuality = 44.305 + 0.655(Length) + 3.791(ABLEB_W) + 9.956(SSCI) + 0.053(Fee)$$
(1)

Table 1
Descriptive statistics and regression results for 124 estimation journals.

Variable	Mean	Std. dev.	Min	Max	Pair-wise correlation with AvgQuality	Expected Sign
AvgQuality	67.66	14.62	38.00	113.00	-	_
Length	18.10	7.72	3.25	33.67	0.479	+
ABI_EB_W	1.86	1.13	0.00	3.00	0.478	+
SSCI	0.31	0.47	0.00	1.00	0.589	+
Fee	25.05	55.92	0.00	400.00	0.455	+

Variable	Coefficient	Std. error	t-Statistic ^a
Intercept	44.305	2.73	16.23
Length	0.655	0.12	5.52
ABI_EB_W	3.791	0.88	4.30
SSCI	9.956	2.22	3.10
Fee	0.053	0.02	4.49
Adjusted R ²	0.570		

Where AvgQuality is the average journal quality with *The Accounting Review* = 100. Length is the average article page length. ABI_EB_W is 3 if journal indexed in all three sources, 2 if journal indexed in any two sources, 1 if journal indexed in one of the sources, and 0 if not indexed in *ABI-Inform*, *EBSCOhost* or *H. W. Wilson* indices according to *Ulrich's Periodical Directory*. SSCI is 1 if journal included on the *Social Sciences Citation Index* in 2005, 0 otherwise. Note that the mean represents the proportion of journals that publish in SSCI. Fee is the article submission fee reported in the 2004–2005 *Cabell's Directory of Publishing Opportunities*.

^a Significant at $p \leq 0.001$ for a 1-tailed test.

Table 1, Panel B reports that our model's adjusted R^2 equals 57%, over 20% higher than the average explanatory power Bean and Bernardi (2005) reported with their three-variable model. All coefficients in the prediction model have significant positive signs.⁴

Length, which is an indicator for the type of audience and the overall quality within the type of audience, is significant ($p \le 0.001$). The coefficient of 0.655 suggests that an increase of 10 pages in average article length is associated with almost a seven point increase in the journal's estimated quality score. Academic journals, which generally publish longer articles, have much higher perceptions of quality than practitioner journals. Further, articles published in higher quality academic (practitioner) journals are frequently longer than those published in lower quality academic (practitioner) journals. Thus, Length captures both of these audience-related aspects of quality.

The coefficient on ABI_EB_W of 3.791 is significant ($p \le 0.001$). Thus, the availability of a journal in two of our electronic search engines increases its estimated quality score over seven points. This outcome is consistent with our intuition that journals that are accessible on recognized search engines are perceived to be of higher quality.

Similar to ABI_EB_W, the coefficient on SSCI is positive and significant ($p \le 0.001$). SSCI reflects journal quality because the index contains only the most influential social science journals. Thus, inclusion in this exclusive index acts as an external signal regarding the journal's quality. Journals included in SSCI have an estimated quality score ten points higher, on average, than those excluded from SSCI. Finally, Fee is positively and significantly ($p \le 0.001$) associated with journal quality. For example, AAA-sponsored journals that charge a \$75 fee receive about a four-point increase in their perceived quality score over journals that do not charge a fee.

⁴ Because the five studies we utilized to develop the dependent variable occurred across a span of more than twenty years, we also evaluated our results with the more recent studies weighted more heavily. Specifically, we calculated WtdQuality as the sum of the average of the scaled scores from the two recent studies multiplied by a weight of two thirds, and the average of the scaled scores from the three earlier studies multiplied by one third. The results are not substantially different with this dependent variable.

4. Model application

An additional objective in conducting this research is to provide quality assessments for a large array of journals. To accomplish this goal, we asked accounting faculty to self-report the journals where their articles had been published, as well as the year of publication. We received responses from 291 faculty who reported publishing more than 2000 articles in more than 400 different journals. Of our respondents, 57% were first employed at institutions offering a Masters degree (MACC, MSA, MTA, or MBA) while 31% were first employed at Ph.D. granting institutions. We calculated the number of faculty employed at all US universities in the *Accounting Faculty Directory 2006–2007* compiled by Hasselback. The *Directory* reports that approximately 16% of all faculty were employed at BS institutions, 53% at MS institutions, and 28% at Ph.D. granting institutions. These percentages are consistent with our faculty responses.

We used our regression model to estimate a quality score and relative ranking for more than 82% of the articles published by our survey respondents. Appendix A contains a complete listing of these journals, their estimated quality scores, relative ranking, and the number of publications reported by our sample of accounting faculty for each journal. The omitted articles appeared in 13 journals that are no longer in publication (66 articles), 160 journals that were not included in *Cabell's* (254 articles), and 17 journals for which we could not obtain the article length (60 articles).⁵ Consequently, we were unable to estimate quality scores for these journals.

4.1. Top 30 accounting journals

Table 2 presents the 30 accounting journals with the highest estimated quality scores in which our sample faculty published. Interestingly, publications in these top 30 accounting journals represent only 31% of the articles produced by our responding faculty. Based on our quality model, the top ranked accounting journal is the *Journal of Accounting Research*, which received an estimated quality score of 96.00. This score is followed by the *Journal of Accounting and Economics* (93.32), *Contemporary Accounting Research* (85.45), *The Accounting Review* (83.81), and *Review of Accounting Studies* (83.19). While these five journals, generally considered to be among the top accounting journals, receive the highest quality scores, the score for *Accounting, Organizations and Society (AOS)* is somewhat lower than expected (75.94), which ranked it 11th. The somewhat lower score for *AOS* occurs because, unlike other journals with high quality perceptions, *AOS* does not charge a submission fee. The *AOS* example illustrates that judgment continues to be required when applying a quantitative model for subjective decisions.

The primary objective of our research is to add to the literature by improving the model proposed by Bean and Bernardi (2005). For comparative purposes, Table 2 also includes the rankings that result from the application of Bean and Bernardi's model (Eq. (1)) that relies on the Ballas and Theoharakis (2003) data for the dependent variable. As shown in Table 2, our top five accounting journals are more consistent with results from prior journal ranking studies than are those of Bean and Bernardi (2005). For example, the *Journal of Accounting Research* received the highest quality score with our model, while the Bean and Bernardi model ranked *JAR* sixth. Perhaps more surprising, the *Journal of Accounting Research*, our third-ranked accounting journal, is ranked 24th using the Bean and Bernardi model.

4.2. Top 30 overall journals

Approximately 22% of our survey faculty's publications were outside traditional accounting outlets; specifically, they published in 145 different finance, economics, management, marketing, and interdisciplinary journals. Thus, Table 3 presents the 30 journals with the highest overall estimated quality scores across all disciplines where our sample faculty published. The *Journal of Financial Economics*

⁵ The 160 journals omitted from *Cabell's* are relatively obscure and not common outlets for accounting faculty publications. Moreover, these journals contained only one or two articles from our accounting faculty respondents, which combined account for 70% of the corresponding 254 omitted articles.

Table 2

Accounting journals with 30 highest estimated quality scores.

Journal	Estimated quality score	Rank using estimated quality score	
		Our model	Bean and Bernardi (2005) model ^a
Journal of Accounting Research	96.00	1	6
Journal of Accounting and Economics	93.32	2	16
Contemporary Accounting Research	85.45	3	24
The Accounting Review	83.81	4	2
Review of Accounting Studies	83.19	5	14
Journal of Business, Finance and Accounting	80.95	6	11
National Tax Journal	79.12	7	1
Abacus: A Journal of Accounting, Finance and Business Studies	77.94	8	12
Auditing: A Journal of Practice and Theory	76.38	9	19
Journal of Accounting Literature	76.06	10	39
Accounting, Organizations and Society	75.94	11	13
Journal of Accounting, Auditing and Finance	75.79	12	7
Journal of Taxation	71.97	13	64
Journal of Management Accounting Research	71.75	14	4
Issues in Accounting Education	71.65	15	20
Accounting Horizons	71.58	16	29
Behavioral Research in Accounting	70.60	17	31
Journal of International Accounting, Auditing and Taxation	68.79	18	48
Accounting Historians Journal	68.70	19	32
Accounting and Business Research	68.69	20	8
Journal of Accounting and Public Policy	67.93	21	21
Journal of the American Taxation Association	67.65	22	16
Journal of Public Budgeting, Accounting and Financial Management	66.98	23	9
Journal of International Accounting Research	66.38	24	24
Critical Perspectives on Accounting	66.26	25	10
Management Accounting Research	65.73	26	40
European Accounting Review	65.38	27	48
Pacific Accounting Review	65.15	28	72
Journal of State Taxation	65.04	29	46
Journal of Information Systems	64.74	30	28

^a We estimated the Bean and Bernardi (2005) model ranks using Eq. (1) in their paper.

has the highest estimated quality score, 108.03. Five of the top ten journals in Table 3 are finance publications: Journal of Financial Economics, Journal of Banking and Finance, Journal of Financial and Quantitative Analysis, Journal of Finance, and Review of Financial Studies. The American Business Law Journal is the overall second highest ranked journal. While some may question this ranking, its inclusion in the Social Sciences Citation Index provides validity to its high score.

4.3. Frequent publication outlets

An additional contribution of our study is the ability to identify journals where accounting faculty frequently publish. Table 4 lists the journals where our sample faculty published at least 17 articles, along with the number of different faculty members publishing in each journal. Combined, these journals account for more than 64% of the articles published in our survey journals. As expected, our sample faculty published a substantial quantity of their articles in practitioner journals, such as *The CPA Journal* and the *Journal of Accounting Research*, were also frequent outlets for our survey faculty. Interestingly, five of the 35 journals in Table 4 (14%) were excluded from Herron and Hall (2004), the most recent survey of journal quality perceptions.⁶ This finding supports our belief that administrators need

⁶ The five frequent outlets in Table 4 omitted from Herron and Hall (2004) are Catalyst: The Leading Edge of Ohio Business (formerly Ohio CPA Journal), Journal of Business and Behavioral Sciences, Journal of Corporate Accounting and Finance, Managerial Auditing Journal, and Oil, Gas, and Energy Quarterly.

Table 3

Journals with 30 highest estimated quality scores.

Journal	Estimated quality score
	1 0
Journal of Financial Economics	108.03
American Business Law Journal	98.38
Journal of Accounting Research	96.00
Journal of Accounting and Economics	93.32
Journal of Banking and Finance	91.29
Journal of Financial and Quantitative Analysis	90.26
Journal of Finance	90.03
Review of Financial Studies	88.97
Contemporary Accounting Research	85.45
MIS Quarterly	84.86
Business History Review	84.55
The Accounting Review	83.81
Journal of Management Information Systems	83.51
Review of Accounting Studies	83.19
Decision Sciences	83.12
Journal of Management	82.32
Journal of Business, Finance and Accounting	80.95
Organizational Behavior and Human Decision Processes	80.36
National Tax Journal	79.12
Journal of Risk and Insurance	78.43
Financial Analysts Journal	78.23
Journal of Engineering and Technology Management	78.08
Abacus: A Journal of Accounting, Finance and Business Studies	77.94
Journal of International Business Studies	76.56
Auditing: A Journal of Practice and Theory	76.38
Journal of Accounting Literature	76.06
Accounting, Organizations and Society	75.94
Journal of Accounting, Auditing and Finance	75.79
Management Science	75.26
International Business Review	74.94

an objective tool to estimate the quality of journals omitted from previous studies as well as new journals entering the market.

5. Contributions and limitations

The primary objective of this research was to develop a quantitative model that can estimate the relative quality of a wide range of journals in which accounting faculty publish. By accomplishing this objective, we provide a starting point for faculty, promotion and tenure committees, and university administrators to rate journals excluded from prior perception studies or their university's journal ranking lists.⁷ For example, the journal ranking list adopted by the Department of Accountancy at Northern Illinois University (NIU) classifies journals as highest quality, high quality, mid quality, and other listed journals. How should a journal that does not appear on NIU's journal ranking list, like *The Journal of Banking and Finance*, be evaluated? With our model, the quality of this journal can be assessed to determine its relative placement compared to other journals on NIU's journal ranking list. In this example, *The Journal of Banking and Finance* received a quality score of 91.29, placing it in close proximity to *Journal of Accounting Research, Journal of Accounting and Economics*, and *Contemporary Accounting Research*. NIU's journal ranking list classifies all three of these as highest quality journals. Thus, our model provides a reasonably straightforward way to incorporate additional publication outlets into existing journal ranking lists and evaluate new or unfamiliar journals.

⁷ We are aware of several other institutions that rely on journal ranking lists to evaluate faculty publications, including Baylor University, Bowling Green State University, Indiana University, Iowa State University, and the University of Louisville.

Table 4

Most frequent publication outlets for survey respondents.

Journal	# Articles by	# Unique	Estimated
	survey faculty	faculty	quality score
Journal of Accounting and Finance Research ^a	87	36	59.42
The CPA Journal	80	58	59.57
Journal of Accountancy	71	35	59.20
Issues in Accounting Education	61	51	71.65
Oil, Gas, and Energy Quarterly	52	22	52.50
The Accounting Review	48	41	83.81
Internal Auditing	46	21	51.85
Journal of Accounting Research	45	27	96.00
Accounting Horizons	37	27	71.58
Auditing: A Journal of Practice and Theory	36	25	76.38
Behavioral Research in Accounting	34	23	70.60
Journal of the American Taxation Association	33	22	67.65
Contemporary Accounting Research	32	27	85.45
Journal of Information Systems	29	20	64.74
Journal of Accounting Education	29	24	61.93
Journal of Accounting and Economics	28	17	93.32
Advances in Accounting	28	20	61.68
Tax Notes	27	13	50.30
Internal Auditor	24	13	59.12
NPA (formerly National Public Accountant)	24	17	50.22
Journal of Accounting, Auditing and Finance	22	21	75.79
International Journal of Accounting	22	16	62.26
Catalyst: The Leading Edge of Ohio Business	22	17	50.82
Journal of Business, Finance and Accounting	21	16	80.95
Strategic Finance	21	16	59.42
Journal of Corporate Accounting and Finance	21	13	56.54
Journal of Business Ethics	20	20	74.32
Managerial Auditing Journal	20	12	58.28
Journal of Applied Business Research	19	15	63.43
Advances in Accounting Behavioral Research	19	17	59.69
Research on Professional Responsibility and Ethics in Accounting	19	13	59.55
Review of Business Information Systems	19	13	52.22
Tax Adviser	18	10	60.44
Information Systems Control Journal	18	6	47.30
Journal of Business and Behavioral Sciences	17	14	52.75

^a The Journal of Accounting and Finance Research ceased publication in 2005. We did not omit it from the sample as it published articles throughout the survey period.

As an additional contribution, we present relative rankings of more than 200 journals where accounting faculty at doctoral and non-doctoral granting universities have recently published. This list, which demonstrates the breadth of publication outlets used by accounting faculty, suggests that the limited set of journals considered in prior research productivity studies likely understated the research output of accounting faculty. Further, this list can help increase the awareness of promotion and tenure committees to the vast array of publication outlets.

We believe our model for estimating journal quality is an improvement over the Bean and Bernardi (2005) model. First, our model's dependent variable is a composite score based on five prior journal perception studies, which minimizes the potential biases associated with any single study. Second, the explanatory power of our model is, on average, 21% higher. Finally, our model yields results more consistent with those of prior perception studies.

This article presented a quantitative model for estimating relative journal quality. The benefits of this model are its ease of implementation, objectivity, applicability across business disciplines, and timeliness for decision making. Users should, however, consider limitations of the proposed model. For instance, the model includes the submission fee charged by the journal. While this variable is highly correlated with journal quality, it underestimates the quality of some high quality journals (e.g., *AOS*) that do not charge a submission fee. Consequently, our model should be combined with professional judgment when evaluating a journal's relative quality. Furthermore, our model does not sufficiently differentiate between the quality of practitioner journals. For instance, our model's estimated quality scores for the *Journal of Accountancy* and *Internal Auditor* suggest that these journals are of comparable quality. However, prior perception studies generally rate *Internal Auditor* as a lower quality journal (Herron & Hall, 2004; Jolly et al., 1995). In light of this issue, future researchers may want to explore additional variables that are associated with practitioner journal quality. Finally, even though our model explains much of the variability in accounting faculty perceptions of journal quality, the potential exists for omitted variables.

Acknowledgements

We would like to thank the editor, the associate editor and two reviewers from the *Journal of Accounting Education*, whose comments substantially improved the paper. In addition, we would like to thank participants at the AAA National Conference in Washington, DC and at the AAA Southeast Regional Meeting in Charlotte, NC for their comments, especially those of our discussants, Donna Dietz and Jeffrey McMillan. In addition, we would like to thank Erin Wagoner for her research assistance.

Appendix A

Quality Scores, Overall Rank, and Number of Articles Published by Sample Faculty.

Journal	Quality score	Overall rank	Articles published
Abacus: A Jrl of Acctg, Finance, and Business Studies	77.94	23	2
Acad of Acctg and Financial Studies Jrl	51.72	200	12
Acad of Educational Leadership Jrl	56.55	162	7
Acad of Strategic Mgmt Jrl	55.79	170	1
Accounting and Business	45.76	221	1
Accounting and Business Research	68.69	56	6
Accounting and the Public Interest	59.26	141	2
Accounting Education	61.41	119	3
Accounting Educators Jrl	57.63	155	8
Accounting Forum	60.73	126	3
Accounting Historians Jrl	68.70	55	7
Accounting Horizons	71.58	43	37
Accounting Research Jrl	51.91	198	1
Accounting Review (The)	83.81	12	48
Accounting, Auditing and Accountability Jrl	62.97	99	2
Accounting, Organizations and Society	75.94	27	12
Adv in Accounting	61.68	114	28
Adv in Acctg Behavioral Research	59.69	136	19
Adv in Acctg Education	63.19	94	11
Adv in Int'l Acctg	64.20	87	8
Adv in Mgmt Acctg	61.61	116	9
Adv in Public Interest Acctg	60.53	128	1
Adv in Taxation	62.80	101	12
American Business Law Jrl	98.38	2	2
Annual Adv in Business Cases	55.69	171	2
Appraisal Jrl	61.73	113	1
Auditing: A Jrl of Practice and Theory	76.38	25	36
Bank Acctg and Finance	51.91	197	1
Behavioral Research in Acctg	70.60	49	34
Behaviour and Information Technology	65.27	77	1
Business and Economic Review	60.16	132	1
Business and Professional Ethics Jrl	66.37	67	1

Appendix A (continued)

Journal	Quality score	Overall rank	Articles published
Business Communication Qtrly	62.69	102	2
Business Credit	54.56	180	3
Business Education Forum	46.76	219	2
Business History Review	84.55	11	1
Business Horizons	60.85	123	7
Business Process Mgmt Jrl	62.29	106	1
Case Research Jrl	58.49	148	1
Catalyst: The Leading Edge of Ohio Business	50.82	204	22
Central Business Review	47.64	213	2
Coastal Business Jrl	50.03	208	1
Commercial Lending Review	55.68	172	8
Contemporary Acctg Research	85.45	9	32
Corporate Finance Review	50.15	207	4
Corporate Governance: An Int'l Review	66.21	70	2
Corporate Reputation Review: An Int'l Jrl	58.51	147	2
CPA Jrl (The)	59.57	137	80
CPCU eJrl	56.51	164	1
Critical Perspectives on Acctg	66.26	69	7
Decision Sciences	83.12	15	7
Delhi Business Review	51.36	202	4
European Acctg Review	65.38	74	2
European Jrl of Operational Research	70.88	47	2
European Mgmt Jrl	63.00	98	1
Expert Systems with Applications: An Int'l Jrl	65.35	75	2
Finance India	62.46	105	1
Financial Analysts Jrl	78.23	21	3
Financial Review	66.34	68	2
Financial Services Review	64.73	82	1
Gender in Mgmt	55.62	174	2
Global Business and Economics Review	54.92	177	1
Global Business and Finance Review	54.29	182	1
Global Finance Jrl	65.33	76	1
Health Marketing Qtrly	61.56	117	1
HFM Magazine	51.17	203	2
Industrial Mgmt + Data Systems	70.80	48	3
Information Strategy: The Executive's Jrl	61.03	121	2
Information Systems Control Jrl	47.30	215	18
Information Systems Security	61.46	118	1
Intelligent Systems in Acctg, Finance and Mgmt	62.60	104	6
Internal Auditing	51.85	199	46
Internal Auditor	59.12	144	24
Int'l Adv in Economic Research	64.27	86	3
Int'l Business Review	74.94	30	1
Int'l Jrl of Accounting	62.26	107	22
Int'l Jrl of Acctg Information Systems	60.34	130	15
Int'l Jrl of Auditing	63.14	95	9
Int'l Jrl of Finance	58.42	149	1
Int'l Jrl of Mgmt	57.66	154	1
Int'l Jrl of Physical Distribution and Logistics Mgmt	63.06	96	1
Int'l Jrl of Public Admin	68.58	57	1
Issues in Acctg Education	71.65	42	61
Issues in Information Systems	48.62	212	1
Jrl of Accountancy	59.20	142	71
Jrl of Acctg and Economics	93.32	4	28

(continued on next page)

Appendix A (continued)

Journal	Quality score	Overall rank	Articles published
Irl of Acctg and Finance Research	59.42	140	87
Irl of Acctg and Public Policy	67.93	59	9
Irl of Acctg Education	61.93	109	29
Irl of Acctg Literature	76.06	26	13
Jrl of Acctg Research	96.00	3	45
Jrl of Acctg, Auditing and Finance	75.79	28	22
Jrl of Applied Business Research	63.43	92	19
Irl of Applied Finance	61.63	115	2
Irl of Applied Psychology	73.14	36	2
Irl of Applied Statistics	65.86	72	1
Irl of Banking and Finance	91.29	5	2
Irl of Behavioral Decision Making	72.17	39	3
Irl of Behavioral Finance	59.91	134	1
Irl of Business and Behavioral Sciences	52.75	191	17
Jrl of Business and Economic Perspectives	52.22	194	8
Jrl of Business and Entrepreneurship	54.72	178	1
Irl of Business and Public Affairs	49.67	210	1
Irl of Business Communication	71.49	44	1
Irl of Business Disciplines	56.39	166	4
Irl of Business Ethics	74.32	33	20
Irl of Business Logistics	66.17	71	1
Irl of Business Strategies	63.46	91	4
Irl of Business, Finance and Acctg	80.95	17	21
Irl of Collective Negotiations	57.77	153	2
Jrl of Computer Information Systems	66.56	65	2
Jrl of Contemporary Business Issues	50.00	209	2
Irl of Corporate Acctg and Finance	56.54	163	21
Irl of Derivatives	60.06	133	1
Irl of Economic Psychology	74.63	32	1
Irl of Economics and Business	70.14	51	1
Jrl of Economics and Finance	61.78	111	1
Irl of Education for Business	55.49	175	12
Jrl of Emerging Markets	56.91	157	1
Jrl of Employment Counseling	73.25	35	1
Irl of Engineering and Technology Mgmt	78.08	22	1
Jrl of Entrepreneurship Education	52.22	193	1
Irl of Finance	90.03	7	2
Jrl of Financial and Quantitative Analysis	90.26	6	1
Irl of Financial Economics	108.03	1	3
Irl of Financial Education	52.01	196	4
Irl of Financial Planning	60.71	127	4
Irl of Financial Research	72.27	38	3
Irl of Financial Service Professionals	60.82	125	4
Irl of Forecasting	73.09	37	1
Jrl of Forensic Acctg	59.17	143	15
Jrl of Government Financial Mgmt	55.62	173	7
Irl of Health Care Finance	63.81	89	2
Irl of Hospitality Marketing and Mgmt	54.70	179	1
Jrl of Information Systems	64.74	81	29
Irl of Information Technology Mgmt	53.21	188	1
In of Insurance Issues	64.48	84	2
Jrl of Insurance Regulation	69.86	52	3
Jrl of Int'l Acctg Research	66.38	66	2
Irl of Int'l Acctg, Auditing and Taxation	68.79	54	15
Irl of Int'l Business Studies	76.56	24	2
JII OF INCI DUBINESS STUDIES	10.30	2-1	2

Appendix A (continued)

Journal	Quality score	Overall rank	Articles published
Jrl of Int'l Financial Mgmt and Acctg	70.95	46	11
Jrl of Investing	61.03	122	2
Jrl of Legal Studies Education	66.89	63	2
Jrl of Legal Studies in Business	71.34	45	3
Jrl of Management	82.32	16	1
Jrl of Mgmt Acctg Research	71.75	41	9
Jrl of Mgmt Development	66.71	64	1
Jrl of Mgmt Information Systems	83.51	13	2
Jrl of Managerial Issues	62.86	100	10
Jrl of Managerial Psychology	64.08	88	1
Jrl of Marketing for Higher Education	58.02	151	1
Jrl of Operations Mgmt	74.85	31	1
Jrl of Organizational and End User Computing	57.96	152	1
Jrl of Organizational Culture, Communications and Conflict	59.08	145	1
Jrl of Pension Planning and Compliance	70.37	50	7
Jrl of Performance Mgmt	56.81	158	2
Jrl of Private Enterprise	61.76	112	3
Jrl of Public Budgeting, Acctg and Financial Mgmt	66.98	62	13
Jrl of Relationship Marketing	65.03	80	1
Jrl of Risk and Insurance	78.43	20	2
Jrl of Small Business Mgmt	73.87	34	1
Jrl of Small Business Strategy	55.99	168	1
Jrl of State Taxation	65.04	79	15
Jrl of Strategic Marketing	63.25	93	2
Jrl of Taxation	71.97	40	2
Jrl of Teaching in Int'l Business	64.36	85	1
Jrl of the American Taxation Association	67.65	60	33
Jrl of the Int'l Acad for Case Studies	53.06	189	3
Management Acctg Qtrly	52.87	190	6
Management Acctg Research	65.73	73	1
Management Decision	61.90	110	1
Management Research News	56.17	167	7
Management Science	75.26	29	2
Managerial Auditing Jrl	58.28	150	20
Managerial Finance	56.80	159	5
Marketing Health Services	59.74	135	2
Mergers and Acquisitions	47.22	217	1
Mid-American Jrl of Business	54.55	181	1
Mid-Atlantic Jrl of Business	61.32	120	4
MIS Qtrly	84.86	10	2
Multinational Business Review	62.67	103	1
Multinational Finance Jrl	69.26	53	1
Municipal Finance Jrl	63.02	97	4
National Tax Jrl	79.12	19	2
Non-Profit World	54.04	183	1
NPA (formerly National Public Accountant)	50.22	206	24
Oil, Gas, and Energy Qtrly	52.50	192	52
Organizational Behavior and Human Decision Processes	80.36	18	7
Pacific Acctg Review	65.15	78	1
Petroleum Acctg and Financial Mgmt Jrl	56.71	160	2
Practical Tax Strategies	60.85	124	14
Public Finance Review	64.54	83	1
Qtrly Jrl of Business and Economics	63.71	90	2
Real Estate Issues	56.65	161	4
		(

(continued on next page)

Appendix A (continued)

Journal	Quality score	Overall rank	Articles published
Real Estate Review	60.24	131	1
Research in Acctg Regulation	55.91	169	13
Research in Governmental and Nonprofit Acctg	57.62	156	4
Research on Professional Responsibility and Ethics in Acctg	59.55	138	19
Review of Acctg Studies	83.19	14	6
Review of Business	55.14	176	3
Review of Business Information Systems	52.22	195	19
Review of Financial Studies	88.97	8	1
Review of Quantitative Finance and Acctg	67.08	61	6
RMA Jrl	58.93	146	2
Services Marketing Qtrly	61.94	108	2
Southern Business and Economic Jrl	56.42	165	3
Southern Business Review	53.26	186	1
Southwest Business and Economics Jrl	53.83	184	1
Southwestern Business Admin Jrl	48.95	211	1
Strategic Finance	59.42	139	21
Tax Adviser	60.44	129	18
Tax Mgmt Real Estate Jrl	53.23	187	1
Tax Notes	50.30	205	27
Taxes - The Tax Magazine	51.61	201	13
Tennessee CPA Jrl	46.23	220	8
Tennessee's Business	47.06	218	2
Thunderbird Int'l Business Review	68.37	58	2
Today's CPA	47.25	216	8
TQM Jrl	53.69	185	1
Troy University Business and Economic Review	47.49	214	2

References

- Arlinghaus, B. P. (2002). The environment for professional interaction and relevant practical experience in AACSB-accredited accounting programs. *Journal of Education for Business*, 78, 38–45.
- Baldwin, A. A., Morris, B. W., & Scheiner, J. H. (2000). Where do AIS researchers publish? International Journal of Accounting Information Systems, 1, 123-134.
- Ballas, A., & Theoharakis, V. (2003). Exploring diversity in accounting through faculty journal perceptions. Contemporary Accounting Research, 20, 619–644.
- Bean, D. F., & Bernardi, R. A. (2005). Estimating the ratings of journals omitted in prior quality ratings. Advances in Accounting Education, 7, 109-127.
- Bonner, S. A., Hesford, J. W., Van der Stede, W. A., & Young, S. M. (2006). The most influential journals in academic accounting. Accounting, Organizations and Society, 31, 663–685.
- Brown, L. D., & Gardner, J. C. (1985). Applying citation analysis to evaluate the research contributions of accounting faculty and doctoral programs. *The Accounting Review*, 60, 262–277.
- Brown, L. D., & Huefner, R. J. (1994). The familiarity with and perceived quality of accounting journals: Views of senior accounting faculty in leading U.S. MBA programs. *Contemporary Accounting Research*, 11, 223–250.
- Cabell, D. W. E., & English, D. L. (2004a). Cabell's directory of publishing opportunities in accounting (9th ed.). Beaumont, TX: Cabell Publishing Company.
- Cabell, D. W. E., & English, D. L. (2004b). Cabell's directory of publishing opportunities in economics and finance (9th ed.). Beaumont, TX: Cabell Publishing Company.
- Cabell, D. W. E., & English, D. L. (2004c). Cabell's directory of publishing opportunities in management (9th ed.). Beaumont, TX: Cabell Publishing Company.
- Cabell, D. W. E., & English, D. L. (2004d). Cabell's directory of publishing opportunities in marketing (9th ed.). Beaumont, TX: Cabell Publishing Company.
- Chung, K. H., Pak, H. S., & Cox, R. A. K. (1992). Patterns of research output in the accounting literature: A study of bibliometric distributions. *Abacus*, 28, 168–185.
- Dyckman, T. R., & Zeff, S. A. (1984). Two decades of the Journal of Accounting Research. Journal of Accounting Research, 22, 225–297.
- Everett, J. O., Klamm, B., & Stoltzfus, R. (2004). Developing benchmarks for evaluating publication records at doctoral programs in accounting. *Journal of Accounting Education*, 24, 229–252.

- Hasselback, J. R., Reinstein, A., & Schwan, E. S. (2002). Prolific authors of accounting literature. Advances in Accounting, 20, 95–125.
- Hasselback, J. R., & Reinstein, A. (1995). A proposal for measuring scholarly productivity of accounting faculty. Issues in Accounting Education, 10, 269–306.
- Heck, J. L., Jensen, R. E., & Cooley, P. L. (1990). An analysis of contributors to accounting journals. Part I: The aggregate performances. The International Journal of Accounting Education and Research, 25, 202–217.
- Herron, T. L., & Hall, T. W. (2004). Faculty perceptions of journals: Quality and publishing feasibility. Journal of Accounting Education, 22, 175–210.
- Johnson, P. M., Reckers, P. M. J., & Solomon, L. (2002). Evolving research benchmarks. Advances in Accounting, 19, 235–243.
- Jolly, S. A., Schroeder, R. G., & Spear, R. K. (1995). An empirical investigation of the relationship between journal quality ratings and promotion and tenure decisions. Accounting Educators' Journal, 7, 47–68.
- Lowensohn, S., & Samelson, D. P. (2006). An examination of faculty perceptions of academic journal quality within five specialized areas of accounting research. *Issues in Accounting Education*, 21, 219–239.
- Read, W. J., Rama, D. V., & Raghunandan, K. (1998). Are publication requirements for accounting faculty promotions still increasing? Issues in Accounting Education, 13, 327–339.
- Sinning, K. E., & Dykxhoorn, H. J. (2001). Processes implemented for AACSB accounting accreditation and the degree of faculty involvement. Issues in Accounting Education, 16, 181–204.
- Smith, L. M. (1994). Relative contributions of professional journals to the field of accounting. Accounting Educators' Journal, 6, 1–31.
- Smith, G., & Krogstad, J. L. (1988). A taxonomy of content and citations in Auditing: A Journal of Practice & Theory. Auditing: A Journal of Practice & Theory, 8, 108–117.
- Thomson Reuters (2009). The Thomson Reuters journal selection process. http://www.thomsonreuters.com/products_services/science/free/essays/journal_selection_process/ (June 18 2009).
- Zivney, T. L., Bertin, W. J., & Gavin, T. A. (1995). A comprehensive examination of accounting faculty publishing. Issues in Accounting Education, 10, 1–25.