J Bus Ethics (2016) 136:557–573
DOI 10.1007/s10551-014-2533-9

A Citation Analysis of Business Ethics Research: A Global Perspective

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Received: 24 August 2014 / Accepted: 29 December 2014 / Published online: 7 January 2015

Abstract This study provides a global perspective on citations of articles published in ten business ethics journals between 1999 and 2012 and establishes three findings. First, the results indicate that *Journal of Business Ethics* and *Business and Society* are the two top business ethics journals based on the distribution of normalized citations received. Second, although North America, particularly the US, remains the top producer of business ethics research, it has been surpassed by Europe in terms of weighted normalized research citations received in 2012, implying a potential diminishing global role of US influence in business ethics research over time. Third, the top-ranked US institutions have reduced their business ethics research impact in recent years, while the European institutions have sharply increased theirs.

Keywords Business ethics journal ranking · School ranking · Global pattern of business ethics research

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Introduction

In recent years, business ethics has become a popular and important mechanism for building theory within management literature. This paper contributes a scientifically useful dimension for evaluating this research, and proposes a novel ranking of both journals and academic institutions in business ethics. Currently, popular media, such as *the U.S. News and World Report* and *Bloomberg Businessweek*, conduct an annual assessment on the overall research performance of academic institutions without diving into a specific discipline. This school ranking draws interests from a wide range of constituencies, helping to decide funding allocation, institutional enrollment, and hiring decisions. Business ethics research is expected to become more important as the 2008–2009 financial crisis revealed serious issues of business ethics practices, causing business schools to revamp their curriculum (Chan et al. 2013b). As a result, it is important to have high-quality metrics to establish journal and school rankings so that current and emerging scholars have a better understanding of the environment and how to shape the field.

This paper addresses the context in which business ethics research is conducted. US academic institutions are generally believed to have played a leading role in business ethics research globally: in particular, the Association to Advance Collegiate Schools of Business International (AACSB) in the US has advocated adding a component in the business school curricula that focuses on the importance of business ethics in teaching and research. Yet, many academic institutions in Asia and Europe have recently emerged alongside the US to improve their business ethics programs and research. In order to evaluate the present-day environment for business ethics research, we examine the extent of the US leadership hypothesis.

The purpose of this study is threefold. First, we examine the ranking of business ethics journals, because they are the driving force behind business ethics research. One of these rankings, Beets et al. (2013), employed a sample of internally developed journal lists (IDJ lists) from 83 AACSB accredited business schools to assess business ethics journals, yielding a ranking of 24 business-ethics-centric (BEC) journals. As journal ranking has been done in different ways, such as using citations from published articles in a set of citing journals (Chan et al. 2013a) or impact factors of journals (Borokhovich et al. 1995; Chan et al. 2011), this study examines the ranking of business ethics journals using citations of each published paper compiled by the Google search engine, which reflects a reliable and objective assessment of the quality of published articles.

Second, based on the citations of each published business ethics article received, we provide a new ranking of schools. This measure of research quality fills the gap in the current literature: it is important to highlight business ethics research quality in addition to the number of business ethics publications. Holland and Albrecht (2013), based on an international survey of 211 scholars in business ethics, concluded that one of the key business ethics research indicators is quality. Thus, we provide a comprehensive study that explicitly examines quality (citations) in business ethics research to date. To account for the possible confounding effect of self-citations on our results, we exclude self-citations by authors and journals.

Third, we analyze the pattern and growth of business ethics research across the globe with particular emphasis on research quality. Choi et al. (2010) advocated a need to promote global business ethics research by integrating the bottom-of-the-pyramid countries through a fundamental redefinition of the traditional global economic triad: the United States, Western Europe, and Japan. Chan et al. (2010) demonstrated the growth of Asian and European countries, led by the US, in business ethics publications. This study thus documents the growth of business ethics research impact in Asia-Pacific and European countries and seeks to shed light on the relationship of business ethics research in terms of quantity, quality, and output among Asia, Europe, and the US.

We use citations because they are a quantifiable quality indicator, revealing journal and article impact when others cite a specific article (Garfield 1973). The academic intellectual contribution assessment literature, however, has traditionally emphasized the quantity, rather than quality, of research output (Chan et al. 2010). Prior studies have attempted to incorporate a quality element in the assessment using premier journals (Chan et al. 2002, 2011). Our study takes a step further, where we account for the events in which premier journals publish low impact factor articles or non-premier journals publish high impact factor articles (Smith 2004; Chow et al. 2007; Singh et al. 2007; Chan et al. 2013a). Some recent studies, such as Wilhite and Fong (2012), suggest that some journals utilize coercive citations to inflate their journal citations. To mitigate the extent to which this may overstate the citation number, we exclude author or journal self-citations in our analyses.[1]

Our journal ranking uses an approach similar to that of Serenko and Bonis (2009), which obtained Google Scholar citation data from Harzing's Publish or Perish tool to construct the h-index, g-index, and hc-index to rank business ethics journals.[2] They examine citations at the *journal* level. Our study instead uses a citation approach to ranking business ethics journals at the *article* level, accounting for the differences in quality among articles within a journal. Our approach is similar to that of Xu et al. (2014, 2015) in their international business and finance studies; they, however, do not exclude self-citations. In comparison, our approach is more accurate and mitigates the self-citation concern.

The rest of the paper is organized as follows. "Hypotheses Development and Literature Review" section discusses the hypothesis development and literature review. "Data and Methodology" section contains the data and methodology. "Empirical Results and Analysis" section presents the empirical results and analysis. We conclude with a brief summary.

Hypotheses Development and Literature Review

The literature on the discipline-based assessment of business programs and journal ranking is rich. We divide the review of extant literature into three main themes: journal ranking, global business ethics research, and school ranking.

Journal Ranking

Based upon the data from their survey, Albrecht et al. (2010) provided a ranking of the top ten business ethics

[1] We gratefully acknowledge this suggestion made by a reviewer.

[2] Hirsch (2005) proposes the h-index, which measures the impact of a journal that has at least h citations from its h number of articles in a given year. Harzing and van der Wal (2008) suggest the h-index is a more accurate citation impact measure than the Social Science Citation Index (SSCI) journal impact factor. Egghe (2006) suggests the g-index as a modification of the h-index to consider both the over-cited works and overall citation consistency. Specifically, the g-index is derived from all articles of a journal which are "ranked in decreasing order of the number of citations that they received: the g-index is the (unique) largest number such that the top g articles received (together) a total at least g^2 citations" [Egghe (2006), p. 131]. Sidiropoulos et al. (2007) propose the hc-index to account for the age of articles that appear in a journal. It places more weight on recently published articles. H-index, g-index, and hc-index approaches examine research quality at the *journal* level.

journals in which many published articles were not related to business ethics. Chan et al. (2013b) examined citations from articles published in three top business ethics journals from 2004 to 2008 to assess the quality of journals, documenting sources of the preponderance of influential business ethics research. Recently, Freeman and Huang (2014) used the citation index and journal impact factors from the Web of Science database to assess the quality of 1.5 million articles published in science journals.

Smith (2004), Chow et al. (2007), Singh et al. (2007), and Chan et al. (2013a) show that using citations at the *journal* level to assess the journal quality has limitations. They document that within a journal, there are heavily and lightly cited articles. Not paying attention to the statistical distribution of citations in a journal may lead to biased results in terms of journal ranking. Following Chan et al. (2013a), we argue in this study that citations in each published articles reflect the quality of a journal accurately and objectively. Thus, the cross-sectional analysis of citations across journals is expected to produce different rankings because of the differing quality of articles published within a specific journal. Moreover, the pattern of citations for a particular journal will likely vary over time, resulting from the changing characteristics of the journal. Thus, we have the following hypothesis.

Hypothesis 1 The distribution of citations is diverse both within and across business ethics journals. Moreover, we expect that there will be enough across-journal variations to allow for objective journal ranking.

Global Business Ethics Research

There has been a recent shift toward understanding the content and quality of business ethics research. Chan et al. (2010) indicate that business ethics research has been driven by institutions outside the US, while Freeman and Huang (2014) demonstrate that homophily enhances research quality. As business ethics research requires contexts from different national and cultural perspectives, it is expected that the research on business ethics by institutions or authors from non-US institutions will pick up speed to catch up with those in the US.

Recent studies have shown that there are gains in research from less homophily and more diversity (Freeman and Huang 2014). That is, within a research team, if there is more diversity in terms of the racial (read cultural) background, there will be better recognition with greater citations. The Freeman and Huang study focused on racial homophily, which could be measured readily through author names. This homophily concept can be expanded in general terms to suggest that more diversity in ideas would result in more citations. Foreign institutions within each region will be less homogeneous due to fewer established research norms. This plethora of research perspectives within the field of business ethics means that there is less research homophily, likely leading to better quality.

We acknowledge that because the US has a more solid foundation in business ethics research (see Chan et al. 2010), one could argue that the US should be able to produce more high-quality business ethics research output than foreign universities. While the theoretical approach of research homophily provides a more valid context to examine research output, a focus on research citations allows us to analyze research quality. This leads us to the following hypothesis.

Hypothesis 2 Business ethics research output and citations abroad grow faster than those of the US universities, measured through weighted normalized citations and annual growth rate.

School Ranking

Schools are ranked in many different ways. In our paper, we discuss the literature along three major methods of ranking: publication-based, surveys, and other derived products (such as faculty representation on editorial boards). We propose an alternative that provides a better proxy for quality, which is more relevant to current scholars and researchers in the field.

First, a publication-based approach in school ranking typically tallies the number of publications for each program. To execute the approach, researchers pre-select a set of quality journals for a specific period of time from which articles are counted. For instance, Borokhovich et al. (1995) provide a research productivity assessment and Chan et al. (2002) offer a global ranking of finance programs using a set of 16 core journals over a 12-year period. Chan et al. (2007) provide an update of a global research assessment using 21 finance journals during 1990–2004. Chan et al. (2010) use ten business ethics journals to rank schools based on business ethics research.

Unfortunately, the publication-based approach to conducting ranking has two potential limitations. First, the approach does not recognize that there may be significant differences in quality between two articles even if they appear in the same journal. Second, many of the studies using this approach adopt a small number of premier journals or a quality indicator of a journal to account for differential journal quality. Using only the premier journals for school ranking assumes that all articles in non-premier journals have zero impact. Thus, the journal quality indicator approach to ranking has been subject to criticism since Smith (2004), Chow et al. (2007), Singh et al. (2007), and Chan et al. (2013a) demonstrate that, even within the same journal,

research impact of articles can differ in the number of citations. These studies show that articles in non-premier journals may have high impact on the literature, and that premier journal articles do not necessarily have high impact. In general, publication-based approaches might not successfully account for differences in quality among articles.

A second approach to ranking schools is by surveys. Brooker and Shinoda (1976) provide an early survey study of graduate programs for business. Based on a survey that was administered to 320 business ethics scholars worldwide, Albrecht et al. (2011) report a ranking of 15 business school programs that are perceived to be leaders in the field of business ethics. The rationale for a survey approach is that the opinions of experts matter. Chan and Fok (2003), however, suggest that surveys may have sample and respondent biases. Recent survey studies, such as Currie and Pandher (2011), use only active scholars in a global setting in their sample to improve the reliability of the survey approach in journal ranking. Nonetheless, few such improved survey studies were conducted in business ethics journal/school ranking.

Third, Kaufman (1984) and Chan and Fok (2003) use faculty representation on journal editorial boards to conduct the ranking assessment of schools. Klemkosky and Tuttle (1977) and Borokhovich and Chung (2000) use the placement records of a doctoral program's graduates as the assessment metric. These derived-product studies have limitations because a particular department may have disproportionate numbers of faculty that are too busy to accept editorial board appointment; moreover, some schools do not have doctoral programs. To date, business ethics school rankings have yet to conduct their assessment using these alternative methods.

In contrast to the above methods, we propose using a cluster of literature citations as a proxy for quality. The rationale behind such an approach is that research quality, not quantity, builds a department's reputation. In sum, a citation-based approach to conducting research assessments has the appeal of a quality-based emphasis while retaining objectivity in the assessment.

Similar to Xu et al. (2014, 2015), we use a citation-based approach to ranking schools on research in business ethics as compared to using the weighted number of published articles in the publication-based approach. We argue that ranking based on the citation approach that emphasizes quality will be preferable to ranking based on publication-based approach emphasizing the number but not the quality of published articles, without taking no or low citations into consideration.

Hypothesis 3 School ranking by the number of published articles (reflecting quantity) will be different from school ranking based on citations (reflecting quality). Moreover, using citations, we predict that the top US universities in business ethics research will experience a sharp difference in ranking based on quantity and quality measure in recent years.

Data and Methodology

Data on Journal Coverage

We follow the study by Chan et al. (2010) to collect the institutional and author information from each article published in ten business ethics journals over a 14-year span from 1999 to 2012: *Business and Society, Business Ethics: European Review, Business Ethics Quarterly, Business and Society Review, Ethics and Information Technology, Ethical Theory and Moral Practice, International Journal of Value Based Management, Journal of Business Ethics, Journal of Markets and Morality,* and *Teaching Business Ethics*. These ten journals are almost identical with those of A+, A, and B-ranked business ethics journals in Serenko and Bonis (2009).[3] From these journals, we conduct a citation analysis on each article as follows.

Google Scholar Citations

The recent advances in internet technology allow us to examine citations from articles in the public domain. There are several methods to collect citation information. Meho and Yang (2007) suggest that Google Scholar is better than two other common avenues (SSCI and Scopus) in terms of accuracy and scope of citations. We follow Chan et al. (2013a) in using Google Scholar to collect citations from each article in selected journals. Because citation counts can change over time, we collected all citation data through 2012 over a two-week window in early November 2014. Wilhite and Fong (2012) report that some journals practice coercive citations in their editorial process. That is, some editors explicitly require authors to cite their journals as part of the requirements for publication acceptance. The coercive citation practice, no doubt, inflates the number of citations of a journal and hence biases the journal and program assessment results.[4] In addition, some authors have the tendency to cite more of their own research works

[3] The *Journal of Accounting, Ethics, and Public Policy* included in Serenko and Bonis (2009) ceased publication and the *Business and Professional Ethics Journal* is not included in this study.

[4] We argue that the coercive citation practice among business ethics journals should not be a problem. Unlike other disciplines with a large number of journals, business ethics has only a small number of journals in which citations tend to concentrate within a few journals. Naturally, authors cite these few business ethics journals more frequently. Editors do not need to specifically require submitting authors to cite their journals as a prerequisite for publication acceptance.

Table 1 Summary statistics of citations in business ethics journals

Journal name	Abb. name	N	Including author and same journal self-citations					
			Mean	Med	Std	Min	Max	Skew
Panel A Normalized citations including self-citations (NCs)								
Business and Society	*B&S*	227	7.5	3.2	18.7	0.0	256	10.6
Business Ethics: European Review	*BEER*	410	3.8	1.9	6.9	0.0	74.3	6.4
Business Ethics Quarterly	*BEQ*	510	6.2	2.5	12.5	0.0	121.3	5.3
Business and Society Review	*BSR*	368	3.4	1.0	8.4	0.0	112.5	8.1
Ethical Theory and Moral Practice	*ETMP*	427	1.2	0.7	1.6	0.0	13.3	3.3
Ethics and Information Technology	*EIT*	371	3.5	2.2	5.2	0.0	62.5	6.0
*International Journal of Valued Based Management**	*IJVBM*	87	1.1	0.6	1.4	0.0	6.6	2.1
Journal of Business Ethics	*JBE*	3,592	6.3	4.0	8.0	0.0	175.1	5.4
Journal of Markets and Morality	*JMM*	207	0.8	0.3	1.9	0.0	15.0	4.7
*Teaching Business Ethics**	*TBE*	144	1.2	0.8	1.4	0.0	7.8	2.3

Journal name	Abb. name	N	EANC						EJNC					
			Mean	Med	Std	Min	Max	skew	Mean	Med	Std	Min	Max	skew
Panel B Normalized citations after excluding author (EANCs) and journal self-citations (EJNCs)														
Business and Society	*B&S*	227	7.3	3.0	18.7	0.0	255.2	10.7	7.1	3.0	17.1	0.0	230.3	10.2
Business Ethics: European Review	*BEER*	410	3.6	1.7	6.9	0.0	73.0	6.5	3.7	1.8	6.6	0.0	68.6	6.1
Business Ethics Quarterly	*BEQ*	510	5.9	2.3	12.3	0.0	118.3	5.4	5.9	2.4	12.3	0.0	120.3	5.4
Business and Society Review	*BSR*	368	3.3	1.0	8.3	0.0	111.0	8.1	3.2	1.0	7.6	0.0	94.0	7.1
Ethical Theory and Moral Practice	*ETMP*	427	1.1	0.7	1.5	0.0	13.0	3.5	1.2	0.7	1.6	0.0	13.3	3.4
Ethics and Information Technology	*EIT*	371	3.2	2.0	4.9	0.0	59.3	6.0	3.3	2.0	5.0	0.0	62.0	6.2
*International Journal of Valued Based Management**	*IJVBM*	87	1.0	0.5	1.3	0.0	6.2	2.1	1.1	0.6	1.4	0.0	6.6	2.2
Journal of Business Ethics	*JBE*	3,592	6.0	3.8	7.9	0.0	174.4	5.6	5.7	3.5	7.4	0.0	160.4	5.4
Journal of Markets and Morality	*JMM*	207	0.7	0.2	1.7	0.0	15.0	5.0	0.8	0.2	1.8	0.0	14.7	4.7
*Teaching Business Ethics**	*TBE*	144	1.2	0.8	1.3	0.0	7.6	2.3	1.2	0.8	1.3	0.0	7.5	2.3

Both *IJVBM* and *TBE* (*) were rolled into *JBE* in January, 2004

so that their articles receive more citations. To mitigate the impact of author and journal self-citations, we conduct our analyses primarily using citations that exclude author self-citations or journal self-citations. Our approach of excluding self-citations is an improvement over Xu et al. (2014, 2015).

All other things being equal, an article that appeared in 1990 should be expected to get more citations than another article that appeared in 2010. To mitigate the vintage effect, we normalize the total number of citations of each article by the number of years the article has appeared (Chan et al. 2013a). For instance, if an article appeared in 1991 with 100 citations, then the normalized citation of the article would be 5 (100 citations/20 years).

In addition to normalizing the citations by the age of an article, we also adjust for coauthorship and coaffiliation. Suppose an article has two coauthors (X and Y) and X is from Institutions A and B, while Y is from Institution C. If the article had 36 normalized citations, then Institutions A, B, and C receive weighted normalized citations (WNCs) of 9, 9, and 18, respectively. In other words, we account for the number of coauthors and coaffiliations in each article in computing the WNC of each institution. For the remainder of the study, we use normalized citations for assessing journal ranking and WNCs for school ranking.

Empirical Results and Analysis

Results for Journal Ranking

To assess the leading citation role of business ethics research, it is important to document the publications of business ethics journals. Panels A and B of Table 1 show the descriptive statistics of the normalized citations that (1) include self-citations (NCs); (2) exclude author self-citations (EANCs); and (3) exclude journal self-citations (EJNCs) for the ten journals.

Table 2 Cumulative distribution of EANCs (normalized citations after excluding author self-citations) by journal

Abb. name	N	Median EANCs	Percentage of articles with specific number of EANCs									
			0 (%)	≤1 (%)	≤2 (%)	≤3 (%)	≤4 (%)	≤5 (%)	≤6 (%)	≤7 (%)	≤8 (%)	>8 (%)
JBE	3,592	3.8	1.9	15.9	30.6	43.9	53.7	62.0	67.8	72.9	77.6	22.4
B&S	227	3.0	7.0	25.6	38.8	50.2	58.6	63.9	68.3	70.9	76.2	23.8
BEQ	510	2.3	8.4	30.0	46.5	57.3	62.2	70.2	75.3	78.8	82.0	18.0
EthicsIT	371	2.0	7.0	33.2	52.3	65.5	76.0	82.2	86.5	90.8	92.7	7.3
BEER	410	1.7	2.7	33.4	56.6	69.5	75.9	82.0	84.9	88.8	91.0	9.0
BSR	368	1.0	9.8	51.9	67.9	73.9	80.4	83.7	86.7	89.9	91.8	8.2
TBE	144	0.8	16.0	57.6	86.1	95.1	95.1	96.5	97.9	99.3	100.0	0.0
ETMP	427	0.7	13.1	68.1	88.1	92.0	95.8	97.4	98.4	98.6	99.3	0.7
IJVBM	87	0.5	13.8	63.2	85.1	92.0	95.4	95.4	98.9	100.0	100.0	0.0
JMM	207	0.2	34.8	85.5	91.3	94.7	95.7	97.1	98.1	98.1	98.6	1.4

In Panel A, we present the summary statistics using NCs. It shows that *Journal of Business Ethics* (JBE) has the greatest number of papers published (3,592), followed by *Business Ethics Quarterly* (510) during 1999–2012. *Business and Society* (B&S) has the highest mean of 7.5 NCs and a median of 3.2 NCs, while JBE has a second highest mean of 6.3 and a median of 4.0 NCs, which is the highest among the journals. Judging from these statistics, JBE should be ranked higher than B&S based on the median figure because their distributions are neither normal nor symmetric due to the high skewness. B&S has a large standard deviation (18.7), partly because its maximum NC is 256, which far exceeds those of other journals. These results in Panel A include self-citations, however.

Panel B presents similar summary statistics using EANCs and EJNCs. As expected, the mean EANC (7.3) and EJNC for B&S (7.1) are smaller than the corresponding mean NCs in Panel A. Similarly, for JBE, the corresponding mean EANC and EJNC are smaller than their counterparts in Panel A. The summary statistics in Panel B are similar for EANC and EJNC. The results are interesting because they imply the potential bias from author self-citations and journal self-citations are not serious and quite similar; that is, the results using EANC and EJNC as measuring metrics are qualitatively the same. For brevity, we primarily present EANC results (based on citations that exclude author self-citations) in our paper.[5]

To further analyze journal rankings, we use the first-order stochastic dominance, a common method of ranking preferences regarding outcomes in finance literature. That is, if "X" journal stochastically dominates "Y" journal in the first order, the cumulative distribution of the "X" journal's citations lies below that of the "Y" journal. In other words, across various buckets of normalized citations, "Y" journal receives fewer normalized citations than "X" journal. To operationalize this construct, we use buckets of zero to eight EANCs.

Table 2 reports the cumulative distribution of the EANCs by journal. *Journal of Markets and Morality* (JMM) has the highest cumulative distribution, and thus should be ranked the lowest among the journals considered. JBE has the lowest cumulative distribution among journals with the exception of B&S, which has a lower cumulative distribution than JBE at citations of seven EANCs or below. However, for EANCs of eight or above, JBE again has the lowest cumulative distribution. It should be noted that JBE is the only business ethics journal that appears on the *Financial Times* list of the top business journals.[6]

Figure 1 plots four selected business ethics journals (*Business and Society, Business and Society Review, Journal of Markets and Morality, and Journal of Business Ethics*) to illustrate our findings. A first-degree stochastic dominance occurs if a journal is clearly better than another journal across the distribution of EANCs. Comparing JBE and JMM, for instance, only 1.9 % of articles from JBE received no EANC, while 34.8 % of articles from JMM had no EANC. We can draw similar conclusions regarding buckets with one or fewer, two or fewer, up to eight or fewer EANCs. Hence, in terms of EANCs, JBE is clearly better than JMM. JBE has a slight cross-over with B&S as reported in Table 2 and stochastically dominates other journals, implying that JBE's citations dominate those of other journals without making restrictive assumptions of the statistical distribution of the citations.

Table 3 reports the results of stochastic dominance among journals in the context of EANCs. The results

[5] The results using citations that exclude journal self-citations (EJNCs) are not reported here but are available upon request.

[6] We thank a reviewer for pointing out that no business ethics journal appears in the University of Texas-Dallas 24 journals ranking list. Both lists are the important source of information for remuneration, tenure, and promotion at some schools.

indicate that JBE does not stochastically dominate B&S, but stochastically dominates BEQ. Interestingly, B&S also stochastically dominates BEQ. In other words, JBE and B&S are leaders of the pack. The results document the ranking of the ten business ethics journals; altogether, results of this analysis provide support for Hypothesis 1. Our findings are different from those of Serenko and Bonis (2009), which document that JBE, BEQ, and B&S are the top three ranked business ethics journals; however, our analysis is based on a more objective and conservative measure of citation.

Results on Global Business Ethics Research

To examine the global pattern of business ethics research related to Hypothesis 2, we compare the citations of papers published in different geographical regions. Table 4 reports business ethics research in terms of EANCs and EJNCs from 1999 to 2012. In early years, North American institutions have the highest EANCs and EJNCs as compared to European and Asian-Pacific institutions. However, for 2012, both EANCs and EJNCs of North America are lower than those of Europe, implying that European scholars receive disproportionately more citations (adjusted for time, coauthorship, and self-citations) than those of North America.

In terms of EANCs, the growth rate from 1999–2005 to 2006–2012 sub-periods for North America, Europe, and Asia-Pacific institutions, are 25.5, 169.7, and 170.8 %, respectively. The growth rates in Europe and Asia-Pacific institutions are much higher than those in North America. We arrive at similar conclusions with respect to EJNCs. These results imply that Europe and Asia-Pacific are catching up with North America in business ethics research and that Europe has surpassed the US in terms of research impact.

Figure 2 plots the EANCs for North America, Europe, and Asia-Pacific regions over time, which indicates an upward trajectory for Europe, a relatively stable trend for North America, and a slight positive trend for Asia-Pacific countries. In 2009, Europe surpassed North America in EANCs for the first time. After a decline in EANC after 2009, Europe again surpassed North America the second time in 2012. Asian remains a distant third in EANCs for business ethics research.

Table 5 reports the regression results that relate either the EANCs and EJNCs to two dummy variables (Europe and Asia-Pacific) and the three interaction terms of time with North America, Europe and Asia-Pacific. The R-squareds in both regressions are high, implying a close fit of the relationship. In both EANC and EJNC regressions, the interaction term, *time*Europe*, is significant at the 1 % level with a magnitude much larger than that of *time*North America.* This implies that the growth of Europe over time is significantly greater than that of North America.

Table 6 shows the EANCs for each individual country with the whole period and two sub-periods (1999–2005 and 2006–2012). The US is the leading country in business ethics research for the whole period, a result confirming the US leadership role in business ethics research. However, the growth rate of EANCs is only 16.5 %. The slow growth rate in US suggests an opportunity for other countries to

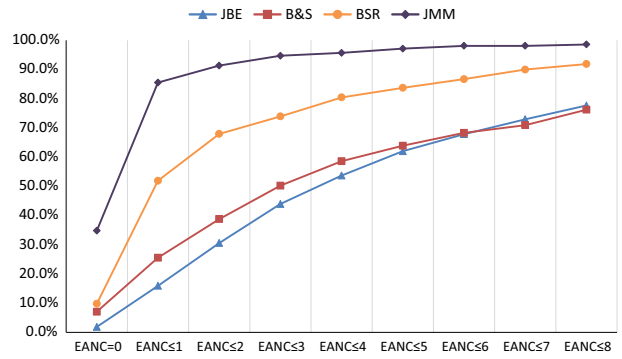

Fig. 1 Cumulative distributions of EANCs (normalized citations excluding author self-citations) for selected journals

Table 3 First-degree stochastic dominance among business journals by EANCs

Results in a cell are interpreted as the first-degree stochastic dominance (FSD) of the journal in the column over the journal in the row

For instance, *JBE* does not have FSD over *B&S* but does have FSD over the remaining journals

Abb. name	*JBE*	*B&S*	*BEQ*	*EthicsIT*	*BEER*	*BSR*	*TBE*	*ETMP*	*IJVBM*	*JMM*
JBE	–	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B&S		–	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
BEQ			–	Yes	No	Yes	Yes	Yes	Yes	Yes
EthicsIT				–	No	No	Yes	Yes	Yes	Yes
BEER					–	Yes	Yes	Yes	Yes	Yes
BSR						–	Yes	Yes	Yes	Yes
TBE							–	No	No	No
ETMP								–	No	No
IJVBM									–	No
JMM										–

Table 4 Business ethics research in weighted EANCs and EJNCs by year and region

Year	EANCs			EJNCs		
	N. America	Europe	Asia-Pacific	N. America	Europe	Asia-Pacific
1999	938.2	252.0	89.0	873.6	246.1	82.0
2000	909.3	213.8	130.1	853.2	206.8	118.7
2001	724.7	280.3	125.8	674.2	269.9	117.0
2002	1,117.0	342.3	130.6	1,065.9	336.5	123.9
2003	1,002.6	405.2	184.0	938.8	379.0	177.6
2004	1,006.7	458.1	117.1	950.1	438.2	113.3
2005	964.4	788.1	109.9	899.5	771.8	104.4
2006	946.6	1,023.6	145.2	897.9	995.3	141.6
2007	1,009.6	808.9	221.3	966.4	786.8	214.0
2008	1,455.0	1,021.3	421.7	1,388.6	1,001.1	400.4
2009	1,443.3	1,581.8	435.8	1,355.5	1,552.7	418.6
2010	1,408.4	910.4	512.9	1,350.5	909.5	484.6
2011	1,091.5	1,022.9	390.5	1,057.4	996.9	374.9
2012	1,008.0	1,020.4	273.0	956.6	1,015.8	273.2
Total	15,025.5	10,129.1	3,286.8	14,228.3	9,906.4	3,144.2
Total (1999–2005)	6,662.9	2,739.8	886.5	6,255.3	2,648.3	836.9
Total (2006–2012)	8,362.4	7,389.3	2,400.4	7,972.9	7,258.1	2,307.3
Growth rate between sub-periods (%)	25.5	169.7	170.8	27.5	174.1	175.7

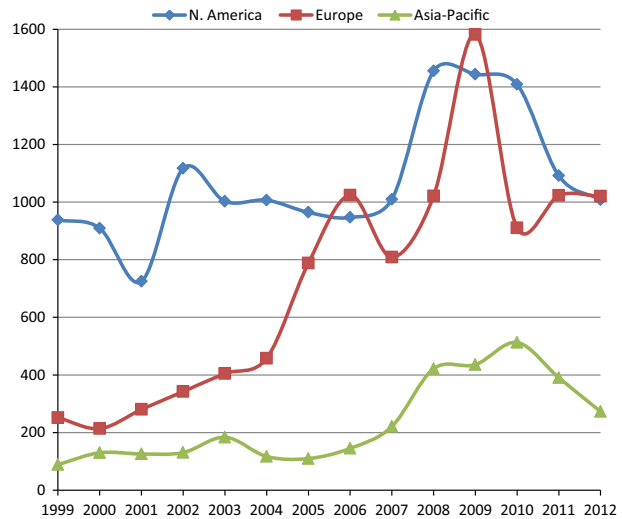

Fig. 2 Research impact of business ethics research in terms of weighted EANCs by year and region (1999–2012)

catch up. The UK, a distant second, shows a substantial growth of more than 50 % in EANCs. For the top 24 countries, there are 15 European countries, indicating the rise of the European countries in business ethics research in recent years, while in Asia, Taiwan, Hong Kong, China, and Korea are the primary drivers of business ethics research.

These results collectively support Hypothesis 2, where we predict that business ethics research citations abroad grow faster than those in US universities as measured by the EANCs and annual growth rate.

Results for School Ranking

Table 7 shows the top 100 ranked schools by EANC in business ethics research with additional ranking results using EJNC, NC, and weighted number of articles (WA).[7] Several results are notable. First, in terms of EANCs, the five top-ranked schools are York University (Canada), Erasmus University of Rotterdam (Netherlands), the University of Georgia (US), the University of Pennsylvania, and the University of Nottingham (UK). Among them, two are US schools, while the other three are non-US. Among the top-10, there are a total of five US schools. The results indicate the rise of European countries in terms of business ethics research quality.

Second, of the top 100 ranked institutions, many of their citations come from the *Journal of Business Ethics* (JBE). That is, there are 23 institutions with over 90 % of their citations from JBE, affirming the prominent role of JBE in their ranking. For example, the University of Ramon Llull, the University of Navarra, and Ghent University have

[7] Weighted number of articles (WA) is the count of total number of articles using the number of authors as the weights. For instance, Authors A and B publish an article together. Author A is affiliated with Institutions X and Y, while Author B is affiliated with Institution Z. Then, Institutions X, Y, and Z are credited with 0.25, 0.25, and 0.5 WA, respectively.

Table 5 Regression analysis of trending business ethics research by region $Y_t = \alpha_0 + \alpha_1 \text{Europe}_t + \alpha_2 \text{Asia-Pacific}_t + \alpha_3(\text{time} \times \text{North-America}_t) + \alpha_4(\text{time} \times \text{Europe}_t) + \alpha_5(\text{time} \times \text{Asia-Pacific}_t) + \varepsilon_t$

Variables	Dependent variable = EANCs		Dependent variable = EJNCs	
	Estimated coefficient	*t* statistics	Estimated coefficient	*t* statistics
Constant	849.03***	8.64	789.89***	8.34
Europe dummy	−745.39***	−5.36	−697.90***	−5.21
Asia-Pacific dummy	−818.86***	−5.89	−765.23***	−5.71
*Time*North America*	29.89**	2.59	30.19**	2.71
*Time*Europe*	82.65***	7.16	82.08***	7.38
*Time*Asia-Pacific*	27.28**	2.36	26.66**	2.40
Adjusted R^2	0.8443		0.8435	
F-statistics	45.46		45.21	
N	42		42	

Time = 1, 2,…, 14 (for year 1999–2012)

The dummy variable for a region was set to 1 if the research output was in that region, 0 otherwise

** and *** denote significance at the 5 % and 1 % level, respectively

Table 6 Weighted EANCs (normalized citations excluding author self-citations) by country

Country	(1) 1999–2012	(2) 1999–2005	(3) 2006–2012	(4) Growth rate between (2) and (3) (%)
US	13,063.1	6,032.4	7,030.7	16.5
UK	3,443.3	1,370.9	2,072.4	51.2
Canada	1,962.4	630.6	1,331.8	111.2
Australia	1,373.4	465.3	908.1	95.1
Netherlands	1,343.7	518.4	825.3	59.2
Spain	1,260.0	234.5	1,025.5	337.3
Taiwan	594.6	67.9	526.7	676.0
Italy	525.6	11.3	514.2	4,431.3
Switzerland	438.6	42.6	396.0	830.6
Germany	423.1	81.3	341.8	320.2
Belgium	419.5	72.6	346.9	377.7
France	418.1	55.2	363.0	558.1
Hong Kong	326.1	143.4	182.7	27.4
Turkey	292.2	36.5	255.8	601.2
Denmark	281.5	34.0	247.5	628.4
Sweden	272.8	27.4	245.4	796.3
China	253.5	20.1	233.5	1,064.1
Finland	250.6	55.4	195.2	252.2
New Zealand	217.5	78.9	138.6	75.5
Norway	197.2	74.7	122.6	64.1
Lebanon	183.6	2.6	181.0	6,844.7
Portugal	179.4	10.7	168.7	1,473.9
Austria	159.5	75.2	84.3	12.0
Korea	157.1	11.7	145.4	1,138.9
Non-academic (no country)	1,896.3	1,029.6	866.6	−15.8
Other 58 countries	1,110.3	313.3	797.0	154.3

Table 7 Leading institutions in business ethics research impact in terms of EANCs (1999–2012)

Rank (based on EANCs)	Institution	EANCs	Country	Rank (based on EJNCs)	Rank (based on NCs)	Rank (based on WA)	% of EANCs from JBE
1	York U	473.3	Canada	1	1	1	77.9
2	Erasmus U Rotterdam, Netherlands	420.3	Netherlands	2	2	3	78.0
3	U Georgia	399.2	US	3	3	36	6.7
4	U Penn	382.3	US	4	4	2	50.8
5	U Nottingham	312.6	UK	5	5	17	64.0
6	U Virginia	255.6	US	7	6	6	52.2
7	U Notre Dame	249.5	US	8	8	5	74.2
8	Copenhagen Business School	243.8	Denmark	9	9	50	21.0
9	Bocconi U, Italy	242.6	Italy	6	7	102	79.1
10	Boston College	230.4	US	10	10	7	30.8
11	U Ramon Llull, Spain	212.2	Spain	11	12	32	90.8
12	U Navarra, Spain	207.0	Spain	14	11	4	90.5
13	U Bath	205.8	UK	12	13	43	63.8
14	Ghent U, Belgium	196.2	Belgium	15	14	37	94.4
15	Tilburg U	192.5	Netherlands	13	15	11	55.3
16	American U Beirut	183.6	Lebanon	16	16	84	87.6
17	U Melbourne	180.4	Australia	18	18	13	78.6
18	U St Gallen	179.6	Switzerland	17	19	115	55.6
19	U Mississippi	173.9	US	22	20	35	84.5
20	DePaul U	173.5	US	20	21	8	68.2
21	Santa Clara U	171.7	US	19	17	16	60.7
22	Baruch College	161.5	US	23	22	14	65.5
23	Rutgers U	157.3	US	21	23	45	13.7
24	U Hull	153.4	UK	26	24	73	89.1
25	Washington State U	153.3	US	28	25	129	91.9
26	U Groningen, Netherlands	149.3	Netherlands	25	26	57	89.6
27	Harvard U	148.4	US	24	27	44	15.6
28	U Calgary	143.2	Canada	27	28	22	92.1
29	Penn State U	133.8	US	31	30	66	66.3
30	U Cambridge	131.4	UK	30	32	47	41.8
31	U Oxford	129.5	UK	29	29	19	32.6
32	U Pittsburgh	126.0	US	32	34	38	11.9
33	California State Polytechnic U-Pomona	124.6	US	33	43	264	9.5
34	Georgetown U	124.3	US	34	40	25	28.2
35	Loyola U Chicago	123.7	US	37	41	9	18.3
36	U Toronto	123.7	Canada	44	37	53	45.8
37	Brigham Young U	123.3	US	40	38	76	64.7
38	Cardiff U	123.3	UK	41	42	157	71.2
39	U Michigan	122.3	US	43	33	20	43.1
40	U Amsterdam, Netherlands	122.3	Netherlands	35	31	24	71.0
41	U New South Wales	121.9	Australia	38	35	60	84.3
42	Brunel U, UK	121.0	UK	36	36	59	67.4
43	U Manchester	120.0	UK	42	39	34	77.8
44	INSEAD	119.0	France	39	44	396	84.9
45	U Northern Iowa	111.1	US	50	49	62	20.3
46	U Carlos III Madrid	109.7	Spain	46	51	281	46.1
47	Vrije U Amsterdam, Netherlands	109.4	Netherlands	47	48	29	24.6
48	U Twente, Netherlands	108.2	Netherlands	48	47	15	27.4

Table 7 continued

Rank (based on EANCs)	Institution	EANCs	Country	Rank (based on EJNCs)	Rank (based on NCs)	Rank (based on WA)	% of EANCs from JBE
49	National Yunlin U Science & Technology	106.3	Taiwan	45	45	338	100.0
50	Northumbria U	104.6	UK	51	52	86	75.4
51	Florida International U	102.9	US	49	46	21	91.6
52	U Wyoming	102.6	US	52	50	46	98.2
53	U North Carolina Charlotte	102.3	US	56	53	77	54.1
54	Simon Fraser U	100.1	Canada	57	55	51	79.5
55	BI Norwegian School Management	98.7	Norway	58	54	33	82.9
56	U Murcia, Spain	97.4	Spain	54	58	244	99.4
57	Baylor U	95.9	US	68	64	69	99.3
58	U New Mexico	95.2	US	53	56	18	79.7
59	Virginia Tech	95.0	US	61	62	30	52.1
60	Cranfield U	94.2	UK	63	60	83	98.6
61	Monash U	94.1	Australia	60	59	56	84.3
62	U Durham	93.0	UK	55	61	78	34.9
63	Arizona State U	92.2	US	65	65	48	58.3
64	Vienna U Econ & Business Admin	89.8	Austria	64	67	203	90.8
65	U London-Royal Holloway	88.5	UK	59	66	79	56.7
66	U South Australia	87.4	Australia	67	68	40	72.3
67	Bentley U	87.3	US	66	71	12	37.9
68	Hong Kong Baptist U	86.3	Hong Kong	73	70	41	96.8
69	Missouri State U	85.6	US	78	78	220	62.2
70	Loyola U New Orleans	85.1	US	79	72	27	89.6
71	Old Dominion U	84.6	US	71	75	117	66.9
72	U Lausanne	82.8	Switzerland	70	69	155	57.1
73	Bradford U	82.7	UK	76	79	154	100.0
74	New York U	82.5	US	84	81	81	23.1
75	College William and Mary	82.3	US	88	80	88	80.5
76	St John's U	81.9	US	85	82	10	89.3
77	Yasar U, Turkey	81.6	Turkey	81	84	625	100.0
78	U Western Ontario	81.0	Canada	77	76	80	91.2
79	Queen's U, Canada	80.7	Canada	75	77	104	94.5
80	U Zurich	79.9	Switzerland	72	73	210	57.1
81	Suffolk U	78.4	US	86	83	68	53.3
82	Concordia U	78.1	Canada	80	85	114	69.6
83	Macquarie U	77.3	Australia	83	86	128	86.5
84	U Gothenburg, Sweden	77.1	Sweden	74	74	63	73.6
85	St Mary's U, Canada	76.9	Canada	89	89	177	56.7
86	U Central Florida	75.1	US	90	87	108	92.3
87	National U Singapore	74.6	Singapore	100	94	99	96.8
88	UW-Milwaukee	74.3	US	82	91	130	48.1
89	Central Michigan U	74.1	US	107	92	259	13.4
90	U Missouri	73.5	US	98	93	216	19.7
91	Massey U	72.9	New Zealand	99	96	54	62.3
92	U Modena and Reggio Emilia, Italy	71.2	Italy	123	105	626	92.9
93	Middle Tenn State U	71.1	US	69	57	125	100.0
94	U Illinois	71.0	US	91	99	171	41.9
95	Boston U	71.0	US	104	104	158	49.3
96	U Warwick	70.9	UK	95	97	75	55.0

Table 7 continued

Rank (based on EANCs)	Institution	EANCs	Country	Rank (based on EJNCs)	Rank (based on NCs)	Rank (based on WA)	% of EANCs from JBE
97	U Technology Sydney	70.9	Australia	94	90	101	91.6
98	Leiden U, Netherlands	70.7	Netherlands	87	98	340	7.4
99	Pepperdine U	68.4	US	103	88	185	98.9
100	UCLA	68.4	US	93	108	268	8.0

respectively 90.8, 90.5, and 94.4 % of their citations derived from JBE. In addition, there are 12 institutions within the 80–90 % citation range. These results indicate the important role of JBE in disseminating business ethics research.

Third, the distributions of ranking by EANC, EJAC, and NC are very similar. In fact, rankings of the top five institutions are exactly the same and rankings of the top fifteen institutions are similar with only slight differences. Thus, using different ways of excluding self-citations do not change the main results with regard to the relative ranking of leading institutions.

Fourth, the distribution of ranking by a quality-based approach (using EANC, EJNC, or NC) would be very different from a quantity-based approach using WA as the metric. For example, the University of Georgia is ranked third by all three quality-based approaches but ranked 36th by the weighted number of articles (WA). A more notable example is Bocconi University in Italy, which is ranked 9th by EANC but 102nd by WA (outside the 100 top school range). In fact, many institutions within the 100 top ranking by EANC would not be listed. They include California State Polytechnic University, Pomona and Washington State University in the U.S. and Cardiff University in the UK, as their faculty published a small number of articles that have high impact as measured by citations. The results indicate that ranking by a quality-based approach differs substantially from that by WA as the rankings come from different distributions.

Table 8 shows changes in EANCs for the whole period from 1999 to 2012 and the two sub-periods (1999–2005 and 2006–2012) for the top 100 ranked schools. Two observations are noteworthy. First, US schools, in general, show a decline in business ethics research impact in the latter period. This result is interesting, likely reflecting a reduced interest by scholars or allocated resources to business ethics research. On the other hand, many of the European institutions show a strong growth in business ethics research impact and have surpassed North American schools in recent years.

Together, these findings show support for Hypothesis 3. Our analyses demonstrate a variation in institutional rankings based on citations (quality) or number of articles (quantity). We also found that the top US universities in business ethics research seemed to have experienced a slow growth in research impact in recent years. Surprisingly, we also found that the top European schools improved their number of citations. These different methods of analyzing quality versus quantity provide a valuable insight into institutional ranking.

Implications

Having presented the findings on ranking journals and schools above, we have acquired some empirical facts in terms of their impact measured by the number of published articles (quantitative measure) and a citation-based analysis that exclude self-citations (quality measure). The challenge now is in explaining, as pointed out by Davis (1971) and Corley and Gioia (2011), how our results are both interesting and contribute significantly enough to advance knowledge. We discuss the implications of our results in the context of contributions to theory and practice. By way of this discussion within the proposed framework advocated by Corley and Gioia (2011) in a premier management journal, we address the "so what?" question here.

In terms of contribution to theory, results from this study provide further understanding of how research impact is measured and the disparities among journals, universities, and regions. None of these findings had been consistently shown in previous research. This additional knowledge in journal and school ranking provides a useful input to the contextualization of journal and school rankings, using citations that proxy the impact of research in academia. Moreover, understanding these rankings is critical to scholars, journals, and schools: our research thus provides a clearer picture of the dynamic nature of business ethics research.

However, it is important to note that journal ranking does not quite measure the impact of the scholarly research on real world applications and practice. While academics question the discrepancy between citations and theory, anecdotal evidence suggests that academics tend to presume that frequent citations indicate the usefulness (or practicality) of the theory published in premier journals. For example, in comparing the list of Academy of Management Review (AMR)'s Best Articles (awarded one year after publication) with the list of each year's most cited

Table 8 Sub-period analysis of EANCs

Rank (in Table 7)	Institution	EANCs in 1999–2005	EANCs in 2006–2012	Percent increase (%)
1	York U	179.4	293.8	63.8
2	Erasmus U Rotterdam, Netherlands	204.2	216.1	5.8
3	U Georgia	362.0	37.2	−89.7
4	U Penn	170.8	211.6	23.9
5	U Nottingham	204.8	107.8	−47.4
6	U Virginia	111.5	144.1	29.1
7	U Notre Dame	119.2	130.3	9.3
8	Copenhagen Business School	28.4	215.4	658.6
9	Bocconi U, Italy	0.0	242.6	NA
10	Boston College	154.2	76.1	−50.6
11	U Ramon Llull, Spain	2.0	210.3	10,605.5
12	U Navarra, Spain	89.4	117.6	31.7
13	U Bath	95.3	110.5	15.9
14	Ghent U, Belgium	45.8	150.4	228.6
15	Tilburg U	50.3	142.2	182.7
16	American U Beirut	2.6	181.0	6,844.7
17	U Melbourne	29.9	150.5	403.3
18	U St Gallen	16.3	163.3	902.0
19	U Mississippi	98.3	75.6	−23.1
20	DePaul U	40.6	132.9	227.8
21	Santa Clara U	30.5	141.2	363.3
22	Baruch College	68.7	92.8	35.1
23	Rutgers U	14.7	142.7	872.8
24	U Hull	85.1	68.3	−19.7
25	Washington State U	89.9	63.4	−29.5
26	U Groningen, Netherlands	60.0	89.2	48.6
27	Harvard U	102.1	46.3	−54.6
28	U Calgary	32.8	110.5	237.2
29	Penn State U	60.6	73.2	20.7
30	U Cambridge	45.6	85.8	88.3
31	U Oxford	64.2	65.3	1.8
32	U Pittsburgh	110.5	15.5	−86.0
33	California State Polytechnic U-Pomona	0.8	123.8	16,020.6
34	Georgetown U	51.5	72.8	41.4
35	Loyola U Chicago	49.5	74.2	50.0
36	U Toronto	38.1	85.6	125.1
37	Brigham Young U	42.2	81.2	92.5
38	Cardiff U	22.7	100.6	342.9
39	U Michigan	31.3	91.0	191.0
40	U Amsterdam, Netherlands	25.8	96.5	274.1
41	U New South Wales	52.8	69.0	30.7
42	Brunel U, UK	48.5	72.5	49.6
43	U Manchester	30.8	89.1	189.2
44	INSEAD	15.2	103.8	581.9
45	U Northern Iowa	47.1	64.0	35.8
46	U Carlos III Madrid	1.1	108.6	9,475.0
47	Vrije U Amsterdam, Netherlands	84.1	25.3	−70.0
48	U Twente, Netherlands	51.3	57.0	11.1

Table 8 continued

Rank (in Table 7)	Institution	EANCs in 1999–2005	EANCs in 2006–2012	Percent increase (%)
49	National Yunlin U Science & Technology	0.0	106.3	NA
50	Northumbria U	94.8	9.8	−89.7
51	Florida International U	37.8	65.1	72.0
52	U Wyoming	30.3	72.3	138.7
53	U North Carolina Charlotte	44.1	58.2	31.8
54	Simon Fraser U	6.5	93.6	1,332.2
55	BI Norwegian School Management	49.2	49.6	0.8
56	U Murcia, Spain	0.0	97.4	NA
57	Baylor U	52.4	43.5	−17.0
58	Virginia Tech	64.0	31.4	−51.0
59	U New Mexico	53.3	41.9	−21.3
60	Cranfield U	31.5	62.6	98.6
61	Monash U	33.9	60.2	77.7
62	U Durham	47.8	45.2	−5.5
63	Arizona State U	41.2	51.0	24.0
64	Vienna U Econ & Business Admin	44.5	45.3	1.9
65	U London-Royal Holloway	24.1	64.3	166.7
66	U South Australia	16.0	71.4	347.5
67	Bentley U	48.3	38.9	−19.5
68	Hong Kong Baptist U	35.3	51.1	44.7
69	Missouri State U	71.8	13.8	−80.8
70	Loyola U New Orleans	57.2	28.0	−51.1
71	Old Dominion U	58.1	26.5	−54.5
72	U Lausanne	16.4	66.4	303.8
73	Bradford U	0.0	82.7	NA
74	New York U	48.9	33.6	−31.3
75	College William and Mary	57.7	24.6	−57.5
76	St John's U	60.8	21.1	−65.3
77	Yasar U, Turkey	0.0	81.6	NA
78	U Western Ontario	48.1	32.9	−31.7
79	Queen's U, Canada	4.2	76.5	1,742.8
80	U Zurich	0.6	79.3	13,795.3
81	Suffolk U	13.8	64.6	368.4
82	Concordia U	48.6	29.5	−39.3
83	Macquarie U	23.1	54.3	135.2
84	U Gothenburg, Sweden	1.2	75.9	6,225.3
85	St Mary's U, Canada	46.9	30.0	−36.0
86	U Central Florida	23.2	51.9	124.2
87	National U Singapore	19.6	55.1	181.4
88	UW-Milwaukee	19.1	55.2	189.9
89	Central Michigan U	3.8	70.3	1,731.8
90	U Missouri	62.5	11.0	−82.3
91	Massey U	18.7	54.2	189.2
92	U Modena and Reggio Emilia, Italy	0.0	71.2	NA
93	Middle Tenn State U	23.3	47.8	105.2
94	U Illinois	2.6	68.4	2,497.6
95	Boston U	36.0	35.0	−2.7
96	U Warwick	18.7	52.2	178.5

Table 8 continued

Rank (in Table 7)	Institution	EANCs in 1999–2005	EANCs in 2006–2012	Percent increase (%)
97	U Technology Sydney	28.0	42.9	53.1
98	Leiden U, Netherlands	0.4	70.3	19,222.3
99	Pepperdine U	9.5	58.8	517.0
100	UCLA	2.4	66.0	2,638.9

AMR paper over the same years (based on Web of Science Social Sciences Citation Index and/or Google Scholar counts), Corley and Gioia (2011) found that only in four out of eighteen years, the most cited paper also turned out to be the AMR Best Article for its year of publication chosen by AMR. This implies that the most cited paper in each year may not have been reasonably expected to be the AMR Best Article for that year. Our paper thus contributes to the literature in showing that there are discrepancies between ranking systems and actual measures of quality within journals.

This paper also contributes to the theoretical literature in understanding the assumptions that have previously been made: while Glaser and Strauss (1967) feel that the prerequisite for generating a theory is an intense familiarity with the data, Davis (1971) explains the necessity of familiarity with the assumptions made by previous audiences about the data. This study documents the pattern of citations and the ranking of journals and schools based on the citation approach to shed light on their underlying business ethics issues and trends. That is, this study has improved our understanding of the emerging trends in business ethics research, thus contributing to the existing literature in a meaningful way. These new empirical facts then enable researchers to develop a better theory of ranking based on these trends and underlying forces. This is particularly evident when talking about school and regional effects and trends. Our research is interesting from a theoretical perspective in that it first brings an original concept in terms of understanding the relative rankings of journals, schools and regions, and then combines it with an approach that has both scientific and practical useful elements as advocated by Corley and Gioia (2011).

In terms of contribution to practice, this study has identified the most cited journals, enabling scholars and practitioners to look for research on best practices of ethical business decision-making. This is precisely where our empirical findings contribute to the literature of journal and school ranking. The results are surprisingly different from common knowledge about research impact and its measurement. In addition, knowing the quality of journals is important for scholars to decide where to submit their scholarly works for publication consideration that would yield the maximum impact from their intellectual efforts to contribute to and expand upon the field of literature. Moreover, having a clear ranking of journals that specialize in business ethics research is instrumental in promoting the practice of ethical business decision-making: top and middle management teams are able to obtain research findings and learn from the best practice if there is one clear premier journal in the field. In addition, journalists and non-academic researchers looking for references on best practices of ethical business decision-making are more likely to delve into one single top-rated business ethics research journal instead of browsing through a variety of unclearly ranked journals, or top-rated but broadly management-specific journals such as the Academy of Management Journal and Academy of Management Review. These journal rankings thus not only encourage better and more streamlined scholarship from researchers, but also the use of business ethics-related academic papers in popular press as well as the day-to-day operations within businesses.

In addition, understanding the underpinnings behind school rankings is valuable from a practical standpoint not only for scholars and potential researchers, but also for governments and other organizational bodies. While officials and administrators use school rankings to allocate funding, students and parents use them to decide enrollment. At the same time, employers use them to make hiring decisions, and faculty can leverage rankings to advance their career and pursue external funding for their research. Thus, this study has practical utility for many constituencies.

This study also specifies grounding for future contributions. Many European schools have risen to become top ranked in business ethics research based on research impact—more so than their US counterparts. One possible explanation is that there had been reductions in funding for faculty research in US business schools after the 2008 global financial crisis, while there had been few significant cut in their counterparts in Europe and Asia-Pacific countries, helping them to experience a surge in research output as well as in quality. While American schools certainly cannot be said to be falling behind as top-ranked institutions in business ethics research, the reason behind this emerging trend needs to be examined more carefully in future research. We provide a direction to future business ethics research efforts.

In sum, the empirical findings of this study have some surprises for us. As such, they contribute to a potential theory of journal/school ranking and help us understand the assumptions behind much of the prior research that had been done within this literature. In addition, our research methods and analysis provide a practical guide to academics for choosing an appropriate publication outlet for their research work, as well as advancing a scientifically valuable methodology for ranking journals based on citations adjusted for self-citations.

Conclusion

This study collects the institutional and author information over a 14-year span from 1999 to 2012 for each article published in ten business ethics journals: *Business and Society, Business Ethics: European Review, Business Ethics Quarterly, Business and Society Review, Ethics and Information Technology, Ethical Theory and Moral Practice, International Journal of Value Based Management, Journal of Business Ethics, Journal of Markets and Morality,* and *Teaching Business Ethics*. We use the Google search engine to collect citations of each article.

Our study provides three interesting results that shed light on the development of a theory of journal ranking and allocation of scarce resources to disseminating the research results through publication in journals with most impact. First, we find that *Journal of Business Ethics* and *Business and Society* are the two top business ethics journals based on citations (after excluding self-citations) received over the 14-year span and the stochastic dominance analysis. As research on business ethics has received greater attention and resources from universities over time, the quality of business ethics journals is important in assessing the scholarly research efforts. Knowing the quality of journals is also important for scholars to know where to submit their works for publication that would have the maximum impact from their intellectual efforts.

Second, research output and citations by geographical region (North America, Europe, and Asia-Pacific) were shown to have grown significantly between 1999 and 2012. In 2012, Europe surpassed the US in terms of normalized citations adjusted for author and journal self-citations. The result implies that the influence of research output by Europe might have been passing over the US in leading business ethics research. However, the caveat is that today collaborative research work is ubiquitous among scholars from institutions across the globe. Regional disparity in research output and citations should converge over time.

Third, many European schools have risen to become top ranked in business ethics research based on research impact, more so than their US counterparts. One possible explanation is that there had been reductions in the funding for faculty research in US business schools after the global financial crisis, while there had been few significant cut in their counterparts in Europe and Asia-Pacific countries, helping them to experience a surge in research output as well as in quality. While American schools certainly cannot be said to be falling behind as top-ranked institutions in business ethics research, the reason behind this emerging trend needs to be examined more carefully in future research.

We see some potential avenues of future research from our study. The reasons behind the growth of global business ethics research, especially in Europe and Asia-Pacific countries in recent years, are potentially interesting research subjects to explore. Are the topics of business ethics research similar in direction and emphasis across regions? A theory of journal and school ranking is desirable but is now absent. This theory should be able to identify and explain the drivers behind the regional differences in ranking (both in qualitative and quantitative measure). Future research should shed light on these important issues.

Acknowledgments We acknowledge the helpful comments from two anonymous reviewers. The usual caveats apply.

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