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Evaluating publications across business disciplines: Inferring interdisciplinary "exchange rates" from intradisciplinary author rankings☆

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ABSTRACT

We propose a novel approach to comparing publications across business disciplines. Specifically, we aim to provide an objective method for evaluating the interdisciplinary value of publications based on intradisciplinary author rankings. Using publication data from the leading journals in accounting, economics, finance, management, and marketing, we first construct intradisciplinary author rankings and then utilize these rankings to estimate the marginal effect of an additional publication on the individual's ranking within her own discipline. Based on the implied effort required to improve an individual's intradisciplinary ranking, we infer interdisciplinary "exchange rates" to evaluate the value of top-tier publications across disciplines. Our estimates indicate that the value of a single single-authored publication in a top-ranked journal is highest in accounting and lowest in marketing. We confirm the validity of our "exchange rate" approach by constructing an interdisciplinary author ranking in which authors from different disciplines are uniformly distributed across the ranking list.

1. Introduction

Assessments of the research performance of academic institutions and individual faculty members typically rely on publication records. While comparisons of publication records may provide accurate and useful information regarding research performance within a given discipline, the internal and external stakeholders of universities are often required to evaluate publication records across several different disciplines. Deans, promotion and recruiting committees, administrators, and funding agencies, for instance, are constantly faced with the challenge of evaluating and comparing the value of publications across disciplines. These comparisons, however, are far from straightforward because of potential discipline-specific differences in publishing patterns and barriers. As noted by Schubert and Braun (1996), interdisciplinary comparisons of publication records without an appropriate "transdisciplinary currency" induce a quotidian fallacy of comparing apples with oranges. In this paper, we present an objective method for evaluating the interdisciplinary value of top-tier publications and apply the proposed approach within a business school setting for constructing interdisciplinary "exchange rates" for publications across business disciplines and economics.

Publications in highly regarded peer-reviewed journals play a central role in hiring, promotion, and tenure decisions, and they also influence salaries and teaching loads at most business schools and universities (see e.g., Fishe, 1998; Swidler and Goldreyer, 1998; Swanson, 2004; Siemens, Burton, Jensen and Mendoza, 2005; Swanson, Wolfe and Zardkoohi, 2007; Beattie and Goodacre, 2012; Spiegel, 2012; Chan, Chan, Tong and Zhang, 2016). Therefore, it is important that faculty members from different disciplines are evaluated, treated, and incentivized in a fair and objective manner. Any perceived inequities across disciplines are likely to lead to poor motivation among faculty members within the disciplines who feel mistreated. Moreover, publication records are often used by administrators, governments, and funding agencies as the primary criterion for allocating resources and

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funding between universities within countries, and between faculties, departments, and individual scholars within universities (e.g., Schubert and Braun, 1996; Kalaitzidakis, Mamuneas and Stengos, 1999; Chan, Tong and Zhang, 2013; Sihvonen and Vähämaa, 2015; Chan, Fung, Fung and Yau, 2016a; Xu, Chan and Chang, 2016). Given the pivotal role of interdisciplinary comparisons of publication records, it is surprising how little research attention the relative valuation of top-tier publications in business disciplines has received.

In this paper, we propose an objective method for comparing the value of publications across business disciplines. Specifically, using publication data from the leading peer-reviewed journals in accounting, economics, finance, management, and marketing, we construct intradisciplinary author rankings that we then employ to estimate the empirical association between the number of publications and author rankings in each discipline. Based on the estimated effort required for improving an individual's ranking within his or her own discipline, we can deduce the marginal value of a single-authored publication in each discipline. We convert these marginal values into "exchange rates" to compare the interdisciplinary value of publications. The underlying premise in the proposed approach is that the marginal value-added of a single single-authored article in terms of intradisciplinary author ranking reflects the significance and value of a top-tier publication in a competitive scholarly environment. While this paper empirically applies the interdisciplinary "exchange rates" for evaluating publications across business disciplines, the proposed methodology provides a generic approach for comparative assessments of research performance across any scientific disciplines where the number of top-tier publications can be viewed as an indicator of scientific impact.

Whereas our approach of inferring interdisciplinary "exchange rates" from intradisciplinary author rankings is unique, our empirical analysis of publication values across business disciplines is related to studies by Buchheit, Collins and Reitenga (2002), Swanson (2004), Valacich, Fuller and Schneider (2006), and Swanson et al. (2007). Similar to us, these previous studies essentially aim to examine how level the playing field is within business studies in terms of publishing in the top-tier journals. On the whole, the empirical evidence reported in prior studies suggests that it is more difficult for accounting scholars to publish in the leading journals of their own field than for scholars in other business disciplines.

Buchheit et al. (2002) examine publication patterns in the top-three accounting, finance, management, and marketing journals over the period 1997–1999. They document that the top-three accounting journals publish fewer articles than the top-three journals of the other disciplines, and furthermore, that publishing in the top-three accounting journals is more concentrated among authors affiliated with the top-20 ranked business schools. Swanson (2004) compares the number of articles and the proportion of faculty members who are successful in publishing in the top-ranked accounting, finance, management, and marketing journals over the period 1990–2002. His findings indicate that significant disparities exist among the disciplines in the proportion of faculty publishing in the leading journals, with accounting journals publishing substantially fewer articles relative to the size of the faculty than the other disciplines.

Valacich et al. (2006) complement Swanson's (2004) analysis by examining publication patterns relative to faculty size in the leading accounting, finance, management, marketing, and information systems journals. Consistent with the findings of Swanson (2004), they document that accounting scholars are relatively the least successful and management scholars the most successful in publishing in the top-tier journals of their own disciplines. Finally, Swanson et al. (2007) investigate the concentration of articles among universities and individuals in the leading business journals. Their findings suggest that publishing is more concentrated among universities as well as individuals in the top accounting and finance journals than in management and marketing journals with a similar intradisciplinary status. In this study, we aim to contribute to the existing body of literature by evaluating publication values across business disciplines through objective interdisciplinary "exchange rates".

In our empirical analysis, we collect data on the authors of each article published over the period 2005–2015 in the journals classified as "Journals of Distinction" (category 4*) in the Chartered Association of Business Schools' Academic Journal Guide, 2015 (hereafter ABS-AJG). The 24 top-ranked journals published altogether 15,610 articles by 18,154 individual authors during our sample period. Using these publication data, we estimate the marginal effect of an additional single-authored publication in a top journal on the individual's ranking within his or her own discipline. We document that the relationship between the number of publications and author rankings is linear-logarithmic in all disciplines. The estimation results demonstrate that substantial differences between the disciplines exist in the implied effort required to improve an individual's intradisciplinary author ranking. In particular, we find that the value of a single publication in a top-tier journal is highest in accounting and lowest in marketing. Our estimates of the interdisciplinary "exchange rates" suggest that a single-authored article in a leading accounting journal corresponds to approximately two marketing articles and top-ranked economics, finance, and management articles. The relatively higher value of top-tier accounting publications is broadly consistent with the empirical evidence documented in Buchheit et al. (2002), Swanson (2004), Valacich et al. (2006), and Swanson et al. (2007).

We confirm the validity of our "exchange rate" approach by constructing an interdisciplinary author ranking in which authors from the different disciplines are uniformly distributed across the ranking list. Furthermore, we conduct a number of additional tests in order to ascertain that the interdisciplinary "exchange rates" are not sensitive to alternative journal sets and sample periods. We also perform a simulation exercise that suggests that the observed differences in publication values between the disciplines are largely induced by discipline-specific quality norms and publication hurdles and by differences in the level of scholarly competition across disciplines. Overall, the results of our empirical analysis indicate that the use of interdisciplinary "exchange rates" for converting publications into equivalent units may increase the objectivity of cross-disciplinary comparisons by eliminating the influence of discipline-specific publishing patterns and barriers.

The remainder of the paper is organized as follows. Section 2 describes the publication data and reports summary statistics regarding publication patterns in the different disciplines. Section 3 introduces the approach used for evaluating the value of publications across disciplines and presents the results of our empirical analysis. Finally, Section 4 provides concluding remarks. This paper is accompanied with an Internet Appendix which provides results of additional robustness checks.

2. Data and descriptive statistics

We construct interdisciplinary "exchange rates" to compare publications across disciplines based on publication data from the leading peer-reviewed journals in accounting, economics, finance, management, and marketing over the period 2005–2015.[3] Specifically, we collect data on the authors of each article published in the journals classified as "Journals of Distinction" (category 4*) in the Chartered Association of Business Schools' Academic Journal Guide, 2015 (ABS-AJG). These journals are considered to publish research of the highest quality and are generally highly regarded among the academic community. According to ABS-AJG, the journals ranked in category 4* are recognized as exemplars of excellence and are commonly rated in the highest category in different journal quality lists.

Despite these journal quality considerations, we acknowledge that the

[3] Our analysis focuses on the large, core business disciplines and omits some smaller and/or more specialized disciplines which are separately categorized in the ABS-AJG. Most of the omitted disciplines do not have a single journal ranked in category 4* in the ABS-AJG. As noted by Swanson (2004) and Swanson et al. (2007), these smaller, more specialized disciplines are not included in business schools departments and curricula in a consistent manner, and furthermore, much less agreement exists about which journals are the most prestigious in these disciplines.