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Can Microsoft Academic help to assess the citation impact of academic books?

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ABSTRACT

Despite recent evidence that Microsoft Academic is an extensive source of citation counts for journal articles, it is not known if the same is true for academic books. This paper fills this gap by comparing citations to 16,463 books from 2013 to 2016 in the Book Citation Index (BKCI) against automatically extracted citations from Microsoft Academic and Google Books in 17 fields. About 60% of the BKCI books had records in Microsoft Academic, varying by year and field. Citation counts from Microsoft Academic were 1.5 to 3.6 times higher than from BKCI in nine subject areas across all years for books indexed by both. Microsoft Academic found more citations than BKCI because it indexes more scholarly publications and combines citations to different editions and chapters. In contrast, BKCI only found more citations than Microsoft Academic for books in three fields from 2013-2014. Microsoft Academic also found more citations than Google Books in six fields for all years. Thus, Microsoft Academic may be a useful source for the impact assessment of books when comprehensive coverage is not essential.

1. Introduction

Edited books and monographs are important academic outputs in the arts and humanities and some social sciences (Hammarfelt, 2016; Huang & Chang, 2008; Nederhof, 2006). For instance, about a third of research publications from Australian universities in the social sciences and humanities two decades ago were books or book chapters (Bourke & Bulter, 1996) and the proportion of book submissions to the 2008 UK Research Assessment Exercise (RAE) across 38 social sciences and arts and humanities subject areas was 31% (Kousha, Thelwall, & Rezaie, 2011). Prior to the creation of the first major book citation index, citation impact monitoring for books was more challenging than for journal articles (Garfield, 1996). This was because, in many humanities and some social science fields, books attract more citations from other books than from journal articles. Bibliometric indicators based on journal-based citation indexes therefore do not fully reflect the intellectual impact of books (Archambault, Vignola-Gagne, Cote, Lariviere, & Gingras, 2006; Cronin, Snyder, & Atkins, 1997; Hicks, 1999). In political science, for example, one study found that books received almost three times more citations from other books than from Web of Science (WoS) journal articles (Samuels, 2013) and another found that Google Books citations to academic books were more common than Scopus citations in the humanities (Kousha et al., 2011).

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Lacking a book citation index, some early investigations manually checked references in scholarly documents (e.g., Creaser, Oppenheim, & Summers, 2011; Cullars, 1998; Knievel & Kellsey, 2005; Krampen, Becker, Wahner, & Montada, 2007), used the cited reference search facility in WoS to count citations to books (e.g., Bar-Ilan, 2010; Butler & Visser, 2006; Chi, 2014; Hammarfelt, 2011) or used non-citation indicators (e.g., library holdings: White et al., 2009) to assess the broader impacts of books (for reviews see: Hammarfelt, 2016; Kousha & Thelwall, 2015). Google Scholar or Google Books citation searching can also find citations from books or other publications that are absent from WoS and Scopus (Abdullah & Thelwall, 2014; Kousha & Thelwall, 2009; Kousha et al., 2011). These methods are problematic to apply in practice for large-scale systematic citation analyses of book chapters or monographs because (except perhaps for Google Books) they are not comprehensive enough (Giménez-Toledo et al., 2016) and Google Books citations only include citations from books (Kousha & Thelwall, 2009).

Thomson Reuters (now Clarivate Analytics) introduced the Book Citation Index (BKCI) in 2011, adding citations from books to the WoS interface for an additional charge. This is not yet a perfect solution because BKCI citation counts can be underestimates for books published in multiple editions and for edited volumes (Glänzel, Thijs, & Chi, 2016; Gorraiz, Purnell, & Glänzel, 2013; Leydesdorff & Felt, 2012) and BKCI indexes relatively few books, and very few non-English works (Gorraiz et al., 2013; Torres-Salinas, Robinson-García, Campanario, & Delgado López-Cózar, 2014).

Microsoft Academic is a relaunched free academic citation index that has indexed over 175 million scholarly publications, including from 48,000 journals and 4000 conferences (https://academic.microsoft.com/ as of June 2018). It captures more citations to journal articles than WoS and Scopus (Harzing & Alakangas, 2017a; Hug & Brändle, 2017; Hug, Ochsner, & Brändle, 2017; Kousha, Thelwall, & Abdoli, 2018; Thelwall, 2017). Microsoft Academic also indexes books (Hug & Brändle, 2017) and may also extract citations from them, especially if they are open access. It supports automatic searches, allowing accurate large-scale citation analyses (Hug et al., 2017; Thelwall, 2018b). Thus, Microsoft Academic seems likely to be useful for the research impact assessment of academic books. To investigate this, the current article compares Microsoft Academic citations with BKCI and Google Books citations to 16,463 BKCI books in 17 fields.

2. Databases for book citation counting

2.1. The book citation index

By early 2018, BKCI included over 60,000 books from 2005, covering Social & Behavioral Sciences and the Arts & Humanities (60%) and Natural Sciences (40%)[1]. Most indexed books are in English (97%) and published in the UK or the USA (75%) (Torres-Salinas et al., 2014), which is problematic for counting citations to non-English books. For instance, only 4% of German political scientists' books had been indexed by BKCI (Chi, 2014). BKCI claims that it combines citations from core WoS publications (mostly journal articles and conference papers) with citations from the BKCI-indexed books. However, most citations to BKCI books still come from journal articles (92% in sciences and 80% in social sciences and humanities) rather than books (5% and 16% respectively) (Kousha & Thelwall, 2014). Thus, the current version of BKCI does not seem to index enough academic books to make a difference for book impact assessments.

2.2. Scopus Books

In 2013 Elsevier initiated the Scopus Book Titles Expansion Program[2] to add scholarly books to its main database of journal articles and conference papers. The Scopus advanced search command "DOCTYPE(bk)" can be used to retrieve a list of academic books by different individuals, institutions, or countries. Although Scopus indexes twice as many as academic books (over 150,000[3]) as BKCI, it lacks an effective classification scheme, which is a serious limitation for citation impact assessment. For instance, Scopus only uses one broad category for "Arts and Humanities" and "Social Sciences" and the Journal Classification Codes in Scopus (ASJC) that are designed for retrieving journal articles in narrow fields seem to be rarely used for books. For example, the query "DOCTYPE(BK) AND SUBJMAIN(1203)" for Language and Linguistics books (ASJC code 1203), only retuned five matches from the entire Scopus database, although BKCI had indexed several thousand books in this category (Linguistics; Language & Linguistics). Moreover, Scopus may also be unable to match many citations with its indexed books. For instance, the 2013 book "*Spoken Corpus Linguistics: From Monomodal to Multimodal*" by Svenja Adolphs that was indexed by both BKCI and Scopus had 23 citations in BKCI but no Scopus citations, whereas a Scopus cited reference search found 26 of its citations.

2.3. Google Scholar

Google Scholar does not claim to be a book citation index, but it links citations from its databases to books indexed by Google Books, and seems to incorporate citations from Google Books. Google Scholar covers more scholarly-related

[1] http://wokinfo.com/products_tools/multidisciplinary/bookcitationindex/.
[2] https://www.elsevier.com/about/press-releases/science-and-technology/elsevier-announces-its-scopus-book-titles-expansion-program.
[3] https://www.elsevier.com/solutions/scopus/how-scopus-works/content.