Poster/Work-In-Progress (WIP) Abstract

Title: Citation lags for articles referenced in public policy documents: an exploratory study

ABSTRACT

Background:

Though altmetrics are commonly thought of as capturing the attention that research receives on social media (Priem, Taraborelli, Groth, & Neylon, 2010), metrics like citations to research in public policy documents are increasingly being used to understand the influence that research is having upon the public sector. Altmetric Explorer is currently the only altmetrics aggregator that tracks this information, using text mining to search the policy documents of international government agencies, NGOs, and other influential policymakers to extract citations. Currently, it is unclear how long it takes for a research article to be cited in public policy documents after the article has been published.

Objective:

This exploratory study set out to determine the citation lag for articles indexed in Altmetric Explorer that have been cited at least once in public policy documents. Articles identified as having a large volume of online attention are compared to a random sample of articles to understand if articles with greater overall exposure might be cited any earlier than other articles. Other altmetrics like Mendeley reader counts and mainstream media mentions are also compared across the two groups of articles, to discover differences in types of attention both groups might receive.

Methods:

Of the 71,829 publications indexed in Altmetric Explorer that have been identified as having been cited at least once in policy documents, two stratified random samples were extracted and compared: one hundred articles with an Altmetric attention score of 100 or above (characterized as “high-attention” articles); and one hundred articles with an Altmetric attention score greater than zero.

The Altmetric data export includes counts for all of the metrics the database tracks, alongside the article’s persistent identifiers like DOIs and the article’s overall Altmetric attention score. Article DOIs were used to query Web of Science and publication dates were exported for each article in the sample. Each article’s earliest citation in a public

policy document was then manually retrieved from its Altmetric details page (Liu, 2015) and recorded alongside articles' publication dates.

Results:

Articles of higher attention did experience a shorter average citation lag than the average article indexed in Altmetric Explorer. The average citation lag for a high attention article is 1.9 years, with the most common citation lag being one year. The average citation lag for articles of any attention is 2.3 years, with the most common citation lag for this group also being one year.

On average, high attention articles received a slightly higher number of citations per document on average (1.09 citations per article) than articles of any attention level (1.05 citations per article).

Other interesting differences in metrics for each group include: high attention articles had much greater numbers of Mendeley readers on average (217.02 readers per high attention article versus 39.48 readers per article of any attention), a greater number of blog posts per article (8.27 blog posts versus less than one post per article for articles of any attention), and a higher chance of being indexed in PubMed (47 of 100 high attention articles had a PubMed identifier versus 27 of 100 articles of any attention).

Future Work:

This study's samples are small--larger numbers of altmetrics for articles should be analyzed before any lasting conclusions can be drawn from the data. These policy-related metrics are interesting, but they only tell a small part of the story. More important than the number of times an article has been cited in public policy is the *reason why* it's been cited. Studies are needed that characterize the various types of citations included in policy documents, much as citations have been characterized for the scholarly literature (Cronin, 1984).

References:

Cronin, B. (1984). *The Citation Process: The role and significance of citations in scientific communication*. London: Taylor Graham.

Liu, J. (2015). "Introducing the New Altmetric Details Pages." The Altmetric Blog. Retrieved from http://www.altmetric.com/blog/newdetailspages/

Priem, J., Taraborelli, D., Groth, P., & Neylon, C. (2010). altmetrics: a manifesto. Retrieved from http://altmetrics.org/manifesto/