

The Potential of a Cost-Per-Use Analysis to Assess the Value of Library Open-Access Funds

Hampson, C., & Stregger, E. (2017). Measuring cost per use of library-funded open access article processing charges: Examination and implications of one method. *Journal of Librarianship & Scholarly Communication*, 5(1), eP2182. <https://doi.org/10.7710/2162-3309.2182>

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Evidence Summary

The Potential of a Cost-Per-Use Analysis to Assess the Value of Library Open-Access Funds

A Review of:

Hampson, C., & Stregger, E. (2017). Measuring cost per use of library-funded open access article processing charges: Examination and implications of one method. *Journal of Librarianship & Scholarly Communication*, 5(1), eP2182. <https://doi.org/10.7710/2162-3309.2182>

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Abstract

Objective – To determine the feasibility and potential effects of a cost-per-use analysis of library funds dedicated to open access.

Design – Cost-per-use analysis, case study.

Setting – PLOS and BioMed Central.

Subjects – 591 articles published in PLOS ONE, 165 articles published in PLOS Biology, and 17 articles published in BioMed Central.

Methods – Three specific examples are provided of how academic libraries can employ a cost-per-use analysis in order to determine the impact of library-based open access (OA) funds. This method is modeled after the traditional cost-per-use method of analyzing a library collection, and facilitates comparison to other non-OA items. The first example consisted of using a formula dividing the total library-funded article processing charges (APCs) by the total global use of the specific PLOS journal articles that were funded. The second and third examples demonstrated what a library-funded OA membership to BioMed Central would cost

alone, and then with APCs that cost could be divided by the total usage of the funded articles to determine cost-per-use.

Main Results – The authors found both of the examples described in the article to be potential ways of determining cost-per-use of OA articles, with some limitations. For instance, counting article usage through the publisher’s website may not capture the true usage of an article, as it does not take altmetrics into consideration. In addition, article-level data is not always readily available. In addition, the cost-per-use of OA articles was found to be very low, ranging from \$0.01 to \$1.51 after the first three years of publication based on the cost of library-funded APCs. The second and third methods revealed a cost-per-use of \$0.10 using membership-only payments, while using the cost of membership plus APCs resulted in a cost-per-use of \$0.41.

Conclusion – Libraries may wish to consider using these methods for demonstrating the value of OA funds in terms of return on investment, as these techniques allow for direct comparison to the usage of traditional journals. However, several barriers need to be overcome in how article-level usage is obtained in order for these methods to be more accurate and efficient. In addition, while the authors report that "The specific examples in this study suggest that OA APCs may compare favorably to traditional publishing when considering value for money based on cost per use," they also caution that the study was not designed to answer the question if the ROI is greater for OA publications than for traditional articles, stating that "...the data in this study should not be interpreted as a verification of such an argument, as this study was not designed to answer that question, nor can it do so given the limitations on the data. This paper was designed to present and illustrate a method. Further study would be necessary to verify or refute this possibility" (p. 15).

Commentary

Open access publishing models differ from those of traditional publishing models, primarily in that the author is typically

responsible for paying article processing charges in order for their work to be published, rather than the cost of publication being covered by a subscription fee. Libraries have recently been making efforts to provide financial support to their faculty to publish in OA journals through designated faculty publication funds, which help to cover the expense of APCs (Monson, Highby, & Rath, 2014). The authors suggest three different ways to demonstrate the value of OA funds through cost-per-use at the article level.

While the very low cost-per-use findings for OA journals is enticing, it is important to note that these results are very preliminary. Further research across other institutions using these methods is necessary in order to confirm or refute these results.

The quality of this study was appraised using "The CAT: A generic critical appraisal tool" created by Perryman and Rathbun-Grubb (2014). Based on this analysis, the quality of the study was found to be high. The authors are both university librarians at a large public research institution, which suggests that they most likely have familiarity with the topic at hand. A significant amount of background information was provided, the research question was clearly defined, and the methods used in the research were carefully explained. There was also detailed discussion of the limitations and implications of the study.

While the quality of this study was high, the strength of the evidence is fair due to the limitations of the research, as described by the authors. For example, measuring the number of article views and downloads provided by the publisher does not capture all the usage of OA articles, as they can be accessed from a variety of platforms. In order to make this method more accurate, additional types of measurements could be taken into consideration. For example, as mentioned in the article, altmetrics might be used as a means of evaluation as well, since this method takes into account how many times an article is mentioned on other online venues such as social media sites and blogs. Considering the number of views from the publisher in

addition to the altmetrics of an article can provide a more accurate picture of its true value.

In addition, not all OA publishers follow the COUNTER definitions when reporting usage statistics, making it difficult to compare usage across various publishers. It is possible that OA publishers will increasingly comply with COUNTER due to pressure from the library community if the method described by the authors gains traction.

In times of financial uncertainty, particularly in terms of limited funding and increasing journal subscription costs, it is important for libraries to be able to justify their expenditures. While the methods explored in this study are not perfect, they provide an excellent starting point for libraries to consider when justifying the existence of faculty publication funds. With increased use of these types of methods, it is possible that OA publishers may facilitate the way usage data is provided in order to increase the validity and practicality of this approach.

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