

Rebuttal to ‘publications in gold open access and article processing charge expenditure: evidence from Indian scholarly output’

The article¹ claims that Indian researchers spent 17 million USD on article processing charges (APC) for gold open access (OA) articles in 2020.

In this rebuttal, we show that the authors might have made multiple errors and need to redo their calculations.

We tried to reproduce the estimation given by the authors for a few publishers. We found huge discrepancies and overestimation. You can see them in the Table 1.

Note that these calculations have been done without considering the ‘corresponding author criteria’ which, if included, will further increase the discrepancy (as done for the PLOS case).

Based on these calculations which form 12.44% of all the papers considered in the study, the authors clearly need to recalculate the amount. A possible reason for their error could be that DOAJ, which forms their primary source, does not mention

discounts usually given to authors from lower-income countries.

Another important error is that while the authors claim that they filtered the articles. Page 1058: ‘Extant literature suggests that the corresponding author most likely pays the APCs’. Following the corresponding author criterion, APC expenditure incurred by Indian researchers was estimated; they have not actually done so. Table 2 shows the discrepancy if one applies the filter. Also, Table 1 shows the estimated error in calculation if this criterion is included in calculation (see the PLOS column).

Also it is essential to understand that journals provide substantial waivers for low and middle income countries. For example, PLOS Publication Fee Assistance Program² provides such waiver. So it must be noted that the calculations of APC should always account for the pitfall of

overestimation. Especially newly launched OA journals many a time do not charge any APC or provide substantial waiver to popularize the journals.

Using Web of Science database we have collected all the papers published in 2020. Then following filters: Country: India; Document: Article and Review Article; Open Access: Gold were used. Then the data was filtered for each publishers Royal Society of Chemistry, American Chemical Society, IEEE and PLOS. For corresponding author filter, the original dataset was transferred to Incites and then for each publishers the numbers were extracted.

Apart from the calculation errors, there are various other issues regarding references, figures and policy discussions.

Table 1. Calculations after taking into consideration the discounts offered to authors from India

Publisher	APC estimated by the paper (USD)	Actual cost estimated in rebuttal (USD)	Error estimate (without corresponding author criteria)
Royal Society of Chemistry*	638,975	457,900	39.5%
American Chemical Society**	554,750	105,000	428.3%
IEEE***	974,920	646,500	50.8%
PLOS****	935,359	892,120	4.8% (^53%)
Total	3,104,004	2,101,770	47.7%

*<https://www.rsc.org/journals-books-databases/open-access-publishing/open-access-payments-apcs-and-funding/>

**<https://pubs.acs.org/doi/pdf/10.1021/acsomega.1c00524>

***<https://journals.ieeeauthorcenter.ieee.org/choose-a-publishing-agreement/open-access-rights-management/>

IEEE discount of 40% calculated based on the 2022 GNI data from World bank with India being a lower-middle income country

****<https://theplosblog.plos.org/2021/09/our-commitment-to-price-transparency/>

^error calculation with corresponding author criteria (this has been included in the table to point out how drastically the value can differ if corresponding author criteria is included in the calculation)

Full calculations for the above table can be found here: <https://osf.io/f76ce>

Table 2. Calculations after taking into consideration that corresponding authors paid the APC

Publisher	Number of papers	Number of papers (with corresponding authors criteria)	APC cost estimation (with corresponding authors criteria) in USD
Royal Society of Chemistry*	575	547	424,460
American Chemical Society**	444	396	98,750
IEEE***	567	344	390,900
PLOS****	479	318	583,140

1. Raj Kishor Kampa, Manoj Kumar Sa and Mallikarjun Dora, *Curr. Sci.*, 2023, **125**(10), 1057–1062.

2. Leigh-Ann Butler, Lisa Matthias, Marc-André Simard, Philippe Mongeon and Stefanie Haustein, *Quant. Sci. Stud.*, 2023; doi:https://doi.org/10.1162/qss_a_00272.

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Response:

We thank the rebuttal authors Koley and Agrawal for pointing out that there was an inadvertent omission in calculating the potential waiver or discounts the author/institute/country level an author received in any part of our discussion or findings. We wish to clarify any misunderstanding that may have arisen. We analysed the APC expenditure incurred in India without calculating the discounts or waivers received by authors as there is no specific single source to find all discounts, for example, an author-level or institute-level discount; hence, it would be difficult to provide an actual amount that Indian researchers spent on APC. Additionally, discounts or any

publisher-provided waivers are recent developments, and discounts/waivers given to authors from LMIC countries were not mentioned in DOAJ, which is the primary source of the present study. Hence, it was not analysed in the current study. These factors may be considered as limitations of the study.

Regarding possible discrepancy in Table 4, we would like to mention here that the Table 4 shows the overall APC levied by major publishers without corresponding authors criteria. The publishers (Royal Society of Chemistry, American Chemical

Society, IEEE and PLOS) that the authors have mentioned giving maximum waivers/discounts received are around 12% of total APC, whereas MDPI, Springer Nature, Elsevier, and Frontiers Media, who offer no country level discounts/waivers to authors of LMIC, received around 53% of the total APC. Hence, this does not make significant changes to the overall APC expenditure. Further, the authors have not explicitly mentioned the issues in references, figures and policy discussions. Hence, we have not responded to the issues that they have raised.

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Cost of publishing for gold open-access articles

Kampa *et al.*¹ provide the total cost incurred in India towards article processing charges (APCs) during 2020 for Web of Science indexed articles. It also presents separate figures for publications subject-wise. The calculation is based on the APC data available for different journals in the Directory of Open Access Journals (DOAJ) website². However, it did not further explore the waiver or discounts offered by various publishers or if they are availed by Indian authors or not. I have checked many reputed publishers, such as Elsevier, Springer, Wiley, ACS, RSC, BMJ, etc., and mentioned their APC waivers and discount policies for their gold and hybrid open-access journals. Even if the DOAJ site mentions it, some publishers also have a subsidized rate; while submitting, an author can choose for eligible discounts or request a waiver. Bansode and Pujar³ studied transformative agreements signed in India by different institutions and consortia with publishers during 2020, which facilitated publishing in gold and hybrid open-access

journals free of charge. The communication with the paper's corresponding author has confirmed that the study has not included the option of waiver or discount for APC⁴. Therefore, the calculated figures for APCs will differ from the actual amount, so the information is problematic for any decision-making.

1. Kampa, R. K., Sa, M. K. and Dora, M., *Curr. Sci.*, 2023, **125**(10), 1057–1062.
2. <https://doaj.org/>
3. Bansode, S. Y. and Pujar, S., *Ann. Lib. Inf. Stud.*, 2022, **69**, 59–65.
4. E-mail communication dated 13 December 2023 <mallikarjun@iima.ac.in>

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Response:

Our paper did not include any discounts/waivers researchers might have received at the individual/institute/country level. Finding comprehensive data on overall discounts or waivers is challenging due to the absence of a centralized information source. Furthermore, many publishers like Elsevier, Springer, MDPI and Frontiers Media do not provide a country-level waiver; there may be individual discounts, which are difficult to trace. Society publishers like IEEE, RSC offer country-level discounts, but these are limited in number. Considering these discounts, there may be a minuscule decrease in the overall calculation of APC expenditures incurred by Indian researchers. Further research can be conducted to comprehensively calculate APCs expenditure, including factoring in discounts/waivers.

R. K. Kampa *et al.*

Need for a wider debate on APCs

Kampa *et al.*¹ bring forth the APC issue for India. The actual numbers reported might be debatable², but more debatable are specific interpretations and recommendations made.

First of all, the belief that 'Article processing charges (APCs) ensure the financial viability of open access (OA) scholarly

journals' needs a re-examination. We have multiple models of publishing in which neither the author, nor the reader has to pay. This trend, sometimes called 'diamond open access' is being promoted as if it is new³. However many journals by the Indian academics, including *Current Science* itself, are being run on this principle for

several decades. If Indian scientists do not prioritize publishing in these journals, it could be the residual colonial culture that the community has failed to recover from. Some of the new journals such as *Qeios* have open peer review and are free at both ends. Such multiple models demonstrate that APCs is not a necessary requirement