The value of UK HEIs contribution to the publishing process: Summary report

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Commissioned by JISC Collections
Executive summary

- Peer review is essential to scholarly journal publishing
- Publishers do not pay their peer reviewers
- The number of articles being peer reviewed is rising
- The cost to HEIs of peer review is rising as salaries and overheads rise
- Different studies put the cost to UK HEIs of peer review at between £110 million and £165 million per year
- Editors and editorial boards cost UK HEIs up to £30 million per year
- Publishers make payments to some editors, but this generally does not reach the HEI
- All these figures depend on where the hourly rate is set: currently set at £56/hour, the figures can be recomputed easily for a different rate
- For comparison, UK HEIs spend between £113 million and £121 million annually on journal subscriptions
Objectives and scope of this report

• Objectives
  – To provide a report that Vice-Chancellors, Principals and other senior HEI managers can agree represents their position on the size of these costs and their importance
  – To enable JISC Collections to assess the value and importance of HEIs’ contribution to the scholarly publishing process as a factor in their relationships with publishers
  – To raise awareness of the issue among senior managers, academics and librarians and provide them with information they may find useful in their own policymaking.

• Scope
  – The focus of this report is peer-reviewed journals. They are absolutely critical to the process of scholarly communication in many disciplines, and important in all. The advantages of peer review are largely a matter of agreement among all stakeholders in scholarly communication, and there is still almost universal support for the current model of pre-publication review. Publishers in particular often refer to it as a key issue for open access journals.
  – We are considering two particular non-cash costs that are integral to the journals system: firstly, peer review, and secondly the activities of academics as editors and editorial board members. Peer review is by far the largest of these three in terms of cost to the academy.
  – In common with other studies in this field, we are focusing on the communications process, rather than the research process and so we are not considering the cost of authorship. This would lead to a much larger total cost to the academy and would not reflect the “service” element proportionately. It is generally recognised that publishing is integral to academics’ careers: the same is not true of acting as peer reviewers.
  – We have included the cost of editors’ time and membership of editorial boards to the academy, but with the caveat that this is a harder area to get data: we have taken a conservative approach to reflect that some publishers pay something towards the time of some editors of some journals: there is no reliable review of practice or costs of this.
  – We have not undertaken any new research for this study, but have assessed the many different published reports covering all or part of the information (a list of the reports consulted may be found at the end of this report). We have analysed their methods and conclusions and used them to suggest a range of values for the various costs.
Cost analysis: peer review

• Calculating the time committed to peer review
• Reports that estimate the amount of time committed to peer review and its cost have taken two approaches:
  – The first is to estimate the number of papers that are reviewed, the number of reviewers and the time taken to review each paper.
  – The second is to survey academics and ask them about the amount of time they spend on peer review. This figure is then extrapolated to produce a figure for the UK as a whole. An hourly cost rate is then applied to this figure to calculate the total cost.
• There are fairly well-accepted reports that use these alternative approaches.
This report surveyed the attitudes and behaviour of 3040 academics around the world in relation to peer review in journals. Around 10% of those worked in UK HEIs. The report does not attempt to calculate the cost of peer review, but gives enough information for us to make an extrapolation using data from other studies.

The following factors and assumptions were used in the calculations:

- Included in the report
  - "Anglophone" reviewers review an average of 8.9 papers per year
  - An average of 5.6 hours was spent on each review
  - 90% of authors are reviewers

- External information used to extrapolate
  - Using data from this study combined with baseline information from others suggests a possible range from £158,251,968 to £204,906,155. However, the figure of 5.6 hours per paper covers countries other than the UK (USA, Canada, Australia and New Zealand). A revised UK-only figure of 3.9 hours was derived from the same raw dataset by Cambridge Economic Policy Associates in their study for RIN. Recalculation using this figure would suggest a range of £142,702,501 to £110,211,192.

Peer review in scholarly journals: Perspective of the scholarly community: an international study
Mark Ware Consulting & Mark Monkman Media for the Publishing Research Consortium (2007)
http://www.publishingresearch.net/documents/PeerReviewFullPRCReport-final.pdf
A study by Cambridge Economic Policy Associates (CEPA) carried out for the Research Information Network on activities and flows of funds for scholarly publishing in the UK estimated the costs of peer review at £165 million.

The following factors and assumptions were used in the calculations:

- Global peer review costs are £1.9 bn
- The UK accounts for 8.7% of global peer review costs.
- Each article takes each reviewer 4 hours on average
- 2.5 reviewers per article average
- Average global hourly rate £40.40
- 7.1% of all published articles are published in the UK.
- Peer review accounts for 23% of global publishing and distribution costs
- This figure does not distinguish between reviewers in HEIs and other organisations, so may overstate the position

Activities, costs and funding flows in the scholarly communications system in the UK:
http://www.rin.ac.uk/our-work/communicating-and-disseminating-research/activities-costs-and-funding-flows-scholarly-commu
This report estimates the cost of peer review for journals carried out in UK universities in 2007 at £140 million; review of other types of content (books, chapters and conference proceedings) cost a further £40 million.

The following factors and assumptions were used in the calculations:
- The number of papers reviewed in UK HEIs will be proportionate to the number published in UK HEIs, taking into account rejection and resubmission rates.
- 50% of submitted papers are rejected (20% of total are rejected without review and 30% after review).
- 75% of the rejected are re-submitted and/or re-reviewed (once).
- Each paper will be reviewed by an average of 2.5 reviewers.
- Each reviewer takes 4.5 hours over each paper.
- The total cost of each hour to the HEI was £56.00 in 2007.
- This would lead to a figure of around 216,000 papers being reviewed in UK HEIs, taking 2.5 million person-hours.

**Economic implications of alternative scholarly publishing models: Exploring the costs and benefits**

John Houghton, Bruce Rasmussen and Peter Sheehan (2009)

Cost analysis: editorships and editorial boards

- Many researchers are involved in editorial roles for scholarly journals, whether as editors (managing or associate) or members of editorial boards.
- The extent of the workload required varies considerably, depending on how the roles are defined in each journal, and on factors such as the frequency of publication of the journal, whether boards meet physically and how often, and the number of submissions a journal attracts.
- There is very little empirical research on the time commitment of individuals to such activities, and because of the variations mentioned, it is much more difficult to arrive at sensible estimates than in the case of peer review, where there are upper and lower estimates of the time spent reviewing a paper and the number of reviewers per paper.
- The JISC report is the only one of the reports reviewed which estimates the cost of this aspect of the UK academy’s contribution to scholarly publishing, at £61.075m annually.
- The cost is based on the assumption of participation by 24% of UK academic researchers in editorial boards, with 8% performing roles as editors, with editors spending between 10 and 30 days per year (average 20) carrying out these tasks, and editorial board members spending between half and one day (average three-quarters).
- As there may be assumed to be a bias towards more senior staff taking on such roles, the use of the average hourly rate of £56 may lead to the total cost estimate being conservative.
- A further factor must be taken into account, namely payments made by publishers to editors for carrying out these roles.
  - Again, practice varies very considerably here, not merely in terms of the amount paid, but also to whom it is paid: in some cases, publishers pay learned societies, who may or may not pass it on to editors; in other cases, editors are paid directly, and in some (believed to be very much the minority) institutions are recompensed for the time of their staff.
  - Payments may be in recognition of the role itself, or more in the nature of expenses, for example to cover physical meetings of the editorial boards where the membership is widely dispersed, or to help encourage participation in a newly launched journal.
- We conclude that in general, payments are relatively small, in the low thousands of pounds per year, and by no means universal.
- The consensus is that these payments do not cover the cost of the time spent.
- We have nevertheless taken a conservative view and discounted 50% of the cost proposed in the JISC report.
Costs to individual universities

- A range of costs for peer review across all UK HEIs is the main purpose of this study. However, we are also able to provide an estimate by individual HEI. Individual HEIs do not keep records to the level of detail required to do this from raw data, so we have considered approaches to allocating cost to individual HEIs.
- There are a number of possible approaches: the main division is between ones based on the number of research staff and ones based on research income.
  - There are a number of problems associated with using staff numbers: HESA statistics suggest that there is some inconsistency in the way different HEIs count their staff, and numbers overall are affected by the high level of hard-to-classify "atypical" staff.
  - Research income is more consistently reported, especially that in relation to either the HEFCE research quality grant or research council funding. Research funded through this form of income is very likely to result in publications. Income from research for industry or individual government bodies may result in research that is not reported in conventional journal articles (e.g. reports on HEI websites). Public-sector funded research data is available at both the national and the institutional level.
- The costs to an institution would therefore be computed from the chosen UK-wide figure and the percentage of the UK-wide public sector funded research attributable to the institution (the largest UK institution accounts for 10% of this type of funding).
- We are not publishing the entire list here, but will provide data to any institution that is interested.
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