

# Publishing Research Papers

## Which policy will deliver best value for your university?

Briefing paper

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**This paper outlines the key findings of a recent JISC-funded study - 'Modelling scholarly communication options: costs and benefits for universities' - which models the economic costs and benefits for UK universities of various Open Access approaches to publishing research literature. Open Access is the immediate, free-to-use access to peer-reviewed research literature. The study was limited to journal articles and peer-reviewed conference papers, though in practice, Open Access publication is extending to book chapters, monographs and research data.**

## Weighing up the costs and the value of different means of publishing research papers

How much does it cost your university to publish its research papers? You may reply, 'It costs us nothing because a publisher does all the work for us'. However, this report demonstrates that universities may get much better value for money, and higher impact for their research, by choosing Open Access rather than limiting publication to journals using a subscription business model.

The study applied Open Access models to a representative group of universities, and reviewed the costs and benefits of each scenario. In terms of modelling, the work does two things: it identifies the costs and benefits of different scholarly communication scenarios; and it quantifies them, that is, it attaches actual values to cost elements in the processes involved and measures what economic outcomes emerge from modelling various scenarios. The outcomes of this modelling vary (eg by university) but, in all cases, Open Access options have the potential to save universities money.

The study also indicates how benefits to research and teaching, and wider economic and societal benefits, flow from a decision to choose Open Access. The key is that academic and economic benefits are derived from the use of research outputs, and the new Open Access publishing models encourage higher use by removing subscription and licensing barriers. There is some evidence that shows barrier-free access leads to more citations and more new research and innovation, building upon your university's research outputs.

## Unilateral or sector-wide change

The benefits of Open Access, in terms of increased visibility and impact of research, will accrue immediately. Because of this, many universities across the world are already changing their

policies on research outputs, including Open Access mandates at Harvard, MIT, Glasgow, Edinburgh, UCL and the University of Salford. Many research funders are also specifying Open Access as a condition of grant, including UK Research Councils, the Wellcome Trust and the European Commission.

However, the full potential cost savings modelled in this study can only be realised when there is worldwide Open Access. Nonetheless, modelling the hypothetical situation can provide a university with a picture of the effects of its own move to Open Access for its outputs. If the UK as a country were to adopt Open Access unilaterally, then savings are scaled to the proportion of the world's literature that emanates from the UK. The report provides a vision of the costs and benefits for an individual university if it contributes to the worldwide movement towards Open Access.

## Open access options

The economic model developed by JISC helps universities calculate the costs and benefits of different modes of scholarly communication, focusing on three approaches to Open Access:

- Open Access journals (where journals make their content freely available online using new business models, where cash flows in from article-processing charges or other sources rather than from subscriptions)
- Open Access repositories (in which articles are made freely available, in addition to their being published via conventional journals or conference proceedings)
- Open Access repositories with overlay services (where content is collected in repositories and service providers carry out the publishing services necessary on that content, such as managing the peer review process, proofreading and copy-editing)

## Key findings from the study

An analysis of research and library costs in four representative UK universities reveals savings through a change away from publishing in subscription journals to Open Access models

- Further benefits from the change to Open Access come over time through the higher visibility of Open Access research outputs, creating more usage and therefore more impact for UK research and a better return on the investment it represents. Economic Implications of Alternative Scholarly Publishing Models by Professor John Houghton *et al* notes potential benefits to the UK of around £170m p.a. in

increased returns to public sector R&D. It is possible to estimate the proportion of this from a particular university (although with less accuracy as one moves from aggregates to specific cases).

- The costs to the universities studied of holding all research papers in a repository, range from £26k p.a. to £209k p.a., and this depends on a variety of factors including the other purposes for which the repository is used and the research profiles of the universities studied. The annual savings in research and library costs from a repository model combined with subscription publishing range from £107k to £1.317m p.a. for those universities studied.
- A change away from subscription-funding to per-article Open Access journal funding has the potential to achieve savings for universities. All universities studied would save from switching to publishing all their articles in Open Access journals, if the article-processing charge is set at £700 or less.
- Savings from a change away from subscription-funding to per-article Open Access journal funding were estimated to be between £170k and £1.365m p.a. for three universities studied, when the article-processing charge is £1,000 per article or less. It should be noted that many research funders, including Research Councils and the Wellcome Trust, may contribute article-processing charges as a part of normal research grants, so that all universities have a potential source of income to cover the majority of such costs.
- External suppliers could be paid by universities to manage peer-review and editorial services for universities' research outputs held in an institutional repository. The net savings resulting from this 'repository plus overlay services' model were estimated to be between £600k and £1.58m for the four universities studied, when the overlay costs are £500 per article or less.

## How do I apply the research in the report to my own university?

The report is based upon information supplied by four UK universities with different characteristics, and you may find in the data from one of the four universities a close match for your own university. The study does not aim to mirror every institutional situation but to provide a tool to assist universities in making informed decisions about the publication of research papers. To obtain a more accurate prediction of the benefits from a change in your policy on publishing research papers, you can feed the research and library data from your own university into an online model. JISC's guide 'How to build a case for university policies and practices in support of Open Access' explains this process.

## What your university can do

In order to realise the advantages from an Open Access model:

- A university-wide policy on Open Access will ensure a high level of participation from a university's researchers

- If no institutional repository already exists, the small investment in setting one up and maintaining it will yield benefits in managing a university's research outputs and making them widely available
- Setting up a dedicated fund to manage income and expenditure flows for Open Access publication charges will assist researchers in publishing in Open Access journals
- Internal publicity about Open Access policies and procedures will provide researchers with clear guidance on the opportunities available to them

This briefing paper was written by Frederick Friend. The study 'Modelling scholarly communication options: costs and benefits for universities' was researched and written for JISC by Alma Swan.

Alternative formats of this briefing paper can be found at: [www.jisc.ac.uk/publications](http://www.jisc.ac.uk/publications)

## Further Information

Modelling scholarly communication options: costs and benefits for universities, Alma Swan, February 2010: <http://ie-repository.jisc.ac.uk/442>

How to build a case for university policies and practices in support of Open Access, a JISC briefing paper: [www.jisc.ac.uk/publications/programmerelated/2010/howtoopenaccess](http://www.jisc.ac.uk/publications/programmerelated/2010/howtoopenaccess)

Online modelling tool for Open Access: [www.cfses.com/EI-ASPM](http://www.cfses.com/EI-ASPM)

Economic implications of alternative scholarly publishing models: exploring the costs and benefits: [www.jisc.ac.uk/publications/reports/2009/economicpublishingmodelsfinalreport](http://www.jisc.ac.uk/publications/reports/2009/economicpublishingmodelsfinalreport)

JISC's Open Access work: [www.jisc.ac.uk/openaccess](http://www.jisc.ac.uk/openaccess)

Open Access, a JISC briefing paper: [www.jisc.ac.uk/publications/documents/bpopenaccessv3](http://www.jisc.ac.uk/publications/documents/bpopenaccessv3)

SPARC Open Access Newsletter: [www.eartham.edu/~peters/fos/newsletter/02-02-09.htm](http://www.eartham.edu/~peters/fos/newsletter/02-02-09.htm)

Enabling open scholarship: Open Access policies for universities and research institutions: [www.openscholarship.org/jcms/c\\_6226/open-access-policies-for-universities-and-research-institutions?hlText=policies](http://www.openscholarship.org/jcms/c_6226/open-access-policies-for-universities-and-research-institutions?hlText=policies)

Research Information Network, Paying for Open Access publication charges guidance: [www.rin.ac.uk/our-work/research-funding-policy-and-guidance/paying-open-access-publication-charges](http://www.rin.ac.uk/our-work/research-funding-policy-and-guidance/paying-open-access-publication-charges)

Worldwide list of Open Access policies and mandates: [www.eprints.org/openaccess/policysignup](http://www.eprints.org/openaccess/policysignup)

Formulating an institutional Open Access policy [www.openscholarship.org/jcms/c\\_6217/formulating-an-institutional-open-access-policy](http://www.openscholarship.org/jcms/c_6217/formulating-an-institutional-open-access-policy)

Repositories Support Project [www.rsp.ac.uk](http://www.rsp.ac.uk)