Communicating the results of research: how much does it cost, and who pays?

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Core functions in the research communications system

- Doing research to generate new knowledge and understanding
- Assuring the quality of information outputs
- Ensuring appropriate recognition and reward
- Presenting, publishing and disseminating information outputs
- Facilitating access and use
- Assessing and evaluating usage and impact
- Preserving valuable information outputs for the long term

Some key groups of players

- Researchers as creators, disseminators and users
- Research funders
  - Public, charitable and commercial sectors
  - National policy-making bodies
- Research institutions
- Publishers (and secondary publishers)
- ICT service providers
- Libraries and publicly-funded service providers
- Commercial information service providers
So what does it all cost, and who pays?

**Scope**
- journals only (*not* monographs or unpublished data)
- excludes secondary publishing and aggregation

**Methodology**
- so far as possible, based on publicly-available information
- some estimates based on expert information
- annual costs, expressed in £s (assuming an exchange rate where necessary of $2 to the £)

**Model available for others to use to test different assumptions with different data**
The big picture: overall costs of the current system

- Research production: £115.8 billion
- Publishing & Distribution: £6.4 billion
- Access provision: £2.1 billion
- User search and print cost: £16.4 billion
- Reading: £33.9 billion
- Total cost: £174.7 billion
Publishing and distribution

<table>
<thead>
<tr>
<th>Cost Component</th>
<th>£ Billions</th>
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<tbody>
<tr>
<td>Non-cash peer review</td>
<td>1.89</td>
</tr>
<tr>
<td>Direct fixed cost</td>
<td>1.80</td>
</tr>
<tr>
<td>First copy cost</td>
<td>3.70</td>
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<tr>
<td>Variable cost</td>
<td>0.97</td>
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<tr>
<td>Indirect cost</td>
<td>0.96</td>
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<tr>
<td>Surplus</td>
<td>0.82</td>
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<tr>
<td>Total cost</td>
<td>6.40</td>
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Quality assurance

Peer review

- a non-cash cost (excludes costs of editorial boards, and of managing peer review)
- 30% of total cost of publishing and distribution
- based on estimates of (2.5 reviewers per article) x 4 hours per reviewer (see Tenopir and King 2000, and Mark Ware for PRC 2008)
- takes into account rejection rates of different kinds of journals
Publishing

Fixed costs for:
- article selection
- management and processing of peer review
- editing and proof-reading
- composition and typesetting
- illustrations and graphics
- rights management

Direct fixed costs: 1.80bn

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<tr>
<th>Category</th>
<th>Cost</th>
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<tr>
<td>Non-copern peer rev</td>
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<td>Direct fixed cost</td>
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<td>Copy cost</td>
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First copy costs

peer review cost plus fixed publishing costs

- First copy cost: 3.70bn
Distribution

**variable costs**
- sales administration, online user management, printing, inventory management etc

**indirect costs**
- marketing, online hosting, customer service/helpdesk, management & administration

**surplus**
- profit or surplus for distribution, investment, or use in other activities

- Distribution
  - Variable cost: £0.97bn
  - Indirect cost: £0.96bn
  - Surplus: £0.82bn
  - Total cost: £6.75bn

- Non-cash peer review: £1.90bn
- Direct fixed cost: £2.80bn
- First copy cost: £3.05bn
Access and usage

- Research production: 2.1bn
- Access provision: 16.4bn
- Reading cost: 33.9bn
- Total cost: 200.0bn
Access

Library costs

- extrapolated from UK figures
  - SCONUL
  - Schonfeld and King 2004
- fixed and variable costs
  - Space and shelving; time spent on acquisitions, registration etc; cataloguing; preservation; IT systems; access management etc
- excludes subscription costs (to avoid double counting)
Search, print etc

Readers’ costs

- Time spent in searching, gaining access, downloading, printing etc
  *(Tenopir and King estimates)*
- *excludes* costs of aggregator and A&I services
Calculation of costs of time spent in reading (Tenopir and King estimates)
A measure of value as well as of cost
How are these costs being met?

- publishing and distribution
  - see next slide

- access
  - costs met by libraries and those who fund them

- search, download and reading
  - costs met by researchers and those who employ them
Meeting the costs of publication and distribution

- estimates for the system as a whole
- differences for different types/categories of journal

- Peer-review (non cash cost)
- Other subscriptions
- Advertising
- Academic subscriptions
- Author-side payment
- Membership fees & individual subscriptions
Meeting the costs of scholarly communications

- HE Libraries: £5.0 billion
- HEI's and their funders: £40.6 billion
- Non-HE Libraries, special libraries and Individual subscribers: £1.2 billion
- Funders/employers of Non HEI researchers: £11.6 billion
- Other: £0.5 billion
So what?

- RIN role to question how efficient and effective are the information services and resources provided for and used by the UK research community.
- Clearer picture of where major costs arise, and how they are funded, enables us to:
  - focus attention on key areas where cost efficiencies are most likely to arise (*eg peer review*?)
  - analyse the balance of trade between different sectors and different countries (*eg UK or EU contribution*)
  - develop scenarios of possible changes, and model their impacts both on costs and on how/where those costs are met
Increases in research funding and article production over 10 years: Costs

- Publishing and distribution costs
- Real terms increase of £1.6bn (25%)
Increases in research funding and article production over 10 years: Funding

Sources of funding and other contributions
E-only publication

~£1bn cost savings, split between
- publishing/distribution (~5% reduction)
- access provision (~36% reduction)
Some key messages

- Journal publishing and distribution are pivotal, but only part of, the scholarly communications system
  - c 3.6% of the overall costs
- Much larger costs incurred by readers in search, print and reading
  - but those costs are also measures of value
- Costs are met overwhelmingly (>78%) by the higher education sector
- Costs will continue to rise in real terms
- There is scope for savings, and improvements in efficiency and effectiveness, across the system
  - and they are not just, or even mainly, in publication and distribution
Thank you

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www.rin.ac.uk

Activities, costs and income flows report available at
http://www.rin.ac.uk/costs-funding-flows

Strategic goals for public policy statement available at
http://www.rin.ac.uk/sc-statement