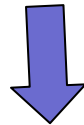


PEER Economics: the effect of large scale deposit on scholarly research publishing

**Paola Dubini – ASK Research Center
PEER final conference – Brussels – May 25th**

The starting point

- ❑ The transformation of the (peer reviewed) scholarly publishing industry
 - ❑ Increased digitization
 - ❑ Industry consolidation
- ❑ The emergence of alternative models to SB journals
 - ❑ Gold open access
 - ❑ “Self published” open platform based journals
- ❑ The growth in the number of repositories
 - ❑ Subject based
 - ❑ Institutional



Which impact on organizations' sustainability?

Which impact on the ecology of scholarly publishing?

The focus: operating costs and cost drivers

- ❑ Analysis of operating cost structure associated with scholarly publishing under different models and for different organizations
- ❑ Analysis of cost associated with operating a repository
- ❑ Identification of cost drivers

The focus: operating costs and cost drivers

- ❑ Analysis of operating cost structure associated with scholarly publishing under different models and for different organizations
- ❑ Analysis of cost associated with operating a repository
- ❑ Identification of cost drivers

- ❑ Extensive literature analysis
- ❑ Secondary data and published evidence
- ❑ One face to face /telephone interview
- ❑ Follow up via questionnaire and subsequent rounds of interviews

The sample

Publishers	Institutions/firms running repositories	Open access publishers
BMJ Group	Cornell University *	BioMed Central
Cambridge (CUP)	CSIC*****	Hindawi
EDP Sciences	GESIS	PLoS
Elsevier	Göttingen University	
IOP Publishing	Inria****	
Nature (NPG)	Max Planck Society **	
Sage Publications	NIH ***	
Springer	SSRN	
Taylor & Francis	Università degli Studi Milano	
Wiley-Blackwell		

* with respect to ArXiv

** with reference to central institutional repository eDoc

*** with reference to PubMedCentral US

**** with reference to HAL and is run jointly by CNRS and Inria ***** with respect to Digital CSIC

Organizations part of PEER project

Organizations not part of PEER that provided information via interviews

Organizations analysed via secondary data only



The cost structure of journals

Cost category	Activities	Average direct cost per article	Cost drivers
Content certification	Management of peer review	250 USD	Number of journals/ articles per journal Journal rejection rate Number of reviewers per manuscript Number of rounds of review
Content publication	Formatting Editing Typesetting Metadata	170 - 400 USD	Number of articles per journal Number of issues per journal Externalisation Standard cost of labor

❑ Cost of content management:

Investment in digital platform

from 1 million USD up

Maintenance costs

170 k– 400k USD

The difficulty of calculating average cost per article

	Number of articles in catalogue 2010	Number of articles published 2010	Journals 2010
BioMed Central	62.000	16.500	215
BMJ Group	824.183	51.728	32
Cambridge (CUP)	700.000	45.000	239
EDP Sciences	146.500	7.000	47
Elsevier	11.000.000	300.000	2.392
Hindawi	14.000	7.500	265
IOP Publishing	400.000	30.000	67
PLOS	15.245	8.000	7
Sage Publications	757.000	30.500	560
Springer	4.000.000	140.000	2.000
Taylor & Francis	4.000.000		1.500
Wiley-Blackwell	4.000.000	120.000	1.500

- ❑ Make/buy decisions concerning platform and financing scheme
- ❑ Frequency of update and year of set up
- ❑ Accounting practices
- ❑ Sunk costs

Between 2010 and 2011 the four major publishing groups introduced new digital hubs



Open Access publishing: a low cost activity?

Expense category	% of journal with cost=0	Mean/USD
Editorial	79%	6.442
Management	73%	9.053
Promotion	88%	1.991
Publishing*	76%	8.342
Technical**	81%	4.746
Platform subscription	96%	12.728
Print edition***	61%	11.989
Other	75%	5.447

* Copyediting + article layout + proofreading

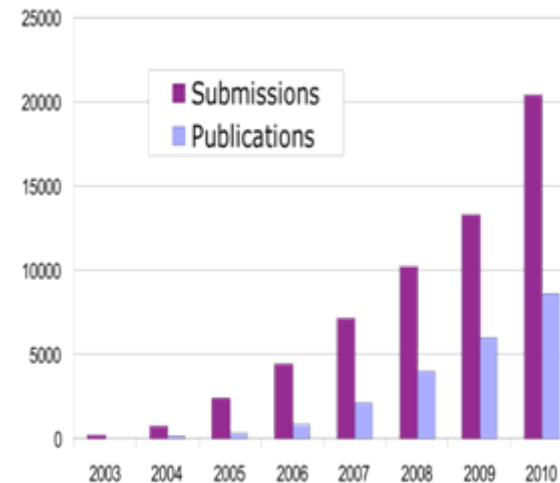
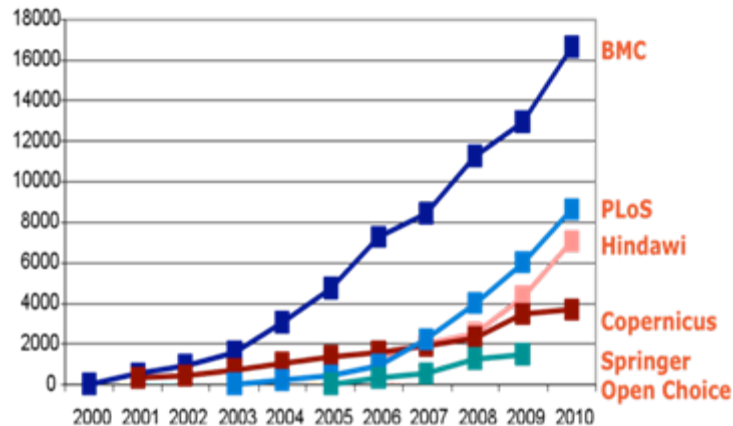
** Website + technical + customization

*** Journal printing + postage

Source: adapted from Edgar and Willinsky (2010), Table 14, p. 14.



Open Access publishing: an increasingly competitive activity



Source: Patterson 2011

- ❑ Operating profitability reached in 2010 at an operating cost level of approximately 15 million USD. This means a bit less than 2.000 USD per article published
- ❑ Competition on reputation and on services/visibility

The contribution of repositories to the OA movement

- ❑ A steady growth in the number of OA repositories (+20% between 2010 and 2011)
- ❑ A growth in the number of references

	References	Full text
ArXiv	673.024	673.024
CSIC repository	26.230	28.873
SSOAR	6.818	5.450
GoeScholar	2.300	2.300
HAL	27.382	14.309
eDoc	153.905	25.968
PubMedCentral	24 million (PubMed)	1,8 million
SSRN	270.109	270.109

A lean cost structure

- ❑ Cost of processing documents (including metadata creation)
 - 10 EUR max per reference
 - 18 EUR max per full text
 - 43 EUR max per journal article
- ❑ Positive impact of harvesting and mandates in the speed up of feeding process
- ❑ Set up cost of repository was not determined;
- ❑ Cost of technical FTE per item
 - between 2 and 50 EUR per reference
 - between 2,5 and 53,2 per full text journal article

.... With a big impact of sunk and organizational costs

The ecology of scholarly research publishing and dissemination

- ❑ SB and OA journals increasingly in competition for reputation and service;
- ❑ Article processing charges will become a reference for price setting
- ❑ Increased competition between big and marginal players;
- ❑ Increased competition among OA journals on reputation and article processing charges
- ❑ The characteristics of the digital platform key
- ❑ Successful digital journals increase their scope and broaden the disciplines covered

Future areas of research

- ❑ Funding OA: the new scholarly publishing ecosystem
 - ❑ Who are the big funders?
 - ❑ Which activities do they finance?
 - ❑ Who are they funding?
 - ❑ What is the amount financed?

Thank you

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