



Report on the EU study on scientific publication markets (IP/06/414)

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History

- In June 2004 the Directorate General for Research at the European Commission undertook a “Study on the economic and technical evolution of the scientific publication markets in Europe”
- It was intended to determine the best conditions for operation of the scientific sector and how the Commission could address these conditions

Bansko,
14th June
2006

History

- The study was carried out by a consortium formed by the Université libre de Bruxelles and the Université des Sciences Sociales de Toulouse
- The final report (IP/06/414) was released in January 2006, but made available to the public on 31st March 2006

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14th June
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History

- It is now still available at:

http://ec.europa.eu/research/science-society/pdf/scientific-publication-study_en.pdf

- A consultation of the stakeholders is open until 15th June 2006:

http://ec.europa.eu/research/science-society/pdf/pr_scientific-publication-study_en.pdf

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History

- Comments on the study should be sent to: rtd-scientific-publication@cec.eu.int within tomorrow!!!
- The EU Commission plans to organize a conference on scientific publishing on 19-20th December 2006

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Study on scientific publications

- 1. Introduction
- 2. Overview of the market
- 3. Entry, prices, costs and quality
- 4. The electronic era
- 5. Bundling strategies
- 6. VAT issues
- 7. Access to research outputs
- 8. Permanent access and preservation
- 9. Standards and interoperability
- 10. Recommendations

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1. Background and goal of the report

- Dissemination and access to research results is a pillar in the development of the European Research Area
- It is necessary:
 - To assess the evolution of the market for scientific publishing
 - To discuss measures to improve the conditions governing access to publications
- The report builds on the existing literature and updates the state of the art

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1. Background and goal of the report

- The report:
 - Considers the specificities of the market for current journal issues
 - Discusses the broad facts about the market
 - Undertakes a quantitative analysis of journal prices
 - Discusses the implications of technological innovation on pricing strategies and the dynamics of entry
 - Analyzes the implication of these developments in terms of competition policy
 - Discusses the alternatives for disseminating and accessing scientific publications

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1. Background and goal of the report

- Reasons why public decision makers should pay attention to the market of scientific publishing:
 - Science has a key role in fostering economic growth \Rightarrow scientific journals are an essential means of disseminating new knowledge
 - Much of scientific activity is publicly funded, the output of research is given away by authors and so are refereeing services: an evaluation of the relative efficiency of the scientific publication process is therefore crucial

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1. Economic and policy context

- The core STM publishing market is estimated between USD 7 and 11 billion
- Between 1975 and 1995, the prices of scientific journals increased 200-300% beyond inflation
- This was accompanied by a fall in subscriptions: prices outpaced the growth of library budgets
- After 1995 publishers started to provide online access to electronic versions of scientific journals

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1. Economic and policy context

- Electronic journals brought significant changes in pricing policies:
 - Selling access to bundles of journals in multi-year contracts (consortia and “big deals”)
 - Providing free access to online journal articles by charging a publication fee
 - Developing alternative ways to disseminate scientific information such as depositing eprints in open archives
- A movement in favor of open access to knowledge has gained scale in the research community

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1. Economic and policy context

Expanding interest for Open Access (OA):

- Declarations (Budapest, Bethesda, Berlin)
- Civil Society (World Summit on the Information Society, UNESCO)
- Political bodies (OECD, UK House of Commons)
- Research funders (US NIH, UK Wellcome Trust, CERN)

These policies have raised publishers concerns that OA is a potential threat for their activities and existence

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2. Overview of the market

- Public funding of authors, referees and journal purchases through libraries
- Libraries as key buyers \Rightarrow lower reader price sensitivity
- Virtuous circles: authors want to publish in highly-read journals, readers want to read journals which publish best authors (barrier to entry)
- Market power \Rightarrow prices in excess of cost

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2. Overview of the market

4 main features of the STM publishing market

- Increasing reliance on journals as main channel for dissemination
- Dominance of “reader/library-pay” economic model
- Existence of for-profit and not-for-profit publishers (these including learned societies and UPs)
- Fast growth of a few for-profit publishers

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3. Entry, prices, costs and quality

- From a detailed quantitative analysis of journal prices in 22 fields (2,700 titles):
 - Prices vary quite considerably between scientific disciplines
 - Prices are higher for for-profit journals (three times higher when comparing the same quality – in citation counts – and age)
 - Statistically high prices correspond to high quality (high citation counts)

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3. Entry, prices, costs and quality

- Higher citation counts mean higher circulation so costs should be lower
- Instead high prices indicate value-based pricing, an indication of market power
- In this situation substitution possibilities across journals are limited
- This provides publishers even more significant market power

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4. The electronic era

- The electronic era should facilitate access to knowledge and entry of new actors
- But key barriers to entry remain established journals reputation, historical stocks, large portfolios (trend toward concentration)
- The sustainability of emerging business models such as open access journals (financed by charging authors) is still unclear
- The present situation is detrimental to competition

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5. Bundling strategies

- “Big Deal” practices are beneficial to library consortia since they allow resource sharing and provide more flexible access to journals
- But they also allow publishers to extract more revenue from consortia, by making it expensive to cancel preexisting subscriptions
- They tend to rigidify library budgets for significant periods of time and prevent entries, reducing the diffusion of knowledge

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6. VAT issues

- The VAT rate applied to electronic journals is considerably higher than the rate applied to printed journals
- This forces libraries to keep print subscriptions
- This also affects European research competitiveness when compared to other countries, such as in the USA where electronic services are exempt from tax

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7. Access to research outputs

- Access means visibility: open access enhances visibility of research outputs and subsequently their potential impact
- The EU should ensure visibility to its own research output through open access
- Published European-funded research should be deposited in open archives
- Recent surveys show that a majority of researchers seem willing to self-archive if their institution or funding body demands it

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8. Permanent access and preservation

- Access to electronic journals is often no longer allowed when subscriptions are discontinued
- Digitization of printed journals from the past is not always available
- Preservation of electronic publications is a problematic issue, publishers cannot be trusted in the long-term

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9. Standards and interoperability

- The use of standards is crucial to enable data exchange and improve dissemination
- Their use facilitate access from every user platform, enables resource discovery from every service provider/engine, ensures future accessibility

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9. Standards and interoperability

- Metadata: Dublin Core
- Documents: XML (full text + automatic metadata extraction)
- Persistent digital object identifiers: preferred to URL
- Linking: OpenURL
- Information retrieval: federated search (SRW), harvesting (OAI-PMH)

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9. Standards and interoperability

- At the EU level, scientific publishing will benefit from research funded under several programs:
 - “i2010: Digital Libraries”, Communication on scientific information could focus on the standards and interoperability issues specific to scholarly publishing and support technical developments
 - eContentPlus that supports accessibility of cultural and scientific content
 - Overall e-infrastructure building strategy for the European Research Area

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10. Recommendations

- While it is important to stress the societal value of the existing publication system, it is also important to acknowledge the societal cost linked to high journal prices, in financial terms but also in terms of limits on the dissemination of knowledge and therefore of further scientific progress.

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10. Recommendations

- Consequently, policies should make sure that the market is sufficiently competitive and “dissemination-friendly”
- In particular, policies should address the need to:
 - enhance access to research output
 - prevent barriers to entry and experimentation
- The 5 “A” recommendations concern access issues
- The 3 “B” ones concern market issues
- The 2 “C” ones concern further action

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10. Recommendation A1

- GUARANTEE PUBLIC ACCESS TO PUBLICLY-FUNDED RESEARCH RESULTS SHORTLY AFTER PUBLICATION
 - Research funding agencies should support self-archiving of publications in open repositories
 - Archiving after a (possibly domain-specific) time period to be discussed with publishers
 - Archiving could become a condition for funding

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10. Recommendation A1

- The following actions could be taken at the European level:
 - establish a European policy mandating published articles arising from EC-funded research to be available after a given time period in open access archives, and
 - explore with Member States and with European research and academic associations whether and how such policies and open repositories could be implemented

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10. Recommendation A2

- AIM AT A 'LEVEL-PLAYING FIELD' IN TERMS OF BUSINESS MODELS IN PUBLISHING
 - There is a central role for funding authorities in the shaping of new models for publishing and communicating research results
 - It seems desirable to allow for competition and experimentation

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10. Recommendation A2

- Suggestions:
 - allocating money to libraries to subscribe to reader or library-pay journals
 - but also to authors to pay for publication costs in author-pay journals
 - and to researchers in the reader-pay model
- Establishing relative priorities in this respect should become a key policy debate

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10. Recommendation A3

- 'EXTENDED QUALITY' RANKINGS OF SCIENTIFIC JOURNALS
 - scientific quality, approximated for example by citation counts, should remain the dominant criterion

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10. Recommendation A3

- Suggestion:
 - dimensions related to the quality of dissemination (self-archiving authorisation, publisher archiving provisions, copyright provisions, abstracting and indexing services, reference linking, etc.) could be tracked explicitly and possibly valued by research funding bodies
- There could be an impetus from public authorities at the European level for such an initiative

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10. Recommendation A4

- GUARANTEE PERENNIAL ACCESS TO SCHOLARLY JOURNAL DIGITAL ARCHIVES
 - Given the heterogeneity of the publishers' current provisions, there is a need for not-for-profit long-term preservation archives, which balance interests among publishers, libraries, and scholars

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10. Recommendation A4

■ Suggestions:

- (i) Promote business models for legal-deposit libraries to allow remote online access to their journals digital archives, making the preservation efforts cost-effective
- (ii) Investigate the feasibility/desirability of the creation of a European non-profit journals preservation organisation (“JSTOR-like”) and of other subject-based archives in relevant domains
- (iii) Determine the standards under which archives must be accessible and set up a portal as a central access point to digital journals and articles

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10. Recommendation A5

- FOSTER INTEROPERABLE TOOLS TO IMPROVE KNOWLEDGE VISIBILITY, ACCESSIBILITY AND DISSEMINATION
 - (i) support research and development on interoperability issues, notably on metadata to improve search and retrieval and on the XML format to improve the overall publishing process
 - (ii) promote the wide implementation of linking technologies, especially the OpenURL, and of interoperable standard protocols, especially the OAI-PMH that enables metadata harvesting and searching across different platforms

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10. Recommendation A5

- Suggestion:

- Both developments could be taken into account by the European Commission in its e-infrastructure building strategy for the European Research Area
- involving DG-Information Society R&D funding programs and the forthcoming “i2010: Digital Libraries” Communication on scientific information

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10. Recommendations B

- The next three recommendations concern the need:
 - to prevent strategic barriers to entry and to experimentation
 - to prevent excessive concentration

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10. Recommendation B1

- **PROMOTE PRO-COMPETITIVE PRICING STRATEGIES**
 - The key issue identified in terms of market access concerns pricing policies, and more particularly the lock-in effect associated to 'Big deals'
 - Specifically, the limited savings libraries obtain for net subscription cancellations does make it hard for newcomers to have access to library budgets

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10. Recommendation B1

■ Suggestions:

- the price of the electronic access should not depend on the historical number of print subscriptions
- prices should be related to transparent indicators, like usage or the number of faculty, students, etc.
- libraries should have the possibility to choose among variable dimension bundles, journals should be priced individually, and prices of bundles should be made public
- one should avoid having prices increase with Internet usage as long as publishing costs do not increase as a result of this rise in usage

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10. Recommendation B2

■ SCRUTINIZE FUTURE SIGNIFICANT MERGERS

- The market has become more concentrated due in part to mergers by large for-profit publishers
- Publishers with large journal portfolios have an incentive to set higher prices

■ Suggestion:

- further acquisitions by large publishers should be scrutinized by the relevant European authorities

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10. Recommendation B3

- PROMOTE THE DEVELOPMENT OF ELECTRONIC PUBLICATIONS
 - Eliminate the unfavorable tax treatment of electronic publications, by:
 - either applying a reduced VAT rate to all types of scientific information, whether print or electronic
 - or by introducing a tax refund mechanism for research institutions
 - Though the European Commission could play a role, this decision is ultimately left to the Member States

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10. Recommendations C

- The last 2 recommendations stress the need for further discussions and study concerning this important market

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10. Recommendation C1

- SETTING-UP AN ADVISORY COMMITTEE
 - Regular contacts are necessary, since the industry's practices are moving very fast, and will keep doing so in the future
 - We advise to set up a committee composed of the various interested parties: publishers, librarians, funding bodies, authors and researchers
 - They should be responsible for recommending changes if need be, and reporting to the Research DG's of the European Commission

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10. Recommendation C2

■ FURTHER INVESTIGATION

- Evolution of copyright provisions: while publishers have become more permissive over time, in particular in terms of the posting of published material on individual web pages, it would be good to investigate precise legal solutions
- Economic analysis of alternative forms of dissemination: alternative publishing business models, unbundling of certification and dissemination, sustainability of open repositories
- Technological developments: support research on interoperability and long-term preservation issues

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10. Conclusions

- While we agree on the report's premises and most of its conclusions, there are a few points that deserve comments.
- A1 – A European policy should mandate published articles arising from EC-funded research to be available **on publication** in open access archives, and the same availability should be a condition for funding for all publicly-funded research.
- A2 – Publication costs should be included in every research grant as integral part of the contract as a dissemination duty.
- A3 – New research evaluation methods should be studied as consequence of new dissemination practices.
- A4 – Institutions could be trusted the responsibility to preserve their own research output by implementing institutional repositories.
- A5 – We agree on the need to support research on interoperability and linking technologies, but we also suggest to support the use of persistent identifiers in the shape of URIs.
- B1 – Attention should be paid not to link usage and prices: usage of literature should be encouraged for the largest possible dissemination.
- B2 – We welcome a special attention to publishers' mergers to avoid excessive concentration.
- B3 – VAT on electronic publications should be reduced at the same level as VAT on printed publications. Tax refund mechanisms are complex and money advance is difficult to sustain for small organizations.
- C1 – An advisory committee is welcome and should include representatives of university organizations and consortia.
- C2 – Further investigation is welcome and should include the evolution of scholarly communication.

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