Pay It Forward:

Investigating a Sustainable Model of Open Access Article Processing Charges for Large North American Research Institutions

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CNI Fall Forum, December 14, 2015

University of California, Davis

Pay It Forward

funded by the

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Key Question:

Can a large-scale conversion to open access scholarly journal publishing funded via APCs be viable and financially sustainable for large North American research-intensive institutions?

Led by the University of California, Davis and the California Digital Library

California Digital Library

Why this project, why now?

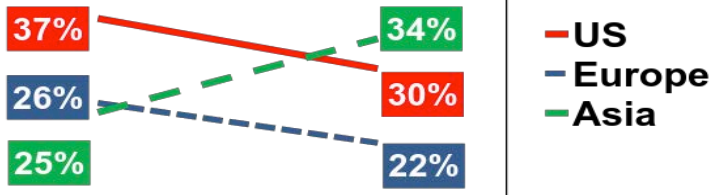
Increasing disconnect between European and North American approaches to open access

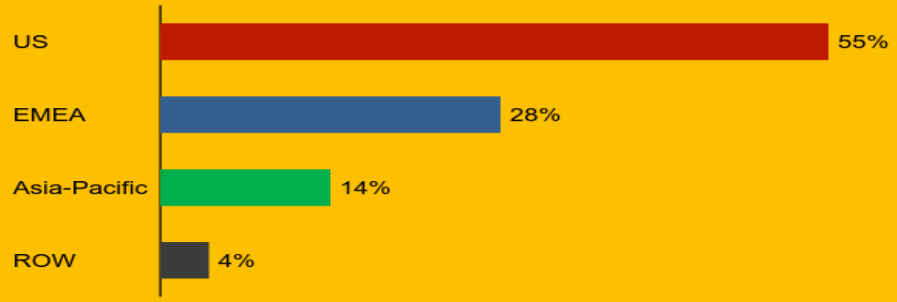
North America	Europe / UK
• Tri-Agency Open Access Policy • NIH Open Access Policy • OSTP Directive • Faculty OA Policies • FASTR	• Finch Report • Horizon 20/20 • APC Offset Agreements

Global Context

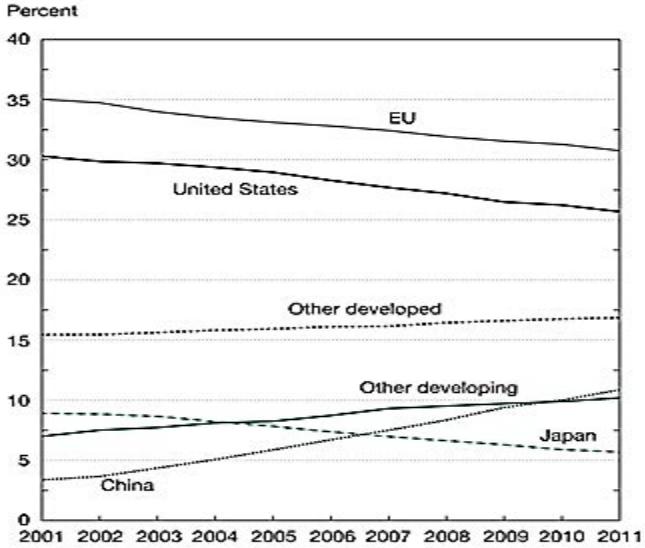
Global R&D Share

2015 STM Report





S&E Global Article Share



"The cumulative effect of sustained above-global-average growth in R&D spending in emerging economies has been a profound shift in the global make-up of research." STM 2015 Report

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Popular Research This Month

1. Green Marketing: A Study of Consumer Per...
2. How Languages are Learned
3. Debunking the Effects of

Open Access Policy for the Academic Senate of the University of California

Home

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- Deposit Your Work
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- Get the Word Out!

Scholarly Publishing
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- Open Access
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  - Dissertations

Adopted 7/24/2013

Also available as a PDF.

Preamble

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Grant of License and Limitations

Each Faculty member grants to the University of California a nonexclusive, irrevocable, worldwide license to exercise any and all rights under copyright

Local drivers:

UC Faculty Open Access Policy

Campus Open Access Fund Pilots

Faculty began asking: ***"Does this mean I have to pay to publish?"*** and ***"Will the library pay?"***

Our Libraries wanted to understand how gold OA would impact our budgets if we were to subsidize publication

Project Design

Qualitative Analysis

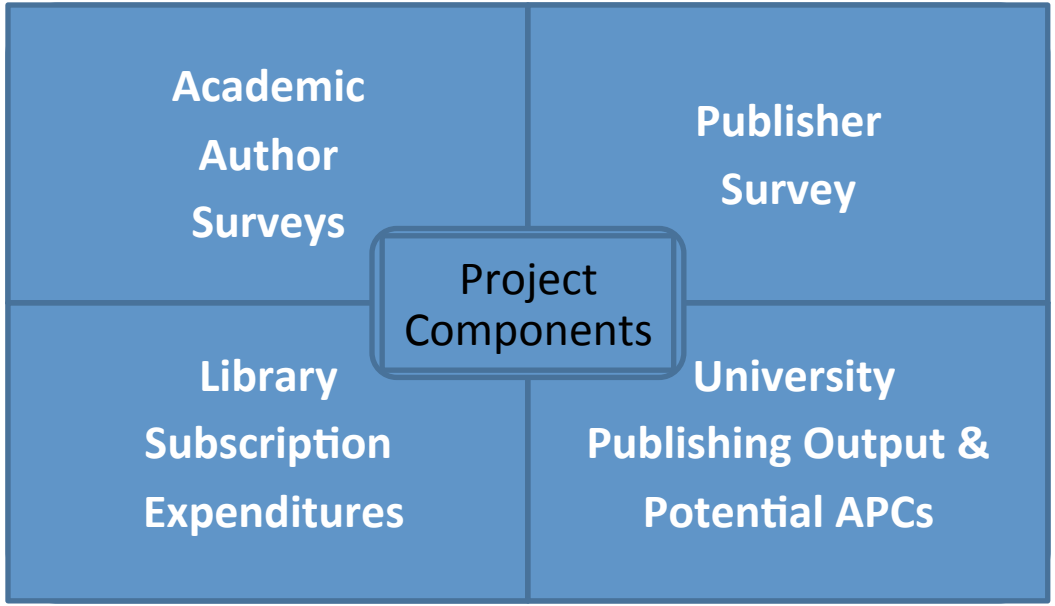
University Partners:

University of California

Harvard University

Ohio State University

University of British Columbia



Industry Partners:

Assoc of Learned & Professional Society Publishers (ALPSP)

Thomson Reuters (Web of Science)

Elsevier (Scopus)

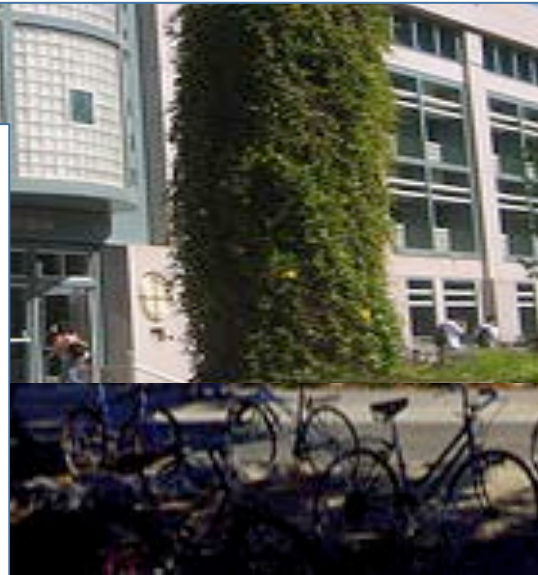
Quantitative Analysis: Five-Year Period, 2009-2013

Core Project Team

MacKenzie Smith, UC Davis *(Co-PI)*
Ivy Anderson, CDL *(Co-PI and Quantitative Lead)*
Greg Tananbaum, ScholarNext *(Project Manager*
Mathew Willmott, CDL *(Data Analyst)*

Project Consultants

Greg Tananbaum, ScholarNext (*Publisher surveys and costs)*
Carol Tenopir, University of Tennessee (*User studies)*
David Solomon, Michigan State University &
Bo-Christer Bjork, Hanken School of Economics
(*APC research, Scenario modeling)*
Mark McCabe, Boston University & SKEMA Business School
(Scenario modeling, economic analysis)



Project Deliverables

1. A publicly accessible financial model that depicts what the emerging APC model would cost large research institutions under a variety of rigorously-modeled scenarios

2. A replicable methodology that that others can adapt to a local context
   - What level of APC is realistic and sustainable in a given discipline?
   - How might costs be distributed among institutions, research funders, authors, and other players?

Project Timeline

Phase 1: January-March

Finalize data specifications, begin data gathering

Conduct focus groups

Develop publisher survey

Phase 2: April-June

Collect and refine data

Conduct user surveys

Conduct publisher survey

Perform publishing cost analysis

Phase 3: July-December

Complete survey analysis

Complete financial and bibliometric data analysis

Build and refine models

Phase 4: January-June

Review and refine model

Prepare documentation

Write up findings

Preliminary Findings

Author Studies

(Carol Tenopir)

Focus Groups

- 10 sessions at Harvard, OSU, UBC, UCD & UCI
- 77 Faculty, postdocs & grad students
  - 46 in faculty, 31 in graduate student sessions
  - arts and humanities, physical and biological sciences, social sciences, medicine, law, and mathematics

Surveys

- 2,020 responses (OSU, UBC, UCD & UCI)
    - 935 faculty, 915 grad students, 148 postdocs, 22 other
    - every discipline, publishing frequency represented
    - majority have 3-5 co-authors, varies by discipline

Author Study Impressions

Range of perspectives

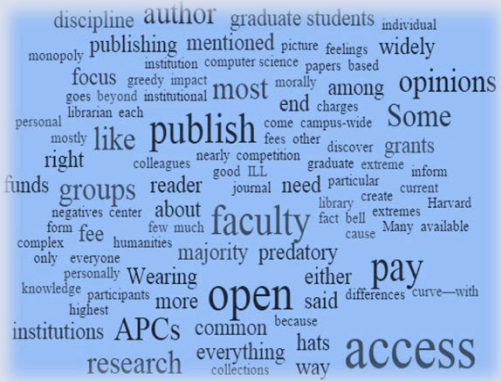
- True believers, skeptics, most people somewhere in the middle
- Many senior faculty already post green versions in a repository or personal website
- Support for OA as readers and as a moral good, but most have access to what they need
- Arts, Humanities, & Social Sciences faculty are less supportive of OA

Concerns

- Where funding will come from
- Richer nations may dominate publication
- Potential for APC price increases
- Predatory / vanity publishing
- Lack of transparency – ‘publishing is broken’
- APCs too high – publishers charge what the market will bear

Library role

- Negotiating Institutional publishing licenses
- Coordinating/administrative



Ambivalence & Questions: Faculty

- If they have a repository (green) why do they need gold?
- There is a confusing lack of transparency in APCs.
- Quality may still be costly.
- Figuring out a good model will take time.
- We have to evaluate the impact on readers and authors and different fields separately.
- We have privilege of access so perhaps we aren’t the best judges of this issue.

Importance of Factors When Selecting Where to Publish*

1. Quality and reputation of journal
2. Fit with Scope of journal
3. Audience
4. Impact Factor
5. Likelihood of acceptance
6. Time from submission to publication
7. Editor or editorial board
8. Open Access

*Listed highest to lowest

Implications

Journal quality matters, and is often defined by traditional attributes.

If authors can publish in their journal of choice, whether it’s OA is secondary.

APC Attitudes

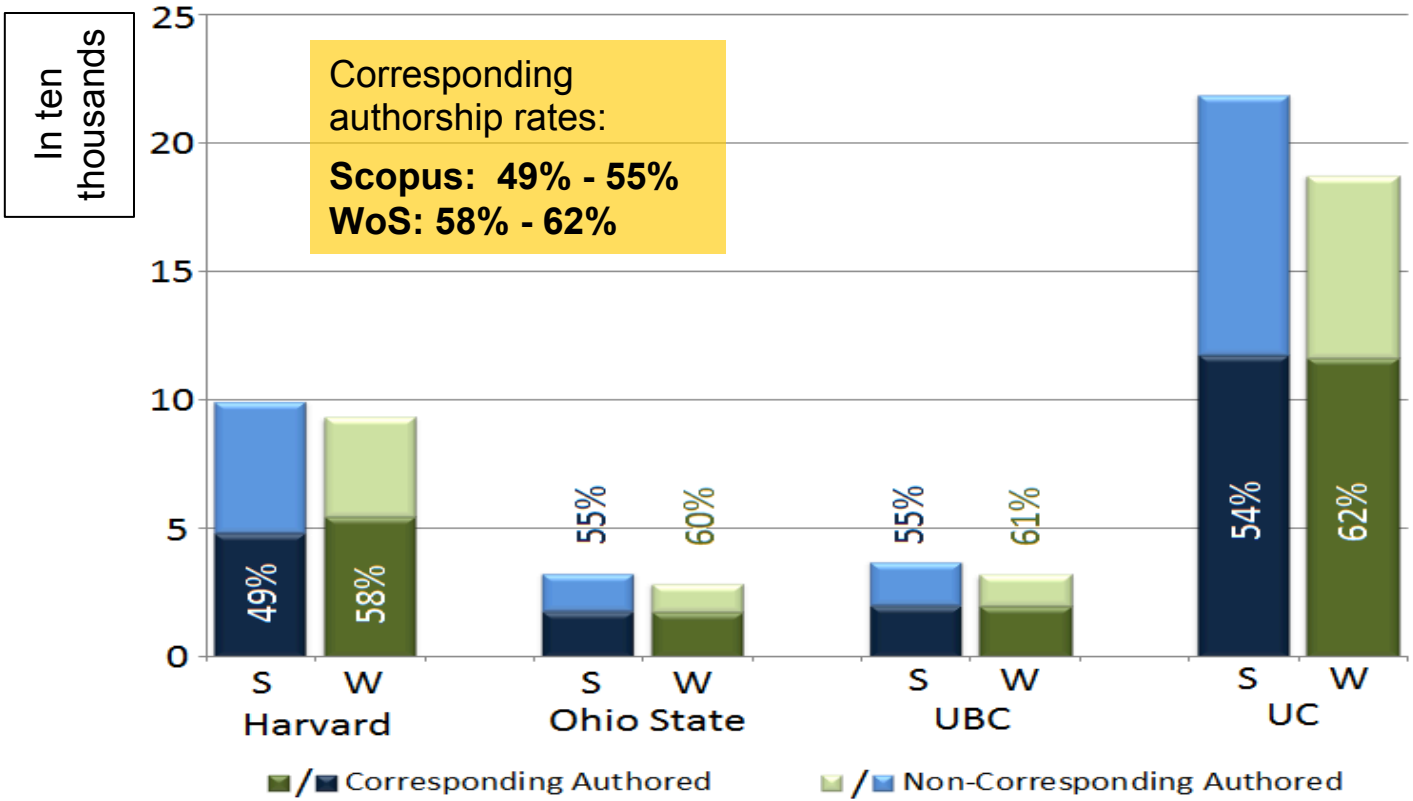
- Of respondents who have published OA
  - majority from life and physical sciences
  - fees paid from research grants
  - author discretion → incentive to *economize*

Preliminary Findings

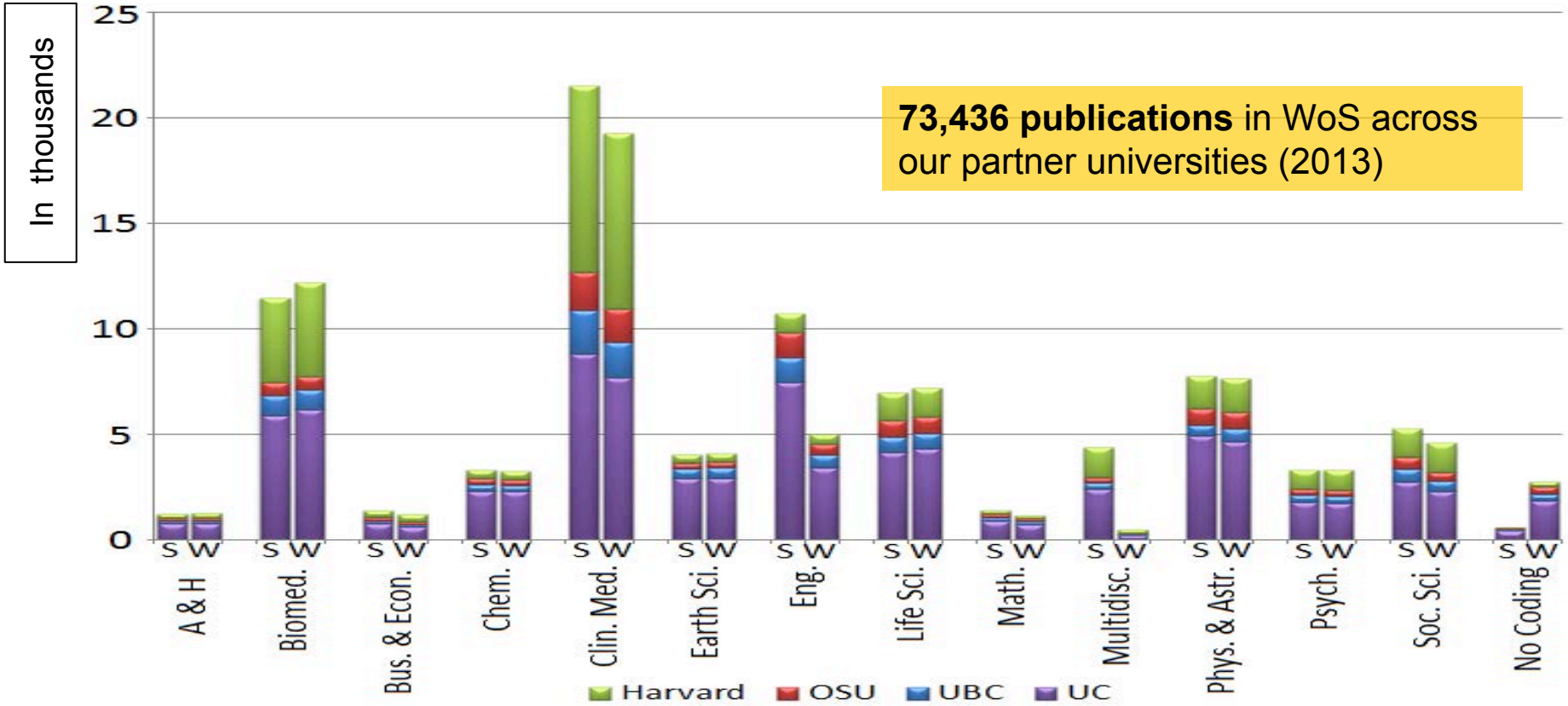
Break-Even Scenarios for Partner Libraries

(Mark McCabe, Mat Willmott)

Bibliometric data:
By partner institution, Scopus & WoS

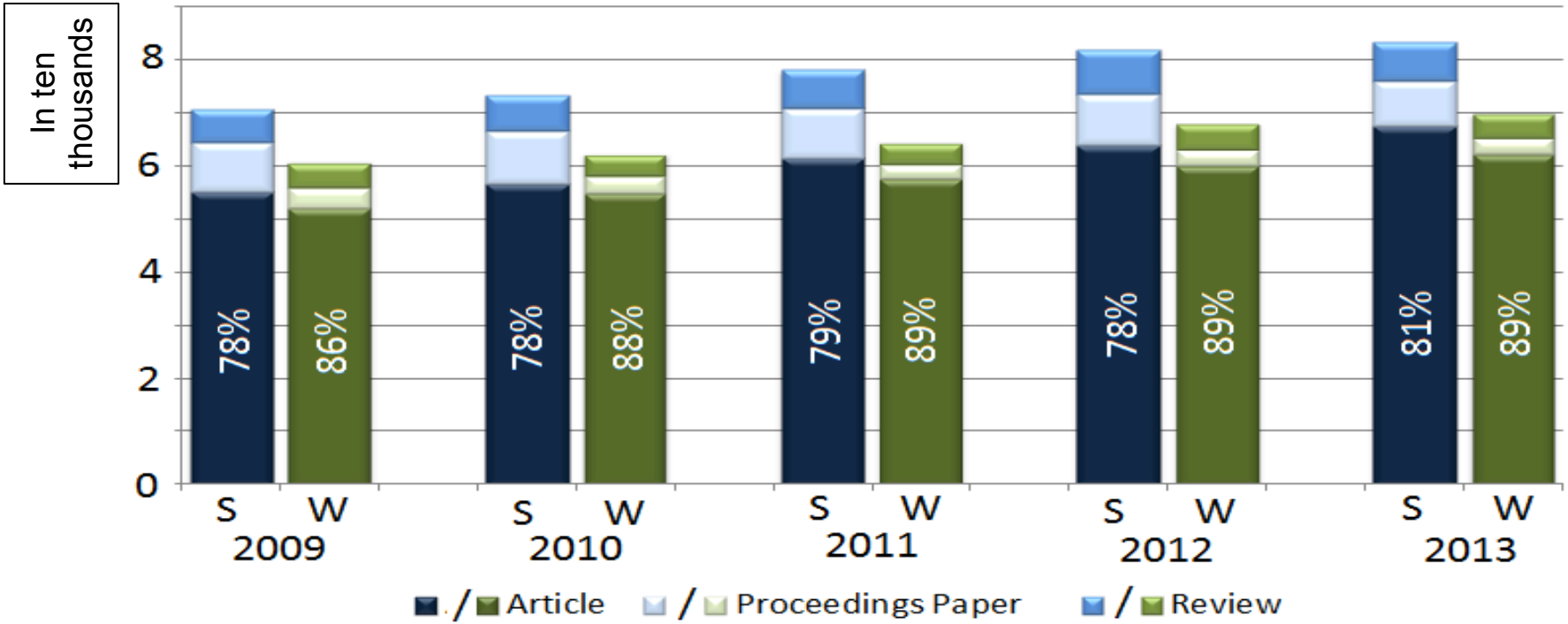


Bibliometric data:
By discipline, 2013

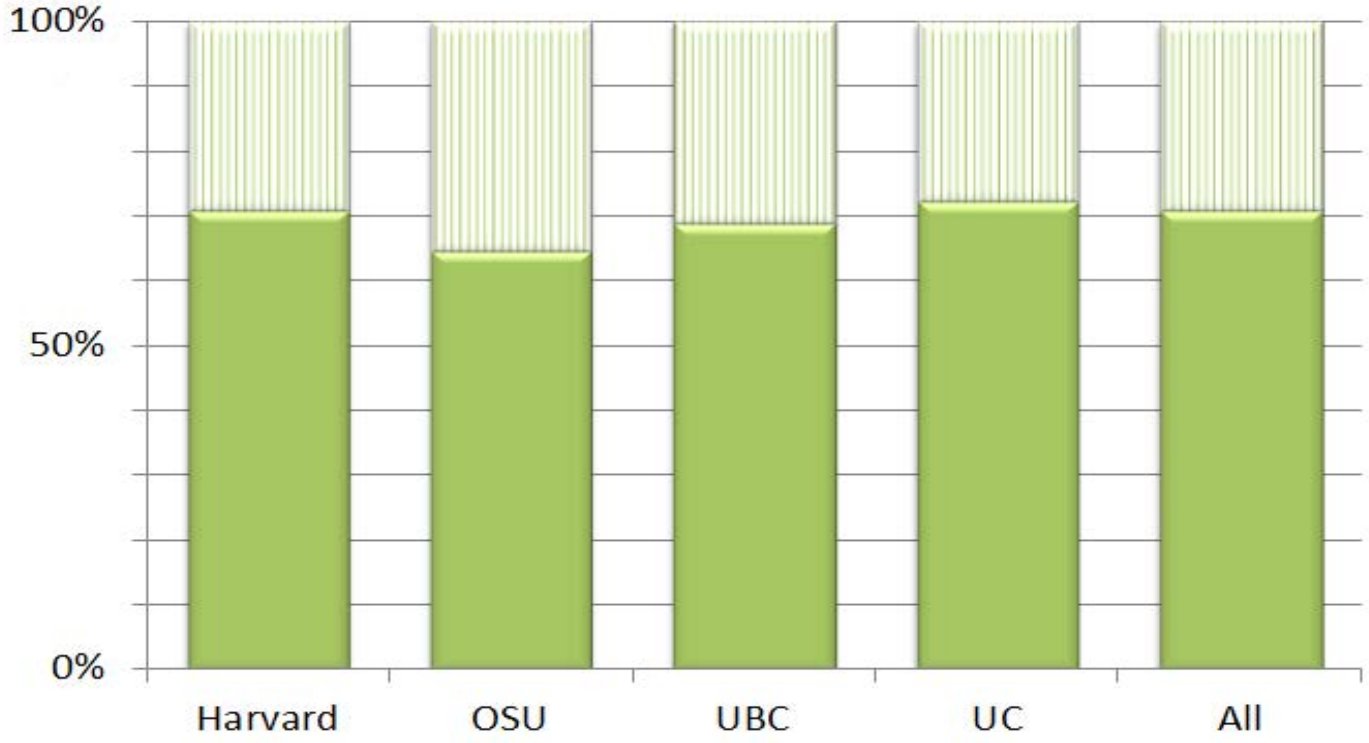


73,436 publications in WoS across our partner universities (2013)

Bibliometric data:
By article type, Scopus & WoS



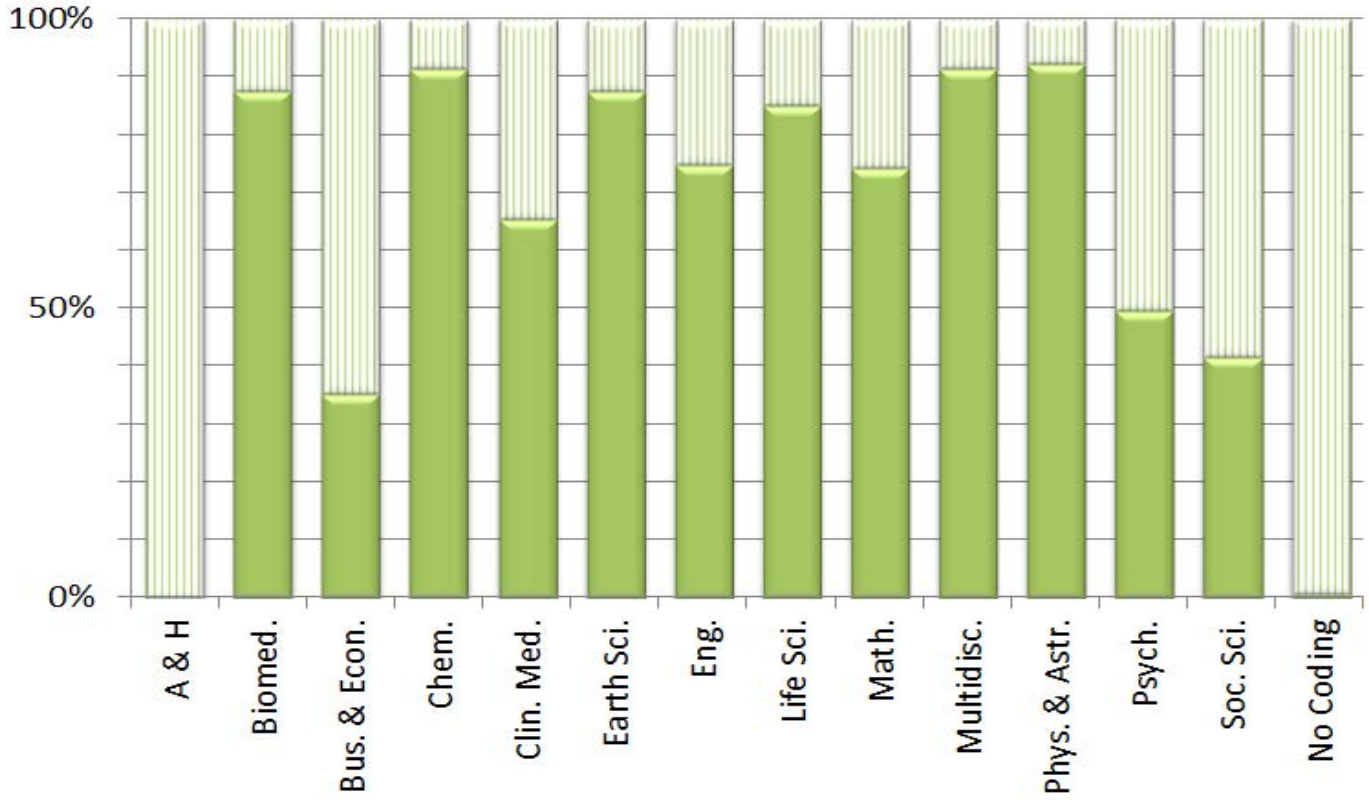
Bibliometric data:
Grant funding (WoS 2013)



Solid:
Grant acknowledged

Striped:
No grant ack'd.

Bibliometric data:
Grant funding by discipline, WoS 2013



Solid:
Grant acknowledged

Striped:
No grant ack'd.

Break-Even Points:
Definition and Methods

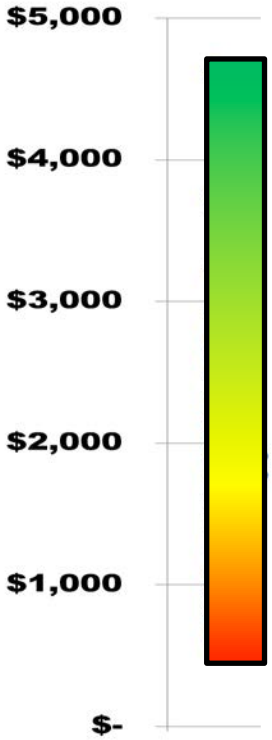
Break-Even Point: the *average* APC an institution would be able to support from its library subscription budget, given its publication output.

- Break-even points were calculated for each partner institution, assuming that the institution is responsible for payment of an APC if the corresponding author is from that institution.

- A **high** break-even point means that the institution could support publication even if the average APC is quite high (represented in **green** in the following charts)

- A **low** break-even point means that the institution could only support publication if the average APC is very low (represented in **red** in the following charts)

Break-Even Points:
Library pays for all articles



Institutions with a higher breakeven point are generally smaller, less research-intensive universities with*:

- A lower ratio of grad students to undergraduates
- A higher ratio of teaching to research faculty
- More students per faculty member

$1907: Average APC for publication in full OA journal, from European payment databases

$1775: Average APC for partner institution publications in full OA journals

Institutions with a lower breakeven point are generally more research-intensive universities with*:

- A higher ratio of grad students to undergraduates
- A higher ratio of research to teaching faculty
- Fewer students per faculty member

*: Demographic data from IPEDS, http://nces.ed.gov/ipeds/

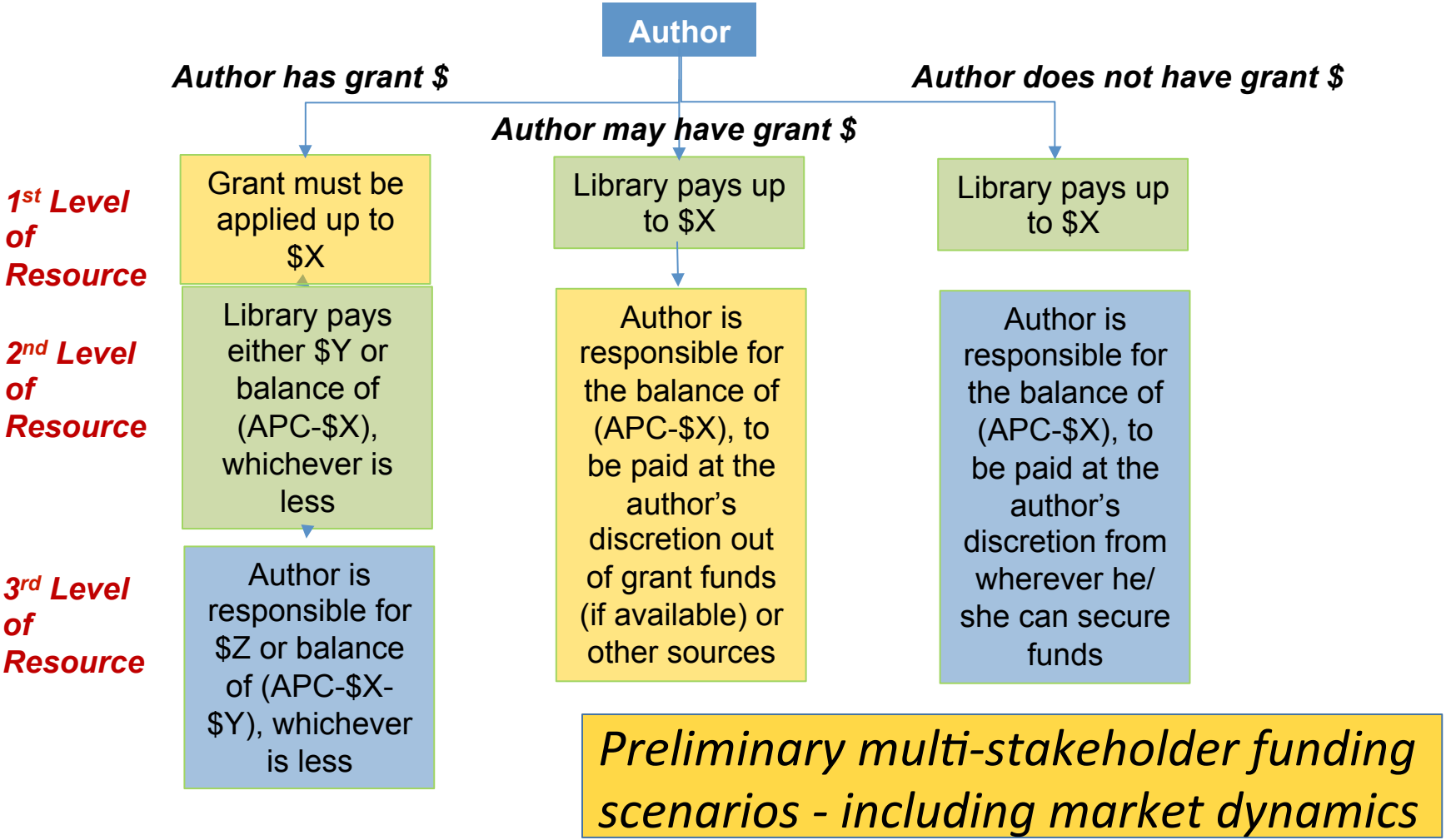
Break-Even Points:
Excluding articles with grant funding

If we assume that documents which acknowledge a grant can have their APC's fully covered by the granting agency, then institutions can support publication at a much higher cost.

About 2/3 of all documents in our dataset which acknowledge a grant are acknowledging either NIH, NSF, DoD, DoE, or NASA, all of which do allow charging APC's to the grant.

$1907: Average APC for publication in full OA journal, from European payment databases

$1775: Average APC for partner institution publications in full OA journals


Author
Author has grant $
Author may have grant $
Author does not have grant $
1st Level of Resource
2nd Level of Resource
3rd Level of Resource
Grant must be applied up to $X
Library pays up to $X
Library pays up to $X
Library pays either $Y or balance of (APC-$X), whichever is less
Author is responsible for the balance of (APC-$X), to be paid at the author's discretion out of grant funds (if available) or other sources
Author is responsible for the balance of (APC-$X), to be paid at the author's discretion from wherever he/ she can secure funds
Author is responsible for $Z or balance of (APC-$X-$Y), whichever is less
Preliminary multi-stakeholder funding scenarios - including market dynamics

Remaining Tasks

- Refine Data
  - Library Expenditure Data
  - APCs
  - Publication data (incl. WoS and Scopus differences)
  - Project growth over time
- Develop funding scenarios to encourage market dynamics
  - Role of libraries, authors and granting agencies
- Build and populate calculation tool
- Write final report
  - Will publish all data that’s publicly shareable