Exploring collaborative community-driven publishing models for Open Access
Acknowledgements
OPERAS is the Research Infrastructure supporting open scholarly communication in the social sciences and humanities (SSH) in the European Research Area. Its mission is to coordinate and federate resources in Europe to efficiently address the scholarly communication needs of European researchers in the field of SSH. OPERAS’ aim is to make Open Science a reality for research in the SSH and achieve a scholarly communication system where knowledge produced in the SSH benefits researchers, academics, students and more generally the whole society across Europe and worldwide, without barriers.

Supporting Organisations

OASPA (Open Access Scholarly Publishing Association) is a membership organisation representing a broad community of organisations engaged in open scholarship, including scholar-led and professional publishers of books and journals, across varied geographies and disciplines, as well as infrastructure and other services. OASPA works to encourage and enable open access as the predominant model of communication for scholarly outputs, and to ensure a diverse, vibrant, and healthy open access community.

SPARC Europe is a Dutch Foundation with over 140 organisations from 23 countries supporting its work. It is working to make Open the default in Europe. Its work centres around 3 goals: Driving Open Access, expanding access to research data and accelerating Open Education in Europe through policy development and advocacy programmes.

Utrecht University Library offers support in every phase of searching for, managing and publishing scientific information. At the library, Jeroen Bosman and Bianca Kramer perform research and provide expertise on open scholarship.

UIT The Arctic University of Norway holds a long standing commitment to open science. The university library organizes one of the most important conferences on scholarly communication in Europe, the Munin Conference. Jan Erik Frantsvåg, open access advisor at the university library, has a strong expertise in this topic and has published a number of scholarly articles on subjects relevant to the study.

Centre de Sociologie de l’Innovation (CSI), founded in 1967, became one of the world’s leading research centres in the field of Science and Technology Studies in the 1980s, when Michel Callon and Bruno Latour among others developed a new approach known as the “sociology of translation” or Actor-Network Theory (ANT). At CSI, Didier Torny’s research focuses on higher education and research public policies, as well as the political economy of academic publishing.

OASPA

DOAJ is a community-curated online directory that indexes and provides access to high quality, open access, peer-reviewed journals. Currently, DOAJ lists more than 10,000 OA non-APC journals.

Redalyc/AmeliCA is a collaborative infrastructure for advancing diamond OA publishing. It provides journal production technology, editorial professionalization, journal quality assessment, visibility and discoverability services, metrics, full-text indexing and Linked Open Data. Currently, it indexes 1500 OA journals from 633 publisher institutions from 31 countries. The online collection offers around 800,000 full-text articles.

LIBER (Ligue des Bibliothèques Européennes de Recherche – Association of European Research Libraries) is Europe’s principal association of research libraries, consisting of nearly 450 national, university and other libraries from more than forty European countries.

ENRESSH (the “European Network for Research Evaluation in the Social Sciences and the Humanities”) is a network of researchers, research administrators and librarians that has grown out of a COST Action, starting in April 2016 and ending in April 2020. It brought together more than 125 participants from 36 countries.
Science Europe is an association of major Research Funding Organisations and Research Performing Organisations. It was established in October 2011 and is based in Brussels.

**Funders**

Science Europe is an international consortium of research funding and performing organisations supporting Plan S, an initiative for Open Access publishing that was launched in September 2018. Plan S requires that, from 2021, scientific publications that result from research funded by public grants must be published in compliant Open Access journals or platforms.

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We are delighted to present the results of the study commissioned last year by cOAlition S, with financial support from Science Europe, to provide an analysis and overview of collaborative, community-driven open access journals and platforms (aka “OA diamond”). The main objectives of the study were to provide an analysis of the global landscape of OA diamond journals and platforms, identify their current funding models and their technical and organisational challenges, and examine the potential for collaboration and shared services. In addition, we asked for an action plan and recommendations to bolster and co-finance this crucial part of the academic publishing landscape.

The study presented today reveals a vast archipelago of OA diamond journals that was previously obscured by discussions mainly focused on the transformation of commercial models for academic publishing. The rich landscape that heaves into view shows, for the first time, to what extent the diamond publishing model serves the academic community through its variety of scholarly disciplines, languages, and cultures. To a large extent, the study uncovers the full dimension of an important part of the world of scholarly dissemination that is as old as science itself: the scientific community assessing scientific quality and managing scholarly communication on its own.

Moreover, the study shows that the collaborative, community-driven publishing model needs to be more efficiently organised, coordinated and funded to better support researchers in disseminating their work. These elements are essential for this type of publishing to be sustainable in the long term, and to reveal its full potential in the context of open science. We hope that the study will initiate a community-wide discussion leading to concrete steps for consolidating this vital infrastructure.

We would like to thank the consortium of 10 organisations (OPERAS, Sparc Europe, Utrecht University, DOAJ, UiT The Arctic University of Norway, LIBER, OASPA, ENRESSH, Redalyc-AmeliCA, CSI) that conducted this study, and particularly the authors of the reports.

Lidia Borrell-Damián, Secretary-General, Science Europe
Johan Rooryck, Executive Director, cOAlition S
Executive Summary

Context

From June 2020 to February 2021, a consortium of 10 organisations undertook a large-scale study on open access journals across the world that are free for readers and authors, usually referred to as “OA diamond journals”. This study was commissioned by cOAlition S in order to gain a better understanding of the OA diamond landscape.

Presentation

The study undertook a statistical analysis of several bibliographic databases, surveyed 1,619 journals, collected 7,019 free text submissions and other data from 94 questions, and organised three focus groups with 11 journals and 10 interviews with hosting platforms. It collected 163 references in the academic literature, and inventoried 1,048 journals not listed in DOAJ.

The results of the study are available in the following outputs:

✔ References Library - DOI: 10.5281/zenodo.4562816
✔ Journals Inventory - DOI: 10.5281/zenodo.4562828
✔ Dataset - DOI: 10.5281/zenodo.4553103
✔ Findings Report - DOI: 10.5281/zenodo.4558704

Main findings

Landscape:
Charting the variety, scope and impact of OA diamond journals in various disciplines and regions

A wide archipelago of relatively small journals serving diverse communities

The number of OA diamond journals is high (estimated to 29,000) but only a third of them are registered in DOAJ. OA diamond journals generally publish fewer articles than APC-based ones (356,000 per year compared to approximately 453,000). Since 2018, the share of diamond journal articles has been dwindling, which coincides with the increase in articles in APC-based journals. The OA diamond sector is diverse in terms of regions (45% in Europe, 25% in Latin America, 16% in Asia, 5% in the US/Canada) and disciplines (60% HSS, 22% science, 17% medicine). In Europe, more than half of them are based in one of the Eastern European countries. The majority of OA diamond journals are small in size, publishing fewer than 25 articles a year. OA diamond journals serve mainly a national authorship (in all disciplines, including science and medicine) but disseminate their output to a largely international audience. OA diamond journals are much more multilingual (publishing in several languages) than APC-based ones (38% compared to 14%). Almost all OA diamond journals have been OA diamond from the time they became available online.
Compliance:
How OA diamond journals comply with industry standards exemplified by Plan S technical requirements

OA diamond journals are on the road to full compliance with Plan S

OA diamond journals are not yet fully compliant with the standards specified in the Plan S technical requirements. Of the six criteria surveyed, a mere 4.3% of OA diamond journals comply with all criteria, and only 37% comply with more than half of all criteria. Regarding the use of open licenses, 37% of the journals use a CC-BY license. Only 49% of the journals embed machine-readable licenses in their metadata as required by Plan S, and around 55% use a DOI. The size of the journal correlates with their ability to attribute such identifiers to their articles. A majority (68%) of OA diamond journals have no preservation policies. Of those who do have a preservation policy, 60% use a standard archiving system that may comply with Plan S requirements. In terms of content structuration and formatting, 75% of journals are unable to format their content either in XML or HTML, providing only PDF in most cases.

Dynamics:
Understanding how OA diamond journals work and the challenges they face

A mix of scientific strengths and operational challenges

When examining how OA diamond journals work concretely under several perspectives, it is apparent that they face a number of challenges in operations. A large portion of the journals are owned by research institutions and societies, but half of them have no legal document to establish this ownership. Monitoring and reporting are also domains in which journal capacity is low (46% of the journals do not provide download statistics and 54% provide no statistics related to production management). Most OA diamond journals (67%) adhere to the highest level of scientific quality control (double-blind peer review), but half of them manage the process through e-mail and they struggle with finding reviewers. Most of the journals (78%) declared complying with a best practice guideline such as COPE, but only 55% actually use an anti-plagiarism software. Half of the journals outsource some of the editorial work, mainly copy-editing (29%) and typesetting (28%). Finally, most journals (60%) use OJS, a CMS fit for managing academic content, but run on a wide variety of platforms and servers whose sustainability is unknown and technical limitations can be challenging. The most challenging area for OA diamond journals is indexation and content visibility in the main international indexes.

Sustainability:
Understanding how OA diamond journals are funded and how sustainable they are

An economy that largely depends on volunteers, universities and government

As far as the financial health of OA diamond journals is concerned, just over 40% of journals reported breaking even and 25% stated a loss. Almost one-third of journals reported not knowing their financial status, with over one-third of these reported by both university-owned journals and university presses. Furthermore, 19% stated not knowing their costs of the previous year. While 60% of OA diamond journals depend on volunteers to carry out their work, with 86% reporting either a high or medium reliance on them, they also reported a wide range of funding mechanisms to fund operations and development costs, from in-kind support, voluntary labour, grants, collectively-organised funding, donations, shared infrastructure, membership, funding proportional to the articles published, free-mium services, Subscribe to Open, and more. Globally, however, it is to cover small costs: the majority (53%) of journals run on less than 1 FTE for their operations and 70% declared less than $/€10,000 annual costs. Finally, universities and RPOs play a leading role in funding and supporting OA diamond journals, whereas RFOs contribute to a far lesser extent.
Contents

Introduction 11

Landscape 21
Charting variety, scope and impact of OA diamond journals in various disciplines and regions

Compliance 49
How OA diamond journals comply with industry standards exemplified by Plan S technical requirements

Dynamics 75
Understanding how diamond journals work and the challenges they face

Sustainability 107
Understanding how diamond journals are funded and how sustainable they are

Bibliography 127

Annex 129
Introduction
Presentation of Data and Methodology
Definitions

Hosting platforms: A web hosting service that allows journals to make their website accessible via the World Wide Web. In the context of OA diamond journals, hosting platforms are almost always joint dissemination platforms, such as OpenEdition, Redalyc and Scielo.

Infrastructures: Organisations that provide support services to the OA diamond journals to perform certain technical tasks, such as copy-editing, dissemination, hosting, indexation, preservation, registration or typesetting.

Handle: Persistent identifier allocated to a digital resource on the Internet. The Handle system enables the separation of the resource identification from its location. The DOI system is a specific application of the Handle system.

In kind: Goods and services, and transactions not involving money. In the context of this report, it means any task performed, or resource made available for an OA diamond journal, which is not charged to the journal.

OA diamond journals: Journals that publish without charging authors and readers, in contrast to APC Gold OA or subscription journals.

OA diamond ecosystem: A system of interactions and interdependencies binding together all relevant stakeholders that participate in the fruition of OA diamond publication.

Acronyms

APC: Article processing charge is a fee that is sometimes charged to authors to make a work available through open access.

DOAJ: Directory of Open Access Journals is a community-curated online directory that indexes and provides access to open access and peer-reviewed journals.

CMS: Content management system is a computer software used to manage the creation and modification of digital content.

DOI: Digital object identifier is a persistent identifier used to uniquely identify digital objects. In the context of this report, they are provided to identify journal articles by organisations such as Crossref and Datacite.

FTE: Full-time equivalent is a unit that indicates the working quantity of employed or voluntary persons for a given task or organisation.

JATS: Journal Article Tag Suite is an XML schema used to describe scientific literature published online.

HTML: Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser.

OJS: Open Journal Systems is a free software for the management of peer-reviewed academic journals; it is created by the Public Knowledge Project and released under the GNU General Public License.

ORCID: Open Researcher and Contributor Identifier is used to uniquely identify authors and contributors of scholarly communication.
PDF: Portable Document Format, developed by Adobe, is a file format to present documents, including text formatting and images, in a manner independent of application software, hardware and operating systems. Based on the PostScript language, each PDF file encapsulates a complete description of a fixed-layout flat document.

PID: Persistent identifier is a long-lasting reference to a document, file, web page, or other object. In the context of this report, it mainly concerns articles, journals and authors.

XML: Extensible Markup Language is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

Online Survey

From mid-June to mid-July 2020, we prepared an online survey listing 94 questions to collect data on the different components of diamond journals, including:

1. Legal structure and governance
2. Authorship
3. Content and metadata
4. Editorial quality assurance practices
5. Technical framework
6. Funding model
7. Dissemination and readership
8. Challenges

The structure and questions of the survey are annexed to the report.

To increase the reach and balance of the survey, we translated the introductory text and the questions into six languages: English, French, German, Italian, Spanish, and Portuguese.

We used SurveyMonkey to manage the dissemination of the survey and the collection of responses. The survey was disseminated to all diamond journals identified in the Directory of Open Access Journals (DOAJ), 30 mailing lists, 9 hosting platforms and aggregators, 10 partners and community websites, and several personalities and social media accounts to be shared worldwide. A crowd-sourced list of Diamond journals (particularly those not included in DOAJ) was also used to disseminate the survey to specific journals.

Open from 22 July to 11 September 2020, the survey produced 2,605 "raw" events, including approximately 1,900 identifiable answers (with name and email address of the respondent). Eventually, after further cleaning (deduplication, removal of fake answers), we collected 1,619 valid responses.

From the 94 questions, 21 were not asked to journals who declared being indexed in DOAJ because data was already available there. To the question: "Is the journal already registered in DOAJ?", 1,136 journals answered "yes" (skipping questions 8 to 29), 431 answered "no", and 52 answered they "don't know". Data were then extracted from DOAJ for the 1,136 journals concerned and added to the final dataset to be analysed.

For publication of the dataset and reference to individual answers in the reports, names and email addresses of the respondents, as well as identification of the journals (title, URL, ISSN), were removed. The individual responses are identified in the following reports by unique numerical identifiers generated by SurveyMonkey.

Different circumstances (the scope of the organisation funding the study, the focus of the call for tender, and the composition of the consortium) influenced the collection of information, particularly in terms of geographic representativeness. Section 1 below gives details about the geographical biases of our dataset, compared to the geographical distribution that can be found in other databases.
In addition to geographical bias, there may be other biases in the responses due to the motivation of journals to participate in the survey or not. For instance, journals may have decided to participate to demonstrate their viability, or conversely, to highlight their needs for additional support.

Analysis of the free text submissions

Challenges of the analysis

The survey received 7019 free text submissions. In contrast with the other inputs, these elements are not pre-structured: the respondents were free to develop their ideas or to include observations that were beyond the scope of the question. Because of this freedom, this resource is very important as it raises potential points and suggestions that were not anticipated, but it also is more challenging to analyse.

Attrition of participation is a major issue. This problem is not limited to the free text; it affects all the fields of the survey that could not be recovered from the DOAJ since the respondents could skip a question for a variety of reasons, either because they were not interested or because they did not have time.

In the case of the free text, some of the submissions could be deemed irrelevant. For example, in the response to a question about how funders may support non-commercial journals in the future, more than 100 respondents simply restated their current funding situation. Additionally, many of the answers are very brief and not completely exploitable because they include a simple phrase that may not accurately summarize the situation of the journal. On the other end of the spectrum, 50-100 free text responses are very detailed and therefore become more highly represented when the corpus of submissions is analysed at the sentence or the statement level rather than at the text level.

As a result, any quantitative analysis of the distribution of answers or potential recommendations should proceed cautiously as we are dealing with a series of nested samples with only a portion of the total respondents answering the questions and, within those responses, only a share is exploitable. Additionally, we had to deal with the fact that the more extensive answers would be more representative.

Exploration of the corpus

The corpus was too large to perform simple qualitative analysis. However, the corpus was too small to fit with standard text mining techniques like comparisons of vocabulary (with tf-idf) or topics modelling. Within a few of the questions, some important words or concepts occur very
sparingly (less than 20 occurrences) since respondents were free to use synonyms or alternative expressions.

For various questions, it was possible to retrieve the main arguments using a syntax analysis with Spacy. The graph below lists the most important hierarchical syntax relationships between a *headword* and a *dependent* word in a sentence for the peer review challenges.

The main arguments in the corpus peer review challenges

**Quantitative analysis with Spac NLP tree**

This approach worked well for the peer review challenge since the submissions are heavily dominated by the issue of finding and recruiting reviewers. Yet beyond this major thematic, the other topics are quickly buried under a long tail of alternative formulations. For instance, the management of review occurs less than 10 times, simply because there are multiple ways to express this idea.

Consequently, we explored alternative methods that were not limited to a formal dataset of word occurrences but relied on a "semantic space" of words and sentences. BERT is an important novel application in computational linguistics that uses deep learning models to recover the semantic and syntax relationships within a corpus.

Semantic map of the sentences from the peer review challenges. The interactive version of the map can be accessed here: http://numapresse.org/divers/peer_review_umap.html
This semantic map gives a general outlook of the leading thematics in the corpus. The position of each sentence is optimized to bring statements with similar meaning closer together. We used a simple clustering algorithm (in colours) to define potential "classes" of statements.

All these elements can be used for exploratory analysis. For example, clusters and positions remain fuzzy approximations and have to be interpreted by a qualitative reading of several sentences (which can be retrieved by hovering the mouse over the points).

In parallel, we manually checked the statements included in the 50 longer submissions of each free text corpus. Given the "long train" distribution of the length of the text, this has proven a rather efficient approach as it favours the more detailed and articulated comments that frequently include more elaborated propositions.

A systematic assessment based on clusters
While the exploratory tools give an approximative assessment of the arguments presented by the respondents, they do not make it possible to extract valid statistics.

✔ The raw occurrences numbers do not take into account all the possible alternatives.
✔ The clustering methods remain fuzzy and probabilistic; they are indicative of discursive consistencies but should not be taken at face value.
✔ Text mining methods are focused on the "semantic" value of the statements: they are not able to discern intent. For instance, it's not possible to automatically dissociate the descriptions of the ongoing practices of the journal from their recommendations of what should be implemented.

To give a more systematic assessment, we relied on a semi-automatic method. We used small, very consistent clusters (HDBSCAN method) as a starting point. While some of these clusters are likely to be duplicates and uncover the same range of thematic/arguments, they include much less noise. We proceeded to annotate them manually using an Excel file ordered by the clusters.

<table>
<thead>
<tr>
<th>cluster</th>
<th>id</th>
<th>sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>54</td>
<td>find_reviewer 11824629414</td>
<td>Difficulty in finding available reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11824710294</td>
<td>Difficulty finding reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11826018033</td>
<td>Difficulty finding reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11832844164</td>
<td>Difficulty finding reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11837092483</td>
<td>difficulties in finding reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer, quality_rev 11876359951</td>
<td>Review quality is inconsistent; reviewers are difficult to find</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11888613990</td>
<td>problems with finding suitable reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11911510400</td>
<td>Difficulties in finding available reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11925538476</td>
<td>Difficulty of engaging competent reviewers</td>
</tr>
<tr>
<td>54</td>
<td>find_reviewer 11929028010</td>
<td>Problems in finding reviewers</td>
</tr>
</tbody>
</table>

Annotating the clusters of sentences: the cluster n°54 all contained assessment about difficulties in the recruitment of reviewers.

The pre-defined clusters speed up the annotation substantially because they are frequently centred on one or two main topics. Additionally, statements non-relevant for the identification of challenges or solutions tend to be bundled together and can be quickly dismissed.

Databases
To be able to quantify various dimensions of the diamond open access landscape, beyond what we can derive from survey results, we have consulted various databases. The most important are the Directory of Open Access Journals (DOAJ), the ROAD Directory of Open Access Scholarly Resources, and Crawford's Gold Open Access (GOA) databases.
Introduction

The Directory of Open Access Journals (DOAJ) provides openly available data on over 15,000 open access journals. It details ISSNs, subject, language, publisher, publisher country, license and date of addition. It also allows separating journals charging publication fees from those that do not, i.e. diamond journals and data can be downloaded. DOAJ is an independent, non-profit organisation managed by Infrastructure Services for Open Access (IS4OA). Journal inclusion in DOAJ is dependent on application by journals, but journals are vetted and are only included if they meet a large number of technical and quality requirements, including peer review requirements.

We assume DOAJ data were correct when created, but we acknowledge that such data have a risk of becoming less correct over time, as journals rarely take the initiative to update them as realities change. In 2014, DOAJ started a re-application process where all journals in DOAJ had to submit new applications with full information, so no metadata should be older than 2014, and most should be even more up to date than that. Another source of uncertainty is the occurrence of typos, misunderstandings, etc. when entering data.

The ROAD Directory of Open Access Scholarly Resources (ROAD) is a service provided by the ISSN International Centre and has data on almost 45,000 serial publications that have registered as being open access. It shows ISSNs, subject, language, publisher, country, publication type and status. Unfortunately, ROAD does not have information on fee-charging, making it impossible to discern between APC-based and non-APC journals. Also, ROAD depends on self-registration and has no strict vetting. The database is important because it is more inclusive than DOAJ, potentially listing many journals that are diamond and that may have sufficient quality but that have not yet applied for inclusion in DOAJ, along with journals that may have been rejected by DOAJ. The ROAD indirectly helps assess the total number of diamond journals statistically by matching the full database with databases that do have information on fee-charging, and by manually checking a sample of journals.

The annually updated Gold Open Access (GOA) databases provided by Walt Crawford hold ISSN, subject and country but have special value added because of the information on APC fee levels and on journal article volume, allowing analyses by journal size brackets. This dataset also contains information about the publisher category and scholarly field. We used values from GOA5 (2014-2019), and created corresponding values for journals in our DOAJ file not found in this dataset. Crawford’s data are based on a download from DOAJ on 1 January 2020.

Our separate DOAJ analyses are based on a file downloaded on 2 June 2020, these data are published continually (https://doaj.org/csv). For some questions, data for some of the survey journals not in DOAJ are added to the DOAJ data and analysed with them. Of the survey journals, only 392 gave complete enough answers to the questions replicating DOAJ information that it was seen as beneficial to include them with the DOAJ-based analyses. DOAJ data added to the survey are taken from a file downloaded on 18 September 2020. For Section 2, we have occasionally used a dump of 1 February 2021. For ROAD, a download was made on 11 November 2020.

For the paragraph headed “Registered or in registration in DOAJ” we have relied on a spreadsheet published by DOAJ, detailing additions and removals, the latter also with a short description of why. It was downloaded in late January 2021, but only data from earlier years were used. The URL for this resource is:

https://docs.google.com/spreadsheets/d/183mRBRqs2jOyP0qZWNX8dUd02D4vL0Mov_kgYF8HORM/edit#gid=1650882189&range=A1

Literature review

We conducted a literature search, which led us to collect 160 references, focusing more particularly on the open access business models. The literature review was used primarily to design the survey, prepare the focus groups, and analyse the answers collected. The references are stored in a Zotero library, available online.
Interviews and focus groups
We organised three focus groups of journals, two in English and one in Spanish, and ten interviews of hosting platforms and infrastructures. Each focus group lasted for two hours. The participants were selected based on their free text submission to provide a representative selection of the diversity of diamond models.

The discussion was initially focused on the requirements of cOAlition S using an experimental journal checker. This is a small application that displayed the conformity of each participant in different areas (technical requirements, editorial quality, copyright & licenses, financial data), based on their submitted data to the survey. This opened a wider debate on the main challenges that journals meet and where support could be most effective.

All the focus groups and the interviews were conducted remotely using an interview guide (with two different versions: one for the journals and one for the hosting platforms). The guide was not used as a constraining form but as a resource of potential questions and suggestions depending on the evolution of the discussion.

Complementary studies
In parallel, SPARC Europe conducted a study on Scoping Open Science Infrastructures in Europe that provided complementary information about the services and hosting platforms OA journals rely on.

Finally, this study will be followed by a complementary study led by the Center for Sociology of Innovation to follow up recommendations with a complementary study to model operational funding scenarios. This will serve to transform the recommendations and action plan into possible concrete funding and support schemes and to test them against the actual capacity of the different stakeholders to implement them.
References to data sources in the report
In the following report, the data sources used can be mentioned as:

✔ Bibliographic references: “Potts et al., 2017”
✔ Survey questions: “Survey Q17”
✔ Survey free-text answers: “(11889977544)”
✔ Databases: “DOAJ”

Complete bibliographic references can be found at the end of this report. All the survey questions can be found in Annex. The list of the databases used is presented in the introduction.
Landscape 1
Charting variety, scope and impact of OA diamond journals in various disciplines and regions
by Jeroen Bosman & Bianca Kramer
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Jeroen Bosman (@jeroenbosman) is a scholarly communications and geoscience librarian at Utrecht University Library. He is an expert in the field of open science and open access policy, practices and tools, as well as scholarly search engines and web search. His main interests are open access and open science in all academic fields, scientometrics, and visualisation and innovation in scholarly communication. He is an avid advocate for open access, open science, Scholarly Commons and for experimenting with open alternatives. He has 25+ years teaching experience in academic information skills and has led dozens of open science workshops, including internationally. He has a wide international network among all stakeholder groups in scholarly communication. He is co-lead of the 101 Innovations in Scholarly Communication project that surveys and charts developments in scholarly communication, research workflow tools and practices. He has co-authored numerous publications on open science and aspects of publication cultures. All activities are carried out in the open and resulting materials are fully open (CC-BY or CC0) and linked to his ORCID account.

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Bianca Kramer (@MsPhelps) is a scholarly communication and biomedical librarian at Utrecht University Library, with a strong focus on open science policy and practice, open infrastructure and metadata. She investigates trends in innovations and tool usage across the research cycle in the project 101 Innovations in Scholarly Communication, with special attention to open scholarly infrastructure. She researches and leads workshops on various aspects of scholarly communication (e.g. preprints, peer review, altmetrics) for researchers, students and other stakeholders in scholarly communication, and has an active interest in open access developments and monitoring, as well as in developments around rewards and recognition. She was a member of the EC Expert Group on the Future of Scholarly Communication and Scholarly Publishing and, together with Jeroen Bosman, researched and authored the report “Open Access Potential and Uptake in the Context of Plan S - A Partial Gap Analysis” for cOAlitionS.

with contributions from
Jan Erik Frantsvåg
The University Library, UiT The Arctic University of Norway
1.1 Number of OA diamond journals and articles
   › 1.1.1. How many OA diamond journals have we identified in the world? 25
   › 1.1.2. How has the number of OA diamond journals developed over time? 28
   › 1.1.3. How many articles are published by OA diamond journals in total? 30
   › 1.1.4 What is the number of articles in OA diamond journals over time? 31

1.2 Distribution of OA diamond journals
   › 1.2.1. Distribution of OA diamond journals by region 31
   › 1.2.2. Distribution of OA diamond journals by discipline 33
   › 1.2.3. Distribution of OA diamond journals by publisher size and type 35

1.3 Journal size
   › 1.3.1. OA diamond journal size, contrasted with APC-based journals 36
   › 1.3.2. OA diamond journal size by region 37
   › 1.3.3. OA diamond journal size per discipline 38
   › 1.3.4. OA diamond journal size by publisher type 39

1.4 Scope
   › 1.4.1 The institutional, national and international authorship of OA diamond journals 40
   › 1.4.2. National and international readership of OA diamond journals 41
   › 1.4.3. Publishing language diversity 41

1.5 Visibility of OA diamond in scholarly databases and indexes 44

1.6 Journal dynamics and life cycle
   › 1.6.1. Journal age and pathways to OA diamond 45
   › 1.6.2. Journal dynamics: Developments in article volume 46

1.7 Summary and conclusion 47
To characterise the current OA diamond landscape, in this chapter we chart the variety, scope and impact of OA diamond journals across disciplines and regions. We try to estimate the total number of diamond journals, including those outside DOAJ. We then look at the development of the OA diamond landscape over time as reflected in DOAJ, both in terms of number of journals and number of articles. We also describe the distribution of diamond journals, across regions, disciplines and publisher types, paying specific attention to journal size.

Using information obtained in our survey of OA diamond journals, we look at the scope of journals in terms of authorship and readership they cater for — are those at the institutional, national or international level? We also consider publishing language diversity of OA diamond journals and their visibility in scholarly databases and indexes. Finally, information from our survey allowed us to look at journal dynamics and lifecycle: changes that have occurred through time with respect to online access, openness or business models, as well as whether article volumes are increasing, declining or stable. The patterns and trends reported provide insight into the diversity and importance of the OA diamond journal landscape and the accompanying opportunities and challenges in supporting this publishing model.
1.1 Number of OA diamond journals and articles

1.1.1 How many OA diamond journals have we identified in the world?

To be able to get a grasp on the size of the OA diamond landscape, it is fundamental, but not easy, to get hold of the basic numbers of its size and share. There are various estimates of the total number of journals (Table 1); however, no one authoritative number exists and numbers differ due to the definitions, sourcing, counting and vetting methods used. Table 1 shows various estimates, based on the different sources and criteria these databases use.

<table>
<thead>
<tr>
<th>Scope of definition of ‘journal’</th>
<th>Number reported and source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarly journals</td>
<td>104,081 (Elektronische Zeitschriftenbank)</td>
</tr>
<tr>
<td></td>
<td>48,970 (Microsoft Academic)</td>
</tr>
<tr>
<td></td>
<td>47,116 (MIAR)</td>
</tr>
<tr>
<td></td>
<td>38,589 (Scopus)</td>
</tr>
<tr>
<td>Active scholarly journals</td>
<td>56,689 (Scilit (Crossref based))</td>
</tr>
<tr>
<td></td>
<td>35,616 (JournalTOCs)</td>
</tr>
<tr>
<td></td>
<td>34,779 (EBSCO host)</td>
</tr>
<tr>
<td></td>
<td>30,187 (Microsoft Academic)</td>
</tr>
<tr>
<td></td>
<td>25,017 (ERA journal list)</td>
</tr>
<tr>
<td></td>
<td>24,184 (Scopus)</td>
</tr>
<tr>
<td></td>
<td>21,420 (Web of Science)</td>
</tr>
<tr>
<td>Active scholarly journals, open access, not all guaranteed peer reviewed</td>
<td>37,333 (ROAD)</td>
</tr>
<tr>
<td></td>
<td>17,537 (JournalTOCs)</td>
</tr>
<tr>
<td></td>
<td>16,158 (Scilit (Crossref based))</td>
</tr>
<tr>
<td></td>
<td>13,822 (Ullrichs)</td>
</tr>
<tr>
<td>Active scholarly journal, open access, peer reviewed</td>
<td>15,581 (DOAJ)</td>
</tr>
<tr>
<td></td>
<td>6,299 (Scopus)</td>
</tr>
<tr>
<td></td>
<td>4,762 (Web of Science)</td>
</tr>
</tbody>
</table>

Table 1. Global journal number estimates, checked November 2020. Numbers are as reported at the moment of checking and not for a particular year, except for Scilit where the numbers refer to 2019. Sources: Listed in table

We attempt to estimate the number of active OA diamond journals globally beyond those in DOAJ. For that we can look at the ROAD database of open access journals, which is maintained by the ISSN registry. That database is quite inclusive, though obviously journals without ISSNs are not listed. First, it is interesting to see a first result of DOAJ/ROAD overlap of OA journals (APC and non-APC combined), derived from data at the ISSN Gold list from Bielefeld (version 4.0) that matched DOAJ and ROAD (Figure 1).

We attempt to estimate the number of active OA diamond journals globally, beyond those in DOAJ by analysing data from several sources. The ISSN Gold list from Bielefeld (version 4.0) matched DOAJ and ROAD, the database of ISSN-registered open access journals (Figure 1).
According to the Bielefeld ISSN-Gold 4.0 list, ROAD overlaps with DOAJ with 8,933 records, leaving 28,400 journals listed in ROAD but not in DOAJ. Of the 14,527 DOAJ journals in the ISSN-Gold 4.0 list, 14,024 were still found in DOAJ in September 2020 and, of those, 10,194 were non-APC.

If one assumes that the distribution of APC versus non-APC in the part of ROAD that does not overlap with DOAJ is the same as in DOAJ (at 73% OA diamond, see Table 2), we could estimate the total number of OA diamond journals to be \(0.73 \times 28,400\) (ROAD) + 10,194 (DOAJ) = 30,926.

<table>
<thead>
<tr>
<th>DOAJ in ISSN-Gold 4.0</th>
<th>Found in DOAJ in Sept 2020</th>
<th>APC</th>
<th>Non-APC</th>
<th>%APC</th>
<th>%Non-APC</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,527</td>
<td>14,024</td>
<td>3,829</td>
<td>10,194</td>
<td>27%</td>
<td>73%</td>
</tr>
</tbody>
</table>

Table 2. Open access models of DOAJ-listed journals covered in ROAD and not covered in ROAD.

Sources: DOAJ, Bruns et al. 2020 (ISSN-Matching of Gold OA Journals 4.0)

However, there is still the possibility that journals in ROAD that are not in DOAJ have a different OA diamond share than journals that are in DOAJ. We verified this by looking at a random sample of 500 records labelled as active scholarly journals, from a download of the full ROAD database. The sample of 500 was stratified to make sure that the main disciplinary groups (HSS, science, technical/medical sciences) were equally represented in the sample and full database. Of these 500, 382 were not found to be in DOAJ. We manually checked the websites of those journals to see whether they were charging fees or could be labelled OA diamond. We then applied the OA diamond percentage of that sample to all journals listed in ROAD but not in DOAJ to arrive at a more reliable estimation of the minimum and maximum number of OA diamond journals outside DOAJ.

We found that in our sample of 382 journals listed in ROAD but not in DOAJ, between 23.8% and 65% are OA diamond. The lower figure of 23.8% is journals that explicitly state that they do not levy APCs. The higher figure of 64.7% includes journals that do not provide data on whether they have APCs or not (Figure 2). In addition, we found that some 19% of journals are not an active open access journal because of having ceased publishing, being a closed/subscription journal or being unfindable. Our revised...
total estimate of OA diamond journals (with an ISSN) is therefore somewhere between 
0.238*28,400 + 10,194 = 16,953 and 0.647*28,400 + 10,194 = 28,569

Both the lower bound of ~17,000 and the upper bound of ~29,000 OA diamond jour-
nals have the issue that the ones in those numbers that are based on ROAD data have 
not been vetted for quality in a manner comparable to the DOAJ application process. 
The upper bound additionally has uncertainty about journals that might levy APCs 
without stating so on the website, though we expect these cases to be quite rare. 
So, though for many thousands of journals there remains some uncertainty, it seems 
probable that there are up to 29,000 diamond OA journals. Finally, it is relevant to note 
that of all the OA diamond journals encountered in the sample, next to zero self-identify 
as being a diamond or no-APC journal.

Though it is important to have this assessment of the overall number of OA diamond 
journals, in the remainder of this chapter we will present more detail on subsets of that: 
either journals in DOAJ, in our survey, or the combination of those two (Figure 3).
1.1.2 How has the number of OA diamond journals developed over time?

Apart from the total size and share of OA diamond, it is interesting to look at the development of the OA diamond landscape over time. How old is the OA diamond journal model? Are new OA diamond journals still being created? Figure 4 shows the development of DOAJ journal numbers over a period of time, using the year the journal was added to DOAJ. There is usually a time lag between a journal being established as OA or converted to OA, and being accepted by DOAJ, so many journals will be older than this graph suggests. This graph excludes journals that have been removed by DOAJ. Note that 2020 data only contains information until early June 2020. When looking at just the OA diamond journals, we see a similar pattern (Figure 5).

Figure 4. Open access journals by year of addition to DOAJ. Source: DOAJ

Figure 5. OA diamond journals by year of addition to DOAJ. Source: DOAJ

Figure 6. APC-based open access journals by year of addition to DOAJ. Source: DOAJ
The development over time is strikingly similar for both OA diamond and APC-based journals (Figure 6). There was strong growth until 2017, except in 2014, when the DOAJ re-application process started and many resources were spent on that. The re-application process also removed approximately 5,000 journals between 2014 and 2017. There is some decline in the number of new journals since 2017, which could indicate that DOAJ has, to some extent, “exhausted” the pool of eligible journals that wish to be listed, and/or a slower growth in the number of eligible journals. Minor changes from year to year could be the result of changes in the queue of pending applications.

Both the number of journals admitted and the number of journals removed have grown over the last three years, resulting in an overall growth in DOAJ data (Figure 7). Unfortunately, no data exists on application numbers, although DOAJ reports having a rather high rejection rate, for various reasons.

The data above shows when OA diamond journals were added to DOAJ, not necessarily when they were created or first made their content available OA. Until late 2020, DOAJ metadata also contained a field: “First calendar year journal provided online open access content”. From the data we find—starting with the year 1881—it seems obvious that, at least for some journals, this is the date of the oldest content made available, not the date this content was made available. We see that there is much content made available that dates from before the journal was added to DOAJ (Figure 8). Obviously, some older journals have done retro-digitization of content. Because of the inherent ambiguity in the question, DOAJ has removed this field from their current application form and metadata (DOAJ 2021 [2]). Our survey does provide some additional information on when OA diamond journals were created, made available online, made available open access, and made available as OA diamond, which is discussed in paragraph 1.6.1.
1.1.3 How many articles are published by OA diamond journals in total?

Journal numbers do not tell the full story, as journals can publish just a handful or many hundreds of articles annually. Based on numbers for 14,368 DOAJ journals, partially from Crawford’s GOA(5) and partially counted manually, and using the annual average number of articles per journal for the years 2017–2019, we estimate an annual production of:

- ✔ 356,000 articles per year in 10,449 OA diamond journals
- ✔ 453,000 articles per year in 3,919 APC-based journals

Assuming that the annual number of articles in scholarly journals is around 4.0 to 4.4 million (averaging 2017–2019, using data from the bibliographic databases Dimensions and Lens), we see that OA diamond publishes around 8–9% of the total number of scholarly articles, and APC-based OA journals around 10–11%. This indicates that OA journals in DOAJ publish about one-fifth of the total global scholarly output. This is an estimation at best, since it does not include diamond journals not in DOAJ, and is limited to coverage of scholarly output in Dimensions and Lens (which are already more inclusive than e.g. Web of Science and Scopus).

The numbers used here represent not only research articles but also other types of content. Almost half of the journals in our survey also contain book reviews, and substantial numbers also publish conference proceedings and opinion pieces (Figure 9). We know that book reviews are an important publication type for humanities scholars in particular.
1.1.4 What is the number of articles in OA diamond journals over time?

It is also interesting to look at the change in article numbers over time. Crawford’s GOA(5) data set gives us data for the years 2014–2019 for journals in DOAJ at the end of 2019 (Figure 10).

OA diamond journals show a continuous, but slowing, growth in article numbers between 2014 and 2018 and a decline in 2019. APC-based journals, on the other hand, show a continuous and accelerating growth over the whole period. The share of OA diamond journals in DOAJ declined slowly between 2017-2018, but more markedly in 2019.

(Note: These numbers are somewhat lower than the corresponding numbers provided in section 1.1.3. This is because section 1.1.3 includes article counts for 2017-2019 for journals added to DOAJ in the first half of 2020.)

1.2 Distribution of OA diamond journals

1.2.1 Distribution of OA diamond journals by region

It is by now common knowledge that the phenomenon of OA diamond is not equally strong in all parts of the world, with Latin America quoted regularly as having a strong OA diamond tradition (Becerril-García and Aguado-López 2019). But where exactly are
OA diamond journal publishers based? Looking at DOAJ, of the 11,000 OA diamond journals, about 45% are published in Europe and 25% in Latin America (Figure 11, top left). The remaining quarter originates from other world regions, with Asia taking the largest share of that and a surprisingly small number of journals based in the US and Canada. Europe’s share of OA diamond journals in DOAJ, though large, is still relatively weaker than its share of APC-based OA journals (Figure 11, top right), mainly due to the large number of those journals based in Western Europe. It is striking that the OA diamond model is indeed much more prominent among Latin American OA journals. Within Europe’s share, it is interesting to see that journals from countries grouped together by Crawford as "Eastern Europe" are also overwhelmingly of the OA diamond type.

We can check biases in our survey response by comparing the donuts in the top left and bottom left of Figure 11. The OA diamond journals in our survey that are also in DOAJ show an overrepresentation of Western Europe and US/Canada and an underrepresentation of Eastern Europe and Asia in particular. This may have been caused by biases in our survey dissemination practices, but other factors like language and capacity to respond may also have played a role. The journals from our survey that are not listed in DOAJ (Figure 11, bottom right) are even more characterised by a very large share of Western Europe, and smaller shares of Latin America and Eastern Europe, at least compared with DOAJ. However, we cannot be sure as to what extent the distribution of the latter category is due to biases or a reflection of real geographical differences between OA diamond journals.

In the survey data, we see an overrepresentation of Western European and US/Canada, at least compared with the population of OA diamond journals in DOAJ.
Figure 12. Shares of OA diamond and APC-based open access models in DOAJ-listed journals. Source: DOAJ

Figure 12 shows OA diamond and APC-based open access models in DOAJ by world region. We see that Western Europe has the largest proportion of APC-based journals, together with Africa, at around 45%. The US and Canada follow with 37%, and then Asia with 29%. The global average is 27% APC-based, 73% OA diamond journals. Even more clearly than in the previous figure is the dominance of the OA diamond model in Latin America with 95% being OA diamond, followed closely by Eastern Europe and the Middle East. Apparently there are reasons why OA journals from those regions have seen no reason (or opportunity) to embrace more commercial models. Most major, large commercial publishers are based in Western Europe or US/Canada, which explains some of the relative dominance of the APC-model in these regions. Without these publishers, Western Europe and US/Canada would be more similar to other regions. Africa seems to be an anomaly, but data indicates that there are relatively more journals in medicine and science, and a larger part of journals based with publishers than elsewhere.

1.2.2 Distribution of OA diamond journals by discipline

Since publication cultures vary widely between disciplines, it is important to zoom in on the distribution of OA diamond journals by subject domain. Crawford’s subject classification from GOA(S) was applied to both DOAJ and survey data to group journals into three subject groups: social sciences and humanities (HSS), medicine, and sciences. Comparing the OA diamond journals in DOAJ (Figure 13, top left) by discipline with APC-based ones (idem, top right) we above all see a dominance of HSS journals among OA diamond DOAJ titles, while HSS is the smallest group of disciplines among APC-levying journals.
That same HSS-prevalence is found in the OA diamond journals of the survey (Figure 13, bottom left and right). However, the survey data is slightly different in that it has a separate category for multidisciplinary journals, which in the DOAJ data are scattered over the other disciplines. The disciplinary distribution of surveyed OA diamond journals not listed in DOAJ is very much akin to that of those that are.

The share of APC and OA diamond models are markedly different in the three disciplinary groups (Figure 14). While the HSS journals in DOAJ are predominantly OA diamond, open access journals in science and especially medicine in DOAJ have less dominant OA diamond shares: about half for medicine journals and about two thirds for science journals. It should be noted that the apparent preference for OA diamond as opposed to APC based models in HSS need not be a direct consequence of the HSS field as such, but could also be more indirectly related via another explaining variable such as journal size, of which we know it is on average smaller in HSS fields. In addition,
small HSS journals are often owned by universities and societies who often prefer OA diamond models, while many big science and medicine journals are owned by commercial publishers, more inclined to use APC models.

1.2.3 Distribution of OA diamond journals by publisher size and type

One of the important aspects of the scholarly publishing landscape is its composition in terms of publisher sizes. This affects competition, economies of scale, market consolidation processes and more. For OA diamond journals, size is strongly skewed towards the very small publisher size brackets (Figure 15), with a large majority of journals published by those with five or fewer journals, and often even just a single one. APC-based OA also includes many journals from small publishers, but it also has a large number of journals from very large publishers. OA diamond journals are, to a quite limited extent, published by large publishers. This size composition can be viewed positively, as a reflection of diversity and researcher-led publishing. At the same time, it means a very fragmented sector with likely stronger challenges in terms of communication, support, collaboration and, potentially, also technical publishing competencies. The fact that few OA diamond journals belong to large publishers means that there is less bargaining power for funding, fewer resources for marketing and thus probably a lower visibility of the OA diamond sector as a whole.

Figure 15. Number of journals by publisher size in terms of journals published (size determined using the sum of OA diamond and APC-based journals). Source: DOAJ

In certain ways, related to publisher size is publisher type. Publisher types in the OA diamond sector (Figure 16) are characterised by a large (>70%) share of university-owned publishers, including university presses. Less than 20% of OA diamond journals are published by (commercial and non-commercial) open access publishers or traditional publishers, that together publish almost 60% of APC-based journals.

Figure 16. Open access publishers by type for the OA diamond sector (left) and the APC-based sector (right). Source: GOA(5)
1.3 Journal size

1.3.1 OA diamond journal size, contrasted with APC-based journals

The annual average number of articles per journal in DOAJ for the period 2017–2019 is 34 for OA diamond journals and 55 for APC-based journals. The corresponding medians are 23 and 25, respectively, indicating that a relatively small number of APC-based journals account for the rather large difference in averages. In DOAJ we find that the majority of OA diamond journals (54.4%) publish 24 or fewer articles per year; only 33.4% of APC-based journals have a similar size (Figure 17 and Table 3). On the other end of the scale, only 0.2% of OA diamond journals publish 500 or more articles per year, against 3.4% of APC-based journals.

When analysing the data on numbers of articles by journal size brackets (Figure 18), the number of articles appearing in very small journals (up to 10 articles per annum) is negligible, for both APC-based and OA diamond journals. However, whereas articles in APC-based journals predominantly appear in the larger journals (with 100+ articles), articles in OA diamond journals predominantly appear in the mid-range size of journals (10-99 articles).
### Table 3. OA journals by size and business model. Sources: DOAJ and GOA (5)

The survey also provides insights into the journal's size. The data (Table 4) suggest the same kind of distribution, skewed toward the lower size brackets, and even somewhat more than what DOAJ data tells us.

### Table 4. OA diamond journals by size. Source: Survey (Q16)

#### 1.3.2 OA diamond journal size by region

Looking more closely at OA diamond journals' annual number of articles published by geography and size (Table 5), we see that Asia, Australia/NZ, US/Canada and Western Europe have more journals in the smallest size group (0-24 articles) than the average. Eastern Europe, Latin America and the Middle East have more medium-sized journals than the average. The US/Canada and Western Europe have more of the largest journals (with 500+ articles) than average, though the absolute numbers are small for this group.
<table>
<thead>
<tr>
<th>Size group</th>
<th>Africa</th>
<th>Asia</th>
<th>Australia/NZ</th>
<th>Eastern Europe</th>
<th>Latin America</th>
<th>Middle East</th>
<th>US/Canada</th>
<th>Western Europe</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>69</td>
<td>1,227</td>
<td>63</td>
<td>983</td>
<td>1,178</td>
<td>348</td>
<td>374</td>
<td>1,438</td>
<td>5,680</td>
</tr>
<tr>
<td>25-49</td>
<td>34</td>
<td>322</td>
<td>19</td>
<td>657</td>
<td>991</td>
<td>351</td>
<td>129</td>
<td>669</td>
<td>3,172</td>
</tr>
<tr>
<td>50-99</td>
<td>14</td>
<td>151</td>
<td>7</td>
<td>322</td>
<td>363</td>
<td>123</td>
<td>57</td>
<td>195</td>
<td>1,232</td>
</tr>
<tr>
<td>100-499</td>
<td>5</td>
<td>53</td>
<td>4</td>
<td>79</td>
<td>79</td>
<td>31</td>
<td>16</td>
<td>76</td>
<td>343</td>
</tr>
<tr>
<td>500+</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>13</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td>1,756</td>
<td>93</td>
<td>2,043</td>
<td>2,612</td>
<td>579</td>
<td>2,391</td>
<td>10,449</td>
<td></td>
</tr>
</tbody>
</table>

Percentages

<table>
<thead>
<tr>
<th>Size group</th>
<th>Africa</th>
<th>Asia</th>
<th>Australia/NZ</th>
<th>Eastern Europe</th>
<th>Latin America</th>
<th>Middle East</th>
<th>US/Canada</th>
<th>Western Europe</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>57%</td>
<td>70%</td>
<td>68%</td>
<td>48%</td>
<td>45%</td>
<td>41%</td>
<td>65%</td>
<td>60%</td>
<td>54%</td>
</tr>
<tr>
<td>25-49</td>
<td>28%</td>
<td>18%</td>
<td>20%</td>
<td>32%</td>
<td>38%</td>
<td>41%</td>
<td>22%</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>50-99</td>
<td>11%</td>
<td>9%</td>
<td>8%</td>
<td>16%</td>
<td>14%</td>
<td>14%</td>
<td>10%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>100-499</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>500+</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5. Journals by geography and size in terms of number of articles published annually during the years 2017–2019. Source: DOAJ

1.3.3 OA diamond journal size per discipline

Applying Crawford’s subject classification from GOA(5) to the more recent DOAJ data used in this study, we can group journals into three subject groups: humanities and social sciences (HSS), medicine, and sciences. The average HSS OA diamond journal publishes 27 articles per year (median 20), science journals 43 (23) and medicine 47 (33), for the period 2017–2019. Among APC-based journals, HSS journals publish 49 articles annually (median 26), science 159 (41) and medicine 114 (47). Looking at sizes of OA diamond journals (Table 6), we see that medicine journals are markedly larger than HSS and science journals. Science journals are also somewhat larger than HSS journals.
<table>
<thead>
<tr>
<th>Annual articles</th>
<th>HSS Journals</th>
<th>HSS Percent</th>
<th>Medicine Journals</th>
<th>Medicine Percent</th>
<th>Science Journals</th>
<th>Science Percent</th>
<th>All OA diamond in DOAJ Journals</th>
<th>All OA diamond in DOAJ Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>145</td>
<td>2.3%</td>
<td>37</td>
<td>2.1%</td>
<td>61</td>
<td>2.7%</td>
<td>243</td>
<td>2.3%</td>
</tr>
<tr>
<td>5–9</td>
<td>615</td>
<td>9.7%</td>
<td>96</td>
<td>5.4%</td>
<td>190</td>
<td>8.3%</td>
<td>901</td>
<td>8.6%</td>
</tr>
<tr>
<td>10–24</td>
<td>3,073</td>
<td>48.2%</td>
<td>493</td>
<td>27.6%</td>
<td>970</td>
<td>42.2%</td>
<td>4,536</td>
<td>43.4%</td>
</tr>
<tr>
<td>25–49</td>
<td>1,897</td>
<td>29.8%</td>
<td>633</td>
<td>35.5%</td>
<td>642</td>
<td>28.0%</td>
<td>3,172</td>
<td>30.4%</td>
</tr>
<tr>
<td>50–99</td>
<td>539</td>
<td>8.5%</td>
<td>370</td>
<td>20.7%</td>
<td>323</td>
<td>14.1%</td>
<td>1,232</td>
<td>11.8%</td>
</tr>
<tr>
<td>100–499</td>
<td>95</td>
<td>1.5%</td>
<td>148</td>
<td>8.3%</td>
<td>100</td>
<td>4.4%</td>
<td>343</td>
<td>3.3%</td>
</tr>
<tr>
<td>500+</td>
<td>5</td>
<td>0.1%</td>
<td>7</td>
<td>0.4%</td>
<td>10</td>
<td>0.4%</td>
<td>22</td>
<td>0.2%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>6,369</td>
<td>100.0 %</td>
<td>1,784</td>
<td>100.0 %</td>
<td>2,296</td>
<td>100.0 %</td>
<td>10,449</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

**Table 6. Distribution of DOAJ OA diamond journals in terms of number of articles published annually during the years 2017-2019 by field and journal size. Source: GOA(5)**

### 1.3.4 OA diamond journal size by publisher type

In his GOA(5) database, Crawford also classifies publishers in four categories: Open Access publishers (publishing only OA), Societies (including associations and government agencies), Traditional publishers (publish both OA and subscription journals), and Universities (including colleges and educational and research institutes). We have added the same classification for journals not in Crawford’s data, and find the following for OA diamond journals in DOAJ (Table 7).

<table>
<thead>
<tr>
<th>Annual articles</th>
<th>Open access publishers Journals</th>
<th>Open access publishers Percent</th>
<th>Societies Journals</th>
<th>Societies Percent</th>
<th>Traditional publishers Journals</th>
<th>Traditional publishers Percent</th>
<th>Universities Journals</th>
<th>Universities Percent</th>
<th>All OA diamond in DOAJ Journals</th>
<th>All OA diamond in DOAJ Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>54</td>
<td>3.9%</td>
<td>32</td>
<td>2.9%</td>
<td>5</td>
<td>1.3%</td>
<td>150</td>
<td>2.0%</td>
<td>241</td>
<td>2.3%</td>
</tr>
<tr>
<td>5–9</td>
<td>188</td>
<td>13.7%</td>
<td>88</td>
<td>8.0%</td>
<td>13</td>
<td>3.3%</td>
<td>603</td>
<td>8.1%</td>
<td>892</td>
<td>8.6%</td>
</tr>
<tr>
<td>10–24</td>
<td>513</td>
<td>37.5%</td>
<td>404</td>
<td>36.8%</td>
<td>107</td>
<td>27.4%</td>
<td>3470</td>
<td>46.4%</td>
<td>4494</td>
<td>43.5%</td>
</tr>
<tr>
<td>25–49</td>
<td>376</td>
<td>27.5%</td>
<td>349</td>
<td>31.8%</td>
<td>120</td>
<td>30.7%</td>
<td>2292</td>
<td>30.6%</td>
<td>3137</td>
<td>30.3%</td>
</tr>
<tr>
<td>50–99</td>
<td>175</td>
<td>12.8%</td>
<td>165</td>
<td>15.0%</td>
<td>85</td>
<td>21.7%</td>
<td>793</td>
<td>10.6%</td>
<td>1218</td>
<td>11.8%</td>
</tr>
<tr>
<td>100–499</td>
<td>57</td>
<td>4.2%</td>
<td>57</td>
<td>5.2%</td>
<td>55</td>
<td>14.1%</td>
<td>167</td>
<td>2.2%</td>
<td>336</td>
<td>3.2%</td>
</tr>
<tr>
<td>500+</td>
<td>5</td>
<td>0.4%</td>
<td>3</td>
<td>0.3%</td>
<td>6</td>
<td>1.5%</td>
<td>7</td>
<td>0.1%</td>
<td>21</td>
<td>0.2%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1,368</td>
<td>100.0 %</td>
<td>1098</td>
<td>100.0 %</td>
<td>391</td>
<td>100.0 %</td>
<td>7482</td>
<td>100.0 %</td>
<td>10,339</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

**Table 7. Distribution of DOAJ OA diamond journals and number of articles published annually during 2017-2019 by publisher type and journal size. Source: GOA(5)**
Our first observation is that the majority (72%) of OA diamond journals are published by universities. Open access publishers and universities also publish mainly small journals: more than 50% of their journals publish fewer than 25 articles per year. Traditional publishers have only 32% of their journals in this category and have the largest fraction of large journals (100+) at nearly 16%, more than double any other publisher group.

1.4 Scope

1.4.1 The institutional, national and international authorship of OA diamond journals

In the discussion on the role of scholarly journals, it is interesting to put a finger on what audiences the journals cater for, in terms of authorship as well as readership — those at the institutional, national or international level? The study's survey explores to what extent OA diamond journals are nationally or internationally oriented in terms of authorship as well as readership. In so doing, whilst also analysing this by world region and disciplines, the report goes beyond the simple binary classifications of international and regional journals often found. It does this by asking what proportion of a journal's authors is from the same country as the journal. The results (Figure 19) show the importance of local journals, especially in Latin America and the Middle East, where over three-quarters of journals report that at least half of their authors are from the same country as the journal. Looking at disciplines, it becomes apparent that local OA diamond journals are not only important in HSS, but also in medicine and for multidisciplinary journals. Compared to these disciplines, OA diamond journals in the sciences have an internationally-oriented author population more often.

![Figure 19. Proportion of authors from the same country as the journal (by region and discipline of journal). Source: Survey (Q37, n=1,365 (region), n=1,269 (discipline))](image1)

Though many OA diamond journals have a national focus, the survey found that the number of journals that primarily serve authors at the institution the journal is associated with is very low (Figure 20). Across regions, 5-10% of journals report a majority of authors coming from the same institution as the journal. Looking at disciplines, these journals are most often found in medicine, although this still only concerns a small minority of journals in this discipline.

![Figure 20. Proportion of authors from inside the journal’s owning organisation (by region/discipline of journal). Source: Survey (Q36, n=1,371 (region), n=1,278 (discipline))](image2)
1.4.2 National and international readership of OA diamond journals

The survey also asked whether journal readership is larger outside or inside the journal's country. Here again we see the international orientation of many OA diamond journals, as shown in Figure 21. Most notable exceptions are journals from Latin America and the US/Canada where the majority report to predominantly serve a national audience. Looking at disciplines, the largest proportion of more internationally-oriented OA diamond journals are found in the sciences. For HSS and medicine, about an equal number of OA diamond journals report a more international orientation as do a more national orientation, and the same is true for multidisciplinary journals.

Figure 21. Share of journals stating their readership is mainly inside or outside their country (by region and discipline of journal). Source: Survey (Q80, n=1,274 (region), n=1,202 (discipline))

1.4.3 Publishing language diversity

In DOAJ, journals list the languages they publish in and data show that many journals report publishing, or at least accepting, content in more than one language. Table 8 shows all languages mentioned by more than 100 journals, after harmonisation of the data.

However, a high number of listings for a particular language does not necessarily mean it is much used in the full-texts. In addition, a journal listing more than one language will more often than not publish (much) more in one language than in the other(s), so the table only shows how often a language is mentioned as a language the journal (may) publish full-text content in. Over 100 journals do not use any of these 15 languages for their full-text articles.

We see that while English is the most common language, it is more important for APC-based journals than for OA diamond ones. Spanish, Portuguese and French play a much more important role for OA diamond journals than for APC-based ones. Generally, this holds for most languages other than English, with Ukrainian and Persian as the notable exceptions which, unlike most other languages, play an about equally large role in both models.
A somewhat different picture arises from the survey data on accepted languages (Table 9). Though we found a comparable share overall of journals accepting English, that number appears to be even higher for surveyed journals not in DOAJ, though still lower than for APC-based journals in DOAJ. Also we find higher percentages for French, Spanish and Portuguese, probably in part also caused by choices made in the dissemination process of the survey. Due to the languages presented as preset options in the survey, the languages in Table 9 differ somewhat from the most frequently observed languages in DOAJ, with e.g. Indonesian, Turkish, Ukrainian hidden in the “Other(s)” category. The proportion of ‘Other(s)’ languages mentioned is also larger.

<table>
<thead>
<tr>
<th>Language</th>
<th>All DOAJ journals</th>
<th>OA diamond journals</th>
<th>APC-based journals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of journals</td>
<td>Percent</td>
<td>Number of journals</td>
</tr>
<tr>
<td>English</td>
<td>10,923</td>
<td>76.0 %</td>
<td>7,369</td>
</tr>
<tr>
<td>Spanish</td>
<td>2,776</td>
<td>19.3 %</td>
<td>2,681</td>
</tr>
<tr>
<td>Portuguese</td>
<td>1,917</td>
<td>13.3 %</td>
<td>1,820</td>
</tr>
<tr>
<td>Indonesian</td>
<td>1,329</td>
<td>9.2 %</td>
<td>951</td>
</tr>
<tr>
<td>French</td>
<td>993</td>
<td>6.9 %</td>
<td>953</td>
</tr>
<tr>
<td>Russian</td>
<td>733</td>
<td>5.1 %</td>
<td>593</td>
</tr>
<tr>
<td>Italian</td>
<td>529</td>
<td>3.7 %</td>
<td>513</td>
</tr>
<tr>
<td>German</td>
<td>417</td>
<td>2.9 %</td>
<td>394</td>
</tr>
<tr>
<td>Turkish</td>
<td>297</td>
<td>2.1 %</td>
<td>286</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>297</td>
<td>2.1 %</td>
<td>180</td>
</tr>
<tr>
<td>Persian</td>
<td>259</td>
<td>1.8 %</td>
<td>170</td>
</tr>
<tr>
<td>Polish</td>
<td>225</td>
<td>1.6 %</td>
<td>186</td>
</tr>
<tr>
<td>Arabic</td>
<td>164</td>
<td>1.1 %</td>
<td>132</td>
</tr>
<tr>
<td>Serbian</td>
<td>134</td>
<td>0.9 %</td>
<td>126</td>
</tr>
<tr>
<td>Catalan</td>
<td>125</td>
<td>0.9 %</td>
<td>120</td>
</tr>
<tr>
<td>None of the 15 languages listed above</td>
<td>110</td>
<td>0.8 %</td>
<td>87</td>
</tr>
</tbody>
</table>

Table 8: Languages OA diamond and APC-based journals publish in. Source: DOAJ

<table>
<thead>
<tr>
<th>Language</th>
<th>All survey journals</th>
<th>DOAJ journals in survey</th>
<th>Non-DOAJ journals in survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of journals</td>
<td>Percent</td>
<td>Number of journals</td>
</tr>
<tr>
<td>English</td>
<td>1,210</td>
<td>79%</td>
<td>828</td>
</tr>
<tr>
<td>Spanish</td>
<td>492</td>
<td>32%</td>
<td>373</td>
</tr>
<tr>
<td>French</td>
<td>342</td>
<td>22%</td>
<td>191</td>
</tr>
<tr>
<td>Portuguese</td>
<td>256</td>
<td>17%</td>
<td>198</td>
</tr>
<tr>
<td>Italian</td>
<td>146</td>
<td>10%</td>
<td>103</td>
</tr>
<tr>
<td>German</td>
<td>108</td>
<td>7%</td>
<td>54</td>
</tr>
<tr>
<td>Russian</td>
<td>32</td>
<td>2%</td>
<td>22</td>
</tr>
<tr>
<td>Japanese</td>
<td>14</td>
<td>1%</td>
<td>0</td>
</tr>
<tr>
<td>Arabic</td>
<td>7</td>
<td>0%</td>
<td>5</td>
</tr>
<tr>
<td>Chinese</td>
<td>2</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>Korean</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Other(s)</td>
<td>259</td>
<td>17%</td>
<td>178</td>
</tr>
</tbody>
</table>

Table 9: Languages OA diamond journals publish in. Source: Survey (Q18)
Many journals use more than one language, though two thirds appear to publish in just one language (Figure 22, Table 10). There is a clear difference between OA diamond journals and APC-based journals in DOAJ, with 14% of APC-based journals and 38% of OA diamond journals being multilingual. Note that this does not give a complete picture of multilingualism, since journals may use other languages not included in Table 9. This will not influence numbers significantly.

![Figure 22](image.png)

**Figure 22. Percentage of OA diamond and APC-based journals using one language or two or more languages. Source: DOAJ**

As to the number of languages accepted (Table 10), we see that OA diamond journals in DOAJ accepting four or more languages is almost 5%, but not even 1% among APC-based journals.

<table>
<thead>
<tr>
<th>All DOAJ journals</th>
<th>OA diamond journals</th>
<th>APC-based journals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of journals</td>
<td>Percent</td>
</tr>
<tr>
<td>1 language</td>
<td>9,849</td>
<td>68.5 %</td>
</tr>
<tr>
<td>2 languages</td>
<td>2,791</td>
<td>19.4 %</td>
</tr>
<tr>
<td>3 languages</td>
<td>1,097</td>
<td>7.6 %</td>
</tr>
<tr>
<td>4 languages</td>
<td>295</td>
<td>2.1 %</td>
</tr>
<tr>
<td>5 languages</td>
<td>154</td>
<td>1.1 %</td>
</tr>
<tr>
<td>6 languages</td>
<td>63</td>
<td>0.4 %</td>
</tr>
<tr>
<td>7 languages</td>
<td>8</td>
<td>0.1 %</td>
</tr>
<tr>
<td>12 languages</td>
<td>1</td>
<td>0.0 %</td>
</tr>
</tbody>
</table>

**Table 10. Number of languages accepted by OA diamond and APC-based journals, from the 15 languages mentioned in Table 8. Source: DOAJ**

Among survey respondents, the proportion of multilingual journals is even higher than in DOAJ (Figure 23, Table 11). Of the DOAJ journals included in the survey, 48% are multilingual (versus 38% of all OA diamond journals in DOAJ). Of the non-DOAJ journals in the survey, a full 60% are multilingual.
Finally, from the survey data on numbers of languages accepted, we find that among journals not in DOAJ, an impressive 14% accept four or more languages (Table 11).

<table>
<thead>
<tr>
<th>Language Levels</th>
<th>All survey journals</th>
<th>DOAJ journals in survey</th>
<th>Non-DOAJ journals in survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of journals</td>
<td>Percent</td>
<td>Number of journals</td>
</tr>
<tr>
<td>1 language</td>
<td>736</td>
<td>48%</td>
<td>560</td>
</tr>
<tr>
<td>2 languages</td>
<td>481</td>
<td>32%</td>
<td>324</td>
</tr>
<tr>
<td>3 language</td>
<td>163</td>
<td>11%</td>
<td>123</td>
</tr>
<tr>
<td>4 languages</td>
<td>69</td>
<td>5%</td>
<td>42</td>
</tr>
<tr>
<td>5 languages</td>
<td>50</td>
<td>3%</td>
<td>21</td>
</tr>
<tr>
<td>6 languages</td>
<td>21</td>
<td>1%</td>
<td>16</td>
</tr>
<tr>
<td>7 languages</td>
<td>3</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>8 languages</td>
<td>1</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 11. Number of languages accepted by OA diamond journals in the survey, from the languages in Table 9. Source: Survey (Q18)

1.5 Visibility of OA diamond in scholarly databases and indexes

The survey asked journals to indicate the databases and indexes where they are indexed, such as DOAJ, multidisciplinary bibliographic databases, regional databases (for Latin America), and library discovery services (Figure 24). Respondents provided answers that included both systems that index on a journal level (e.g. journal lists) and on an article level (e.g. search engines). Inclusion in databases and indexes increases visibility of OA diamond journals. It is therefore important for library discovery systems to include not only subscription journals, but also OA diamond journals in their databases, and for libraries to show that information to their users.

Answers also reflect the awareness of journal editors/owners as to the existence of indexes and databases and the relevance for their journals. For instance, respondents are much more aware of being indexed in Scopus and Web of Science (WoS) than of being indexed in the other multidisciplinary bibliographic databases, like Dimensions.
and Lens, even though both include all journals in Crossref (among other databases) and are freely accessible worldwide. All numbers reported here thus represent lower bound; actual numbers are probably higher and, in some cases, much higher. It would be useful to do a full check to assess the actual coverage of indexing, and to assess the degree of awareness of editors and owners of where their journals are indexed, but that goes beyond the remit of this study.

Figure 24. Databases that index their OA diamond journal, as reported by respondents: DOAJ (green), multidisciplinary bibliographic databases (blue), regional databases (yellow), library systems, including discovery systems (light blue), others (orange). Source: Survey (Q81, n=1,359)

1.6 Journal dynamics and life cycle

1.6.1 Journal age and pathways to OA diamond

Detecting trends in the OA diamond landscape is as important as describing current patterns. It is especially interesting to see how journals evolve over time from launch to now and to see whether change has occurred with respect to their online access, openness or business model. The survey collected information on the year of the journal’s creation, the year the journal first became available online, the year it was made available open access, and the year it was made available open access without charging authors (Figure 25). Results show that while older journals often started out in print, almost all OA diamond journals have been OA diamond from the time they became available online. Only a small proportion switched to an open access model after having been available online as a subscription journal, and very few have switched from an APC-based OA model to OA diamond. This can reflect a conscious or principled choice for using an OA diamond model, but can also be indicative of difficulty in switching from a paywalled or APC-based model to an OA diamond model.
1.6.2 Journal dynamics: Developments in article volume

The survey asked journals to indicate how the number of articles published per year has developed over the last five years (Figure 26). Has article volume been increasing, declining, remaining constant or fluctuating? Overall, almost three-quarters of journals reported constant or increasing article volume, which can be taken as an indication for journal health and stability. Almost one-fifth of journals appear less stable with fluctuating article volume, and 4% of journals reported declining article volumes.

When we relate the development of article volume to journal size, it appears that smaller journals (fewer than 25 articles/year) are less stable than larger journals, and journals that currently have between 25-100 articles per year are usually on a growing trajectory, with over 50% of these journals reporting an increase in the annual number of articles over the last five years (Figure 27).
No significant differences can be reported in the stability of OA diamond journals across disciplines (Figure 28), with the only exception being journals in medicine. In this discipline, more journals are growing than declining. This could also be a reflection of higher volume growth in medicine overall.

1.7 Summary and conclusion

There are almost certainly at least 17,000, but likely up to 29,000, OA diamond journals when we include journals that haven’t considered or haven’t succeeded in registering with DOAJ. However, we have data providing more in-depth insights only for OA diamond journals in DOAJ and in our survey.

We estimate that OA diamond publishes around 8-9% of the total number of scholarly articles, and APC-based OA journals around 10-11%. The share of OA diamond articles of all open access journals has been declining since 2017. Compared to APC-based
journals, OA diamond is especially strong in Eastern Europe and Latin America, and weaker in Western Europe. Over half of OA diamond journals are found in HSS. Within those disciplines, a large majority of open access journals is OA diamond, but also in medicine, about half of full OA journals is OA diamond.

Most OA diamond journals are relatively small, but not extremely small. This is markedly different from APC-based open access journals, where the majority of articles are published in large or very large journals. Most OA diamond journals are the sole journal of their publisher or are with a publisher having just a few journals. Most of these publishers are university-based. Though many OA diamond journals have a national focus in terms of authorship, readership is often international. The survey found that the number of journals that primarily serve authors at the institution the journal is associated with is very low.

We see that while English is the most common language, it is more important for APC-based journals than for OA diamond ones. In contrast to most APC-based journals, many OA diamond journals accept multiple languages.

Almost all OA diamond journals have been OA diamond from the time they became available online. Only a small proportion switched to an open access model after having been available online as a subscription journal, and very few have switched from an APC-based OA model to OA diamond. Almost three-quarters of journals reported constant or increasing article volume, which can be taken as an indication for journal health and stability.

In summary, OA diamond journals are very numerous, relatively small, often published by small university-based publishers, strong in HSS but important in other disciplines as well, and use the diamond model right from the moment of becoming accessible online.

The results indicate the importance of OA diamond journals. They also point at the main dimensions to reckon with when fostering OA diamond journals: their geographical and language diversity, their large number and often smaller size, and their publishers’ size.
Compliance

How OA diamond journals comply with industry standards exemplified by Plan S technical requirements

by Jan Erik Frantsvåg
Jan Erik Frantsvåg
The University Library
UiT The Arctic University of Norway

Early education in economics, banking and information science, later Master in Documentation Science. Early career in banking, later university administration. Since 2006, full-time open access worker at the University Library. @JEFrantsvag
This section is based on analysis of two data-sets: DOAJ metadata, where a large amount of information about journals is found in DOAJ; and survey data, where journals not in DOAJ have given much of the same information we find in DOAJ metadata, plus some more, and where DOAJ journals have given information not found in DOAJ metadata.

There are 532 journals in the survey that are not also in DOAJ, and 1,087 that are in DOAJ. Survey journals and DOAJ journals are often compared, and within DOAJ OA diamond and APC-based journals are likewise often compared. (In the survey, APC-based journals were not asked to participate.) In instances where there is no relevant information in DOAJ metadata, we compared survey journals that are also listed in DOAJ with those not listed in DOAJ.
2.1 Scientific and editorial quality

2.1.1 Compliance with COPE principles

Source: Survey Q52

Plan S requirements specify “a solid system in place for review according to the standards within the relevant discipline and guided by the core practices and policies outlined by the Committee on Publication Ethics (COPE).” COPE represents good standards for review and other editorial practices, and issues guides and other resources to help editors. No explicit information is available in DOAJ metadata as to what extent COPE guidelines are followed in the daily execution of editorial work. However, together with COPE, OASPA and WAME, DOAJ developed the Principles of Transparency and Best Practices in scholarly publishing. These are guiding principles in the evaluation of journals when applying, and the application form itself reflects that. Applying to, and being accepted by, DOAJ should therefore be a strong indication of following COPE principles and practices, or a corresponding set of principles and practices made by similar initiatives.

The literature has shown that so-called international standards (COPE, ICMJE) were far from being universally practiced. For example “top-ranked” or WoS-endorsed journals, even when they formally declared following standards, had varied authorship policies (Bosch et al., 2012, Bošnjak and Marušić, 2012), as well as duplicate and salami slicing distinct policies — or even no policies at all (Ding et al., 2020).

In Figure 1 below, the survey answers are split between journals in the survey that are also listed in DOAJ, and journals that are only in the survey.

![Figure 1. Q52 Compliance with COPE principles](image)

When asked whether journals comply with best practice guidelines on publication practices, 1,137 of the 1,477 journals that answered this question reported following guidelines, whereas a very small number (51) do not. Almost 100 journals explicitly referenced COPE, and a further 166 journals referenced the COPE website. This means that at least 23.1% of journals referenced COPE here. Twenty-nine journals, roughly 2.5%, referenced ICMJE (International Committee of Medical Journal Editors) which should satisfy the criterion. No other guideline was referenced explicitly. Most journals, however, answered with a URL, often to the journal itself, and cannot be categorised here.
But this indicates the existence of some sort of guideline in this area, for most journals. These might be internal to the journal, institutional, national or other standards that fit the journal's scope. We saw that the major difference between the survey journals in DOAJ and not in DOAJ is that there are more "Blank" or "Unknown" answers among journals not in DOAJ. The fraction that answers "No" is a bit higher for the journals not in DOAJ.

There is a distinct possibility that going through the application process with DOAJ makes journals aware of various aspects of publishing, and makes them think through these aspects. Hence, journals in DOAJ will have a tendency to have a lower fraction of "Unknown" answers, and of not answering.

2.1.2 Information on the peer review procedure

Source: DOAJ, Survey Q26

In DOAJ, all journals (except one) indicated that they conduct peer review in a form we assume meets with Plan S requirements. This is referenced with a URL pointing to further information about the peer review procedure.

Figure 2 shows the distribution of the various types of review listed by the journals over the two categories of journals, OA diamond and APC-based.

![Figure 2. Review types used by journal group in DOAJ](image)

Blind and double-blind review are the most frequently used types, totalling more than 80% for both journal groups. The most striking difference is that double-blind peer review is more commonly used by OA diamond journals, while blind peer review is more commonly used by APC-based journals. This might, however, be more a matter of semantics than of reality as labels for authors' and reviewers' anonymisation process vary through time (Pontille & Torny, 2015).
In the survey, Q26 is: "Please select the review process for papers published by the journal." In Figure 3 we have divided the answers between journals in DOAJ and journals not in DOAJ.

![Figure 3. Review forms used by survey journals organised by those in DOAJ and those not](image)

Double-blind peer review is higher than 50% for both groups, and is by a wide margin the most important review process. Our conclusion is that all review processes used by both DOAJ and survey journals that have answered this question are Plan S compliant.

2.1.3 Information on editorial management and submission/rejection
Source: DOAJ, Survey Q50

In DOAJ, all journals have links to URLs with information about instructions for authors, the Editorial Board and open access statements. We assume that information about review and decision-making processes are to be found here, and on the more general "About" pages.

We have no information in DOAJ about detailed statistics, except that all journals have published the average number of weeks between submission and publication in their DOAJ metadata. This information is easily available on the DOAJ website.

In the survey, Q50 asks, "Does the journal publish annually at least basic statistics, covering in particular:" five options plus an "Other" alternative. More than one answer could be selected.
We see from Figure 4 that nearly half of all journals do not publish any of the statistics offered as an alternative, but some of them have some information under “Other”, which offers a variety of information published, predominantly some form of usage statistics. Journals that are in DOAJ selected more than one answer to a higher degree (39% of journals) than OA diamond journals (23%). Responses of “Blank” and “None” were also relatively higher for survey-only journals than for DOAJ journals in the survey.

2.1.4 Registered or in the process of being registered in DOAJ

All journals in DOAJ fulfil the requirement of giving “immediate and permanent open access (without any kind of technical or other form of obstacles) under an open license”. According to information in a Google document published on the DOAJ website, 2,108 journals were added to DOAJ during 2020. Of these, 37 received the DOAJ Seal, which is a sign of good adherence to standard practices of OA and publishing. In 2020, 569 journals were, however, removed for various reasons. The most common reason was not publishing anything (41%) or being below the DOAJ threshold of five articles per year, with “not adhering to best practice” (25%) and “technical issues” (24%) coming in second and third place respectively. Technical issues can include URLs that no longer work or security issues with the website, for example. That the journal is no longer OA caused 3% (19) of the removals, while suspected editorial misconduct by publishers saw 7% (39) removed from DOAJ.

Registration in DOAJ implies following both technical and editorial standards; predatory publishers should not be listed in DOAJ. As the numbers for removals show, journals change after being admitted, but DOAJ has procedures in place to try to discover and remove journals that no longer conform to the expected standards.
2.2 Technical requirements and recommendations

2.2.1 Requirements

2.2.1.1 Persistent identifiers (PIDs)

Source: DOAJ, Survey Q42

A persistent identifier (PID) is an identifier that remains constant over time and always points to the resource referred to, irrespective of renaming or moving to new domains or URLs.

In DOAJ, only the PID for articles are listed in the journal metadata.

![Figure 5. Use of article identifiers by journal category in DOAJ](image)

We see from Figure 5 that a majority of DOAJ journals (62.9%) offer an article PID in the form of a DOI. Among APC-based journals, this holds for 85% of journals in DOAJ. Uniform Resource Names (URNs) and Handles are used by a negligible fraction of journals in both categories.

Article numbers show better results, with 62% of diamond OA articles having a DOI as opposed to 94% of articles in APC-based journals. This indicates that larger journals, in terms of articles published, offer DOIs to a greater extent than smaller journals.

Use of DOIs is, to some extent, a question of competence and of using a publishing platform that allows easy deposit of metadata with the DOI provider. But for small journals the expense is also a problem. With CrossRef, the most frequent provider of DOIs for articles, there is an annual membership fee of minimum US$ 275, and then an additional small fee per registered DOI (e.g. US$ 1 per new article). For the majority of DOAJ journals, the annual fee can be a larger problem than the per DOI fee, as only 30% of journals belong to publishers that publish more than 250 articles per year. The annual fee is a fee paid by the publisher so that many journals could be covered by a single annual fee, if organised properly.
The use of PIDs is the theme for Q42 in the survey. A journal may check more than one answer, so the numbers did not add up to the total number of journals surveyed. Among DOAJ journals in the survey, there were 66.7% more answers than journals, 35.2% among the survey journals not in DOAJ.

DOAJ journals in the survey scored higher for “CrossRef DOIs”, “Other DOIs”, “ORCIDs” and “Grant ID”, while survey-only journals had a higher percentage of “Datacite DOIs” and “Other PIDs”. Journals using “Other DOIs” mentioned: Handle, mEDRA and Researcher ID. Nearly 60% of all journals in the survey use “CrossRef DOIs”, 32.4% mentioned “Datacite DOIs” or “Other DOIs”. Some 24.3% of journals in the survey reported using no DOI; 17.6% of the DOAJ journals and 38% of the survey journals not in DOAJ.

2.2.1.2 Long-term digital preservation or archiving
Source: DOAJ, Survey Q28

The Plan S requirement on content archiving is unclear as to what services actually conform to requirements. Journals in DOAJ listed around 500 different services, of which we assume only a handful to be compliant. A clear definition of what criteria such services need to meet, and a registry of compliant services, are lacking. Some of the services we assume compliant seem to be free of charge to publishers. One of these is only available to OJS users, though that is nearly half of the journals in DOAJ. DOAJ and PKP have, together with others, just started to work to create more such services.

Journals need guidance on what is meant more specifically by archiving in this context, what possibilities exist and how they can be used at low or no cost. Some (groups of) journals might need financial support to find a working solution to the archiving requirement.

CrossRef membership terms, see Terms 2i [2], make it clear that journals that issue DOIs are obliged to also have an archiving solution in place.
In the graph below (Figure 7), we include services that we are quite certain meet the Plan S requirements and, in addition, about 500 services reported by journals whose functionality is unknown. Many of these latter 500 services may not meet Plan S criteria.

![Figure 7. Archiving in place by journal category in DOAJ](image)

We see from Figure 7 that 32.2% of OA diamond journals in DOAJ appear to satisfy this requirement, as well as 67.3% of APC-based journals.

An interesting observation is that 6,000 journals reported some form of archiving in place. However, more than 9,000 in DOAJ journals reported using DOIs, nearly all CrossRef DOIs with an archiving requirement. So about 3,000 journals using DOIs actually reported they do not satisfy the criteria CrossRef has for journals to issue DOIs.

Of the diamond OA journals in DOAJ, 27.1% of humanities and social science (HSS) journals indicated that they have some kind of archiving in place, while 37.8% of science journals and 42.9% of medicine journals reported this.

Looking at the article level data in DOAJ, we see a larger fraction of articles than of journals being covered by an archiving solution, meaning that larger journals are more compliant than smaller journals, most markedly for APC-based journals.
The OA Diamond Journals Study

Figure 8. Archiving solution by journal category in survey

In the survey, journals could choose more than one option, hence the numbers do not equal the total number of journals surveyed. The large majority of survey journals have no archiving policies (855 of 1,619 respondents). In addition, only 381 respondents use a standard archiving system (LOCKSS, PKP PN, CLOCKSS & Portico) that may be compliant to cOAlition S requirements. Local solutions like national libraries (170 respondents) are frequently quoted. A larger fraction of DOAJ journals than other journals in the survey reported having no solution in place, 63.8% versus 53.3%. For journals in DOAJ, the number is 67.8%, so the survey journals are more compliant.

2.2.1.3 Machine-readable metadata in CC0

Source: DOAJ

DOAJ metadata does not provide information on whether the journal makes article level metadata available, and under a CC0 license. However, if a journal deposits article level metadata with DOAJ, these metadata are made available under a CC0 license in various ways, including API, OAI-PMH and a full data dump of all journal metadata. So journals depositing article level metadata with DOAJ will, as we understand it, fulfil the article metadata requirement. cOAlition S requires these metadata to include funding information, but such information is not yet generally available in DOAJ.

A majority of DOAJ journals have deposited article level metadata in DOAJ, however, it is unclear from the data to what extent this is a continuing process for the individual journal, or a one-off or rare occurrence. We do see from Figure 9 that 78% of OA diamond journals in DOAJ have deposited one or more article level records compared to 87.3% of APC-based journals. This high deposit rate suggests that DOAJ could be the best way to solve this requirement for many OA diamond journals.
2.2.2 Recommendations

2.2.2.1 Author and grant PIDs

Information about the use of author and grant PIDs is not available in DOAJ metadata. The sub-section "Persistent Identifiers (PID)" above contains information about the use of ORCID among survey journals. Only 32.5% of survey journals use ORCIDs.

2.2.2.2 Self-archiving policy in Sherpa Romeo

Source: DOAJ

Sherpa Romeo (S/R) is the only self-archiving policy service accepted by Plan S. Some journals use other services, but 9,407 journals (65.5%) have not listed having a policy anywhere in their DOAJ information.
Of DOAJ diamond journals, 81.4% have no policy in S/R compared to 47.9% of APC-based journals. Numbers for articles are somewhat better, indicating larger journals tend to be more compliant, which is more pronounced for APC-based journals than for OA diamond journals.

2.2.2.3 Full-text in JATS XML

Source: DOAJ, Survey Q27

Many journals offer full-text in more than one format. Here we limit ourselves to looking at PDF, XML and HTML formats. We focus on them as PDF being most common, XML is what Plan S recommends, and HTML because it has some of the same properties as XML and can be realised at a lower cost to journals. The related Plan S recommendation, “a machine-readable community standard format such as JATS XML” is somewhat unclear. Both XML and HTML are machine-readable standard formats and embed a structure. XML is much richer in structure than HTML, but also more complex.

How many journals in DOAJ provide PDF as a full-text format?

<table>
<thead>
<tr>
<th>PDF</th>
<th>OA diamond</th>
<th>APC-based</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>113</td>
<td>6</td>
<td>119</td>
</tr>
<tr>
<td>Yes</td>
<td>10,336</td>
<td>3,913</td>
<td>14,249</td>
</tr>
<tr>
<td>Total</td>
<td>10,449</td>
<td>3,919</td>
<td>14,368</td>
</tr>
<tr>
<td>Percentage of journals that offer this format</td>
<td>98.9 %</td>
<td>99.8 %</td>
<td>99.1 %</td>
</tr>
</tbody>
</table>

Table 1. PDF as full-text format by DOAJ journal category

When comparing all data, the PDF is the most common text format where more than 99% of all OA journals use this format. The OA diamond journals are slightly less likely to offer this format, still 98.9% of such journals offer PDF.

Looking at XML in DOAJ we find the following:

<table>
<thead>
<tr>
<th>XML</th>
<th>OA diamond</th>
<th>APC-based</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>9,590</td>
<td>3,104</td>
<td>12,694</td>
</tr>
<tr>
<td>Yes</td>
<td>859</td>
<td>815</td>
<td>1,674</td>
</tr>
<tr>
<td>Total</td>
<td>10,449</td>
<td>3,919</td>
<td>14,368</td>
</tr>
<tr>
<td>Percentage of journals that offer this format</td>
<td>8.2 %</td>
<td>20.8 %</td>
<td>11.7 %</td>
</tr>
</tbody>
</table>

Table 2. XML as full-text format by DOAJ journal category

XML is used by 8.2% of DOAJ OA diamond journals compared to 20.8% of APC-based journals, but with a total of 11.7% for all DOAJ journals, XML is not in widespread use among DOAJ journals. Numbers are slightly better when we look at articles, since 10% are XML in DOAJ OA diamond journals and 29.8% in APC-based journals. This indicates larger journals are more likely to offer full-text in XML. We do not know if XML here is necessarily JATS XML for all respondents, though this XML standard is developed for use with journals.

HTML is another full-text format that could satisfy the Plan S requirement.
Compliance

Some 22.9% of DOAJ OA diamond journals use this format compared to 59.7% of APC-based journals.

As previously stated, we believe both XML and HTML may satisfy the Plan S criterion. That means we need to find journals that offer at least one of these formats, however, this can not be done by adding the numbers for the XML and HTML in Tables 2 and 3 because some journals may offer both. Below (Table 4) are the numbers we found for journals offering at least one of the formats XML and HTML in DOAJ.

<table>
<thead>
<tr>
<th>HTML or XML</th>
<th>OA diamond</th>
<th>APC-based</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>7,835</td>
<td>1,434</td>
<td>9,269</td>
</tr>
<tr>
<td>Yes</td>
<td>2,614</td>
<td>2,485</td>
<td>5,099</td>
</tr>
<tr>
<td>Total</td>
<td>10,449</td>
<td>3,919</td>
<td>14,368</td>
</tr>
</tbody>
</table>
| Percentage of journals that offer this format | 25.0 % | 63.4 % | 35.6 %

Table 4. HTML or XML as full-text format by DOAJ journal category

Among DOAJ OA diamond journals, 25.6% offer XML and/or HTML compared to 63.4% of APC-based ones.

More detailed analysis indicates that larger journals tend to offer XML or HTML to a larger extent than smaller ones, and that compliance is higher for journals in medicine than in HSS or science. We understand that journals need XML to be accepted in PubMed Central, which probably explains the higher compliance rate for medicine journals.

Turning to the survey, we found the following picture:

<table>
<thead>
<tr>
<th>Format</th>
<th>Survey DOAJ journals</th>
<th>Survey only journals</th>
<th>All survey journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML</td>
<td>142</td>
<td>63</td>
<td>205</td>
</tr>
<tr>
<td>HTML</td>
<td>315</td>
<td>142</td>
<td>457</td>
</tr>
<tr>
<td>PDF</td>
<td>1067</td>
<td>416</td>
<td>1483</td>
</tr>
<tr>
<td>HTML or XML</td>
<td>324</td>
<td>177</td>
<td>501</td>
</tr>
</tbody>
</table>

Table 5. Survey full-text format by survey journal category

We see that the results generally conform to what we find in DOAJ, but there are some differences. PDF is offered by only 78.2% of the survey-only journals, compared to
99.1% of all DOAJ journals. XML is offered by a higher percentage of survey journals — both survey DOAJ journals and survey-only journals — than by DOAJ OA diamond journals (8.2%). The same is the case for HTML, offered by 22.9% of DOAJ OA diamond journals. More than 30% of survey journals offer HTML and/or XML, compared to 25% of DOAJ OA diamond journals. It is difficult to say why survey journals fare better on this point than DOAJ journals.

PDF is a text format that is easy to produce, at no cost to the journal neither in money nor added work, and may easily be produced from text files that aren’t necessarily technically well-structured. Both HTML and XML need a technically well-structured text file to start with, and call for both competence and cost in time and/or money to be produced, XML vastly more so than HTML. We see that even among APC-based journals that have income that can be used to pay for XML, or to secure in-house competence, XML is only offered by a fifth of them.

2.2.2.4 Automatic deposit of JATS XML in author-designated repository
Source: Survey Q47

While information on this is not available in DOAJ metadata, survey data show that the JATS XML compliance rate is 35.1%, as shown in Figure 11. However, since more than 40% of journals responded either “Unknown” or “No answer”, it is difficult to draw conclusions here.

In the survey we found the following:

![Figure 11. JATS XML automatic deposit by journal type in survey](image)

DOAJ journals in the survey are more compliant than survey-only journals, but both groups have an "Unknown" share of around one third.
2.2.2.5 Compliance with OpenAIRE metadata standards

Source: Survey Q46

Although no information is available on compliance with OpenAIRE metadata standards in DOAJ, we found the following in the survey data: the compliance rate is over 40% but nearly 50% of responses are "Unknown" or "No answer". That only 6.5% of respondents answered "No" can be interpreted as a positive sign as shown in Figure 12 below.

Survey journals in DOAJ are more compliant than survey-only journals; the latter group has a higher rate of “Unknown” or “Blank” answers.

2.2.2.6 Does the journal require linking to data, code, and other research outputs?

Source: Survey Q54

Although no information is available on journals requiring links to data, code and other research outputs in DOAJ, from the survey data we found that nearly half of respondents reported not requiring this, against 24.8% who do. Despite more than 25% of answers being "Unknown" or "No", this points to a low level of compliance as shown in Table 6.

<table>
<thead>
<tr>
<th>Response</th>
<th>Journals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>402</td>
<td>24.8 %</td>
</tr>
<tr>
<td>No</td>
<td>791</td>
<td>48.9 %</td>
</tr>
<tr>
<td>Unknown</td>
<td>277</td>
<td>17.1 %</td>
</tr>
<tr>
<td>No answer</td>
<td>149</td>
<td>9.2 %</td>
</tr>
<tr>
<td>Total</td>
<td>1,619</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Table 6. Journal requirements on linking to data, code etc.
We see from Figure 13 that DOAJ journals in the survey are slightly more compliant than survey-only journals.

\textbf{2.2.2.7 Does the journal provide openly-accessible data on citations according to the standards of the Initiative for Open Citations?}

Source: Survey Q55

No information is available in DOAJ on whether journals provide openly-accessible data on citations. Less than 25\% of journals in the survey do indeed provide such citations, indicating a low level of compliance as shown in Table 7.

<table>
<thead>
<tr>
<th>Response</th>
<th>Journals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>390</td>
<td>24.1%</td>
</tr>
<tr>
<td>No</td>
<td>450</td>
<td>27.8%</td>
</tr>
<tr>
<td>Unknown</td>
<td>593</td>
<td>36.6%</td>
</tr>
<tr>
<td>No answer</td>
<td>186</td>
<td>11.5%</td>
</tr>
<tr>
<td>Total</td>
<td>1,619</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

\textit{Table 7. Citations made available according to I4OC standards}
We see that DOAJ journals in the survey are somewhat more compliant than survey-only journals.

In the preceding Tables/Figures there is generally a high percentage of “Unknown” and/or “No” answers, especially to the more technical questions. It is not clear from responses as to whether this signals a lack of certainty about the correct answer to the question, or lack of understanding of what the question entails.

The highest compliance rate is 40% on the recommendations treated in this part of the report; the lowest is 24.1%.

### 2.3 Copyright and licensing

#### 2.3.1 Is the license made visible or embedded in the article?

*Source: DOAJ, Survey Q19*

DOAJ asks journals whether a machine-readable CC-license is embedded or displayed in articles. Assuming all journals that have answered “Yes” are indeed compliant with the Plan S requirement, 43.4% of DOAJ OA diamond journals are compliant compared to 73.6% of APC-based ones as seen in Figure 15.
A more detailed analysis shows that compliant journals are, on average, larger than non-compliant ones, so 49% of articles in OA diamond journals are in compliant journals, while 86.4% of APC-based articles are in compliant journals.

In the survey, 793 of 1,619 journals (49%) stated that they embed or display licenses in the article.
DOAJ journals in the survey (46.6%), but also that DOAJ journals in the survey are more compliant than OA diamond journals in DOAJ (43.4%).

2.3.2 To what extent do OA journals allow re-use and remixing of content, and which CC licenses do they use?

Source: DOAJ, Survey Q20, Q59

DOAJ asks journals to list their most restrictive license. We know, though, that some journals allow a number of licenses to be chosen from. This can be the author’s choice, though some journals limit the choices but allow some alternatives if mandated by funders. DOAJ is working on allowing journals to list a number of licenses for the author to choose from. The listing of the most restrictive license in DOAJ metadata makes it likely that the compliance rate is actually higher than seen below. We are assuming that cOAlition S is satisfied if a Plan S compliant license is available to the author, without all content in the journal being compliant.

In Figure 17, green and blue colours mark the Plan S-compliant licenses (CC BY, CC BY-SA and, CC0) with other colours marking non-compliant licenses.

Among DOAJ OA diamond journals, 44.2% satisfy the Plan S requirement (CC BY, CC BY-SA or CC0), while 57.1% of APC-based journals comply. CC BY is the most widely used license; it is used by more than half of the APC-based journals and 37.4% of DOAJ OA diamond journals. Some journals listing a restrictive license may also offer a compliant license, but DOAJ asks journals to list only the most restrictive, often least Plan S-compliant, license.

The -NC clause is a significant problem for compliance. CC BY-NC and CC BY-NC-SA, where the -NC clause is the reason for the license being non-compliant, are applied by 27.8% of DOAJ OA diamond journals, and 26.8% of APC-based journals. If OA diamond
journals chose not to use the -NC clause, 72.1% of DOAJ OA diamond journals and 80.9% of APC-based journals would be compliant.

Some 23.6% of DOAJ OA diamond journals and 17.3% of APC-based journals use the CC BY-NC-ND license, where both the -NC and the -ND clauses represent a problem for compliance. The CC BY-ND license (which can be accepted as an individual exception) is used by only 1.4% of all OA diamond journals and hardly any APC-based journals.

Looking at the scholarly fields for all OA diamond journals, we found that 50.6% of science journals are Plan S compliant in this area compared to 43.6% of HSS journals and 37.8% of medicine journals. OA diamond medicine journals have a higher fraction of licenses with -NC clauses than the other OA diamond journals.

In the full survey data, we found that 1,350 of 1,619 journals, 83.4%, reported allowing reuse in accordance with a CC license or a license with similar condition.

<table>
<thead>
<tr>
<th>License</th>
<th>Number of journals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC0</td>
<td>12</td>
<td>0.9 %</td>
</tr>
<tr>
<td>CC BY</td>
<td>563</td>
<td>41.7 %</td>
</tr>
<tr>
<td>CC BY-SA</td>
<td>87</td>
<td>6.4 %</td>
</tr>
<tr>
<td>CC BY-NC</td>
<td>189</td>
<td>14.0 %</td>
</tr>
<tr>
<td>CC BY-NC-SA</td>
<td>116</td>
<td>8.6 %</td>
</tr>
<tr>
<td>CC BY-ND</td>
<td>29</td>
<td>2.1 %</td>
</tr>
<tr>
<td>CC BY-NC-ND</td>
<td>367</td>
<td>27.2 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1350/1363</strong></td>
<td><strong>106.5 %</strong></td>
</tr>
</tbody>
</table>

Table 8. Survey journals applying Creative Commons licenses

Note that in the survey, unlike DOAJ, journals could list more than one license. Hence, the 1,350 journals listing 1,363 responses to this question, and the sum of percentages reflects this. Of the 1,350 who replied “Yes” to Q20, 48 did not provide information about their license. We see that CC BY is the most widely used among survey journals with CC BY-NC-ND in second place. Nearly 50% of these journals are compliant with Plan S requirements.

2.3.3 To what extent is copyright retention without restrictions allowed, and if not, what plans are there to introduce this?

Source: DOAJ, Survey Q22

As shown in the graph below for DOAJ OA diamond journals, 48.7% of journals said that authors hold copyright without restrictions compared to 53.0% of APC-based DOAJ journals. Looking at APC-based DOAJ journals, we found compliant policies in 55.9% of HSS journals, 55.7% of science journals and 49.6% of medicine journals.

Looking at all DOAJ OA diamond journals, we found that 52.1% HSS journals allow authors to retain copyright without restrictions compared to 48.4% of science journals, but only 37.0% of medicine journals.
OA diamond journals are slightly less compliant (48.7%) than APC-based journals (53.0%). HSS journals are the most compliant in both groups in this area, and medicine journals are the least compliant. The difference between medicine journals and the other two groups is most pronounced among OA diamond journals.

In the survey, Q22 is whether the journal allows authors to retain copyright without restrictions.

In the survey we found the following:
DOAJ journals in the survey allow author copyright retention to a somewhat larger extent than survey-only journals; DOAJ journals have a compliance rate of 57.2% compared to 55.3% for survey-only journals.

Unlike the more technical questions previously discussed, this policy question has few “Unknown” or “Blank” answers. A majority of answers are positive, meaning the journal conforms to Plan S requirements.

Those who did not answer “Yes” to the above question were asked in Q23 to indicate whether they intended to allow authors to retain copyright in the future.

As shown in Table 9, responses indicated that not many journals plan to change their policies to align better with Plan S requirements.

<table>
<thead>
<tr>
<th>Response</th>
<th>Journals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>35</td>
<td>5.0 %</td>
</tr>
<tr>
<td>No</td>
<td>499</td>
<td>71.0 %</td>
</tr>
<tr>
<td>Unknown</td>
<td>57</td>
<td>8.1 %</td>
</tr>
<tr>
<td>No answer</td>
<td>112</td>
<td>15.9 %</td>
</tr>
<tr>
<td>Total</td>
<td>703</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Table 9. Survey journals that plan to allow authors to retain copyright without restrictions

2.3.4 Licenses: Do they apply to metadata and content?

Neither DOAJ metadata nor survey data provide us with information on the licensing of journal or article metadata; it is the licensing of the content that has focus.

2.4 Mandatory requirements not seen as relevant for OA diamond journals

2.4.1 Mirror journal

A mirror journal is an OA journal that is a twin of a subscription journal, having the same editors, reviewers, authors and readers with essentially the same content scope but different articles.

OA diamond journals should not have subscription counterparts; this can be difficult to guard against, but is not very likely. All known existing mirror journals are APC-based journals, so such journals will not be part of our OA diamond journals. We have analysed all OA journals in DOAJ, but with a focus on OA diamond.

2.4.2 Transparent costing

We understand the transparent costing requirement in Plan S to be a requirement targeted at APC-charging journals, as a mechanism to make their APCs more transparent. As OA diamond journals by definition have no APC, the need for transparent costing seems small.

When/if funding mechanisms for OA diamond journals are established, a framework for calculating costs and making them public could become necessary. However, so far this has not been an important question, and therefore has not been analysed here.
2.4.3 Waivers

Waivers are a mechanism for protecting authors from low-income countries/institutions from having to forgo publishing due to an inability to fund APC payments. As OA diamond journals have no APC, no waiver is necessary, hence this was not looked at in this particular study.

2.5 Summing up and general comments

In the preceding parts of this chapter we looked at how well journals in DOAJ and in our survey conform to Plan S requirements and recommendations.

We have identified six requirements that we can analyse based on DOAJ metadata:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>OA diamond</th>
<th>APC-based</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>License</td>
<td>44.1 %</td>
<td>55.9 %</td>
<td>57.1 %</td>
</tr>
<tr>
<td>Peer review</td>
<td>100.0 %</td>
<td>0.0 %</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Author copyright</td>
<td>49.4 %</td>
<td>50.6 %</td>
<td>53.0 %</td>
</tr>
<tr>
<td>Article PID</td>
<td>55.3 %</td>
<td>44.7 %</td>
<td>85.3 %</td>
</tr>
<tr>
<td>Permanent preservation</td>
<td>19.1 %</td>
<td>80.9 %</td>
<td>56.0 %</td>
</tr>
<tr>
<td>Machine-readable license</td>
<td>43.6 %</td>
<td>56.4 %</td>
<td>73.6 %</td>
</tr>
</tbody>
</table>

Table 10. DOAJ journals conforming to Plan S requirements by DOAJ journal category, percentages

Peer review is the one requirement that all (but one) journals satisfy. Permanent preservation is the requirement seeing the lowest compliance amongst journals at 28.9%, only 19.1% for OA diamond journals. APC-based journals meet more requirements than OA diamond journals.

Looking at how many of the six criteria journals satisfy, we found the following:
Whereas the groups of journals that meet few criteria are dominated by OA diamond journals, the journals that satisfy all requirements are dominated by APC-based journals. Furthermore, we found that DOAJ journals operated by open access publishers have the highest percentage of journals satisfying all criteria (15%) while 10% of traditional publishers' journals satisfy all criteria. Societies score 3%, and universities 2%.

In general, smaller journals score lower on these criteria than larger ones, OA diamond lower than APC-based, university-based lower than journals with professional publishers, and HSS journals lower than science and medicine journals. Structurally, the smaller journals tend to be more OA diamond, university-based and in HSS, so it is basically the same factors manifesting themselves in various ways.

Size has to do with the possibility and operational need to gain competence: the larger the journal, the larger the need for competence and the better the possibilities to achieve competence. APCs enable the journal to pay costs and buy competence, either by outsourcing functions or by hiring persons in the organisation. This does not mean APCs are the solution, but it indicates that funding, beyond in-kind contributions, must be considered vital to ensure strong and healthy OA diamond journals. It also points to a need for journal owners of all kinds to organise journals so that resources are pooled and competence built up collectively for a number of journals.
Dynamics

Understanding how diamond journals work and the challenges they face

by Pierre-Carl Langlais
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## Contents

### 3.1 Ownership and governance
- **3.1.1 Facts**
  - 3.1.1.1 Who does OA diamond serve and who owns the journals? 79
  - 3.1.1.2 Is there a document establishing legal ownership? 80
  - 3.1.1.3 What are the reporting capacities of the journals (statistics, reporting to boards)? 81

- **3.1.2 Strengths** 83

- **3.1.3 Challenges**
  - 3.1.3.1 Standardisation 83
  - 3.1.3.2 Lack of recognition 84

### 3.2 Editorial work and quality assurance
- **3.2.1 Facts**
  - 3.2.1.1 What are the different types of content the journals publish? 84
  - 3.2.1.2 To what extent is the editorial work outsourced? To whom? 85
  - 3.2.1.3 What type of Peer Review (PR) is used by the journals and how is it managed? 86
  - 3.2.1.4 To what extent do the journals’ editorial and scientific work align with industry best practices? 87
  - 3.2.1.5 To what extent do diamond journals support innovative policies? 88

- **3.2.2 Strengths** 89
  - 3.2.2.1 Quality control 89
  - 3.2.2.2 Uncharted innovations 89
  - 3.2.2.3 Commitment to changes 89

- **3.2.3 Challenges**
  - 3.2.3.1 Recognition of volunteers’ work 90
  - 3.2.3.2 Editorial services 90
  - 3.2.3.3 Peer review 91

### 3.3 Technical infrastructure
- **3.3.1 Facts**
  - 3.3.1.1 Technology and workflow management 93
  - 3.3.1.2 Hosting 94
  - 3.3.1.3 Format 95
  - 3.3.1.4 Content preservation 96
  - 3.3.1.5 Article identifiers 97

- **3.3.2 Strength** 98

- **3.3.3 Challenges**
  - 3.3.3.1 Use of OJS and other specialised scholarly communication tools and services 98
  - 3.3.3.2 Conformity to standard tools 99
  - 3.3.3.3 Content preservation 100
  - 3.3.3.4 Indexation 101
  - 3.3.3.5 Joining a hosting platform: Overcoming the cost of entry 103

### 3.4 Conclusion: Profiling journals 103
This report describes the current dynamics of OA diamond journals in three areas: ownership, editorial work and technical infrastructure.

Beyond the structural characteristics laid in the previous reports, community-driven academic publishing has experienced, and continues to experience, significant technological, editorial and organisational changes. For instance, the Open Journal Systems (OJS) is an academic content management system that has become increasingly widespread during the past decade. A study done five or six years ago would have yielded a completely different landscape.

The results of the survey and the large corpus of 7,019 submissions provide a unique window into uncovering the practices, issues and transformation of 1,619 OA diamond journals, that has been deepened by a series of focus groups of selected journals and platforms. However, this rich resource has its limitations. As shown in the first section, while seemingly large, our sample is dwarfed by the estimated actual number of OA diamond publications. Nevertheless, the composition of the survey appears to be fairly representative of the experience of community-driven publishing in Europe and the Americas.

Given the focus on dynamics and changes, this section relies on a hybrid methodology that combines quantitative statistics from the survey, text mining analysis and close reading of selected free texts and the feedback from the focus groups. Each section includes a presentation of the main statistical facts extracted from the survey followed by an analytic assessment of the strengths and challenges of OA diamond journals.

This report ends with a synthesis of the main profiles and the convergent dynamics of OA diamond journals. Beyond the apparent dispersion of editorial practices and structures, we highlight the gradual emergence of a latent culture of community-driven publishing.
3.1 Ownership and governance

3.1.1 Facts

3.1.1.1 Who does OA diamond serve and who owns the journals?

Sources: Survey Q11, Q12, Q34 and Q35

The majority of journals (42%) are owned by universities. The main alternatives are learned societies (14%) and, to a lesser extent, government agencies, university presses and individuals. A significant share of responses does not fit the pre-defined categories: “Other” (15%), “Other research organisation” (8%) and “Other non-profit publisher” (5%). The lack of fitting responses may indicate a general uncertainty about the nature of the organisation or about the condition of ownership itself that is consistent with the results of the next section on the formality of ownership.

Figure 1. Who owns the journal in the survey? (Q34)

Ownership has a large impact on the resources used by OA diamond journals by creating different sets of constraints, opportunities and incentives. For example, journals owned by learned societies rely significantly more on membership fees, while grants are a more dominant resource for journals owned by Research Performing Organisations (RPO).

Figure 2. Relationship between ownership (Q34) and resources (Q62)

As shown in the graph, the leading model of university ownership is, to some extent, an official facade giving OA diamond journals a large latitude to set up diverse models.
Historically, scientific publishing has long been managed directly by scientists through learned societies and academies. Until the second part of the twentieth century, most journals could be assimilated to a “club model”, that is the production of “a self-constituted group, endeavouring to create new knowledge” (Potts and al. 2017), the most historically known being the Royal Society (Moxham and Fyfe, 2018, Fyfe et al., 2019). This community-based management did not simply affect editorial processes but also the condition of dissemination: “The Royal Society’s relations with scientific authors, editors, and publishers were governed by custom and courtesy, not by copyright.”(Fyfe et al. 2017) The strict separation between scientific work and editorial work only became a reality with the advent of large publishing conglomerates in the 1950s and 1960s (Wouters 1999).

The analysis of the free text submissions to the survey shows that scientists continue to be largely involved in the management of OA diamond journals: “Each member of the editorial board is an associate editor and is in charge of the scientific work, from submission to final version” (11841051480); in the editorial staff “everyone works hard” (11973925755); “An editorial team of four professors/researchers from the University, who dedicate a small part of their time to the editorial activities.” (11972525268)

3.1.1.2 Is there a document establishing legal ownership?
Sources: Survey Q35

As shown in figure 3, just over half of the respondents stated that they have a legal ownership document (51%, 765 respondents), while 23% state not having one and 26% are unaware of the existence of any. This distribution shows that the OA diamond ecosystem remains significantly structured by informal forms of ownership. The rate of formal ownership does not vary significantly across the main type of owners (university, learned society and individuals), except for journals owned by government agencies (64% of them have a legal document).

![Figure 3. Is there a document establishing legal ownership? (Q35)](image)

Conversely, legal ownership is correlated with the size of the journal, either in terms of staff or of total annual costs. As seen in Figure 4, only 44% of the journals with less than 1 FTE have a known document establishing ownership versus 74% of the journals with 6-9 FTEs. The same trend is visible in financial data: 45% of journals with $/€0-1000 of annual operating costs are documented versus 65% of journals with $/€50,000-100,000 of annual operating costs. Additionally, journals without legal ownership are less likely to use an external publisher or an external publishing service (53% versus 30%). The positive relationship between the size of the journal and legal ownership suggests there is less incentive to formalise the status of the journal when it is managed on a very small scale.
Figure 4. Share of journals with a legal document establishing ownership (Q35) per paid staff in FTEs (Q67) and per total annual costs (Q66)

Figure 5 shows that differences are marked across countries as well, which seems to suggest significant cultural variations regarding the formalisation of ownership, although in some cases the number of answers may be too small to be conclusive. From the available data in the survey, there seems to be a regular cluster of journals with legal ownership documented in Eastern Europe and Latin America, especially in contrast with Canada and Western Europe (France and Germany). Further research is needed to account for these cultural differences, which could be influenced by a wider historical context.

Figure 5. Share of journal with a legal document establishing ownership (Q35) per country (Q14)

Lack of formalised ownership can create significant uncertainties for the management of the journal. The actual owner of the journal cannot be identified and/or there is dissolution of responsibilities across the editorial committee, which makes it harder to face structural problems.

3.1.1.3 What are the reporting capacities of the journals (statistics, reporting to boards)?

Sources: Survey Q29 and Q50

Responses from the survey show that 60% of the respondents do not share any basic statistics and 64% do not provide article statistics (Figure 6).
In the second focus group of journals, participants raised issues with the use of these data by indexers: “Indexers ask the average of rejection: apparently it is important for them to have a high rate of rejection. Yet if you earn the reputation of being a difficult journal, it’s going to have a vicious effect on the participation of authors.” This seems to be consistent with the statistics trend for the survey. The rate of journals that do not provide article download statistics is the highest among journals that complied to the ethical code of practices of DORA, OASPA and DOAJ (90%) and, to a lesser extent, with journals owned by "Other" research organisation (66%) or by "Individuals" (60%). In all of these sub-groups, technical capacity could be less of a factor than the actual intent not to transmit basic statistics of usage and the concern that they could be used for assessment policies.

Conversely, journals hosted by platforms have a slightly enhanced reporting capacity. For article download statistics, we found a rate of 38% for international platforms and 36% for national platforms versus 30% for institutional platforms and commercial host providers. Platforms are better equipped to implement standards at a larger scale although this may not solve the acceptability issue of several key statistics. As shown in the graph below, international platforms have the highest coverage of statistics providing the number of reviews received (17%) and the number of reviews requested (13%). Their rate of statistics providing the average time of publication (34%) and approval rate (25%) is comparable to commercial publishers.
In short, recording and publicising download statistics for OA diamond journals is not only an issue of technical infrastructure but is also part of a wider debate on policy choices and the potential uses and misuses of reported statistics.

### 3.1.2 Strengths

Autonomy is a common thread in nearly all the focus groups and individual interviews of journals, although it is less apparent in the free texts; diamond journals value their independence and their ability to use unusual formats or unusual governing structures.

Diamond journals maintain a secular tradition of “club” journals, set up for the uses and interests of a specific closed community of knowledge. Before the commercial turn of scientific publishing in the 1950s and the 1960s, numerous leading journals relied on this governance model (Potts et al. 2017).

OA diamond journals are still strongly embedded in institutional environments (from a legal and governance perspective). Most diamond journals are inherently independent from commercial publishers as they are not created by them and do not rely on them at the management level.

Beyond these historical continuities, community governance is a key area for further development for OA diamond journals. The ascending role of the editorial committee and volunteers brings OA diamond journals closer to community-run projects, where contributors are constantly self-learning and appropriating tasks they like the best: “I claimed the tasks I personally enjoy doing.” (11889977544) More experimental journals are even inventing their skills: “I am continually sharing not only with the assistant editors but with all the contributors and even the peer reviewers. Together we are inventing this new form.” (11919594687)

One participant of the focus groups stated that this was a major incentive to create a customized platform: “The editorial college takes the decision and relies on a system by voting that does not fit with any journal system. We had a vision for a completely different business model and for that, we needed a big website.” Innovative OA diamond journals tend to bridge the secular heritage of scientific societies with the new wave of digitised knowledge commons such as Wikipedia or OpenStreetMap (Hess et Ostrom 2007).

### 3.1.3 Challenges

#### 3.1.3.1 Standardisation

The autonomy of OA diamond journals creates potential issues for any funding programs that would rely on some level of standardisation. They may be reluctant to alter their policies and/or their editorial workflow.

Reporting capacity is consequently one of the most challenging requirements of cOAlition S for OA diamond journals. This is a significant technical issue. Editors can struggle to account for a decision-making process that does not match the checkboxes of policy assessment. Numerous self-hosted journals, or journals hosted on institutional infrastructures with limited support, seem to be unable to record these statistics in their workflow. Comparatively, journals hosted on international platforms have the highest reporting capacity even though it remains low overall, which highlights the significant contribution of platforms to the standardisation in the field.

Focus groups showed that reporting statistics can be a controversial issue beyond technical capacity. Rejection rates have been one of the most heated issues discussed in the second focus group as the participants underlined that this indicator was incompatible with their own vision of scientific evaluation. Participants also suggested that the delay
between submissions and acceptance is much more meaningful than the delay between acceptance and publication. This feedback demonstrates the need for a wider conversation on the definition of reporting statistics and their further uses.

3.1.3.2 Lack of recognition

Even though they are well embedded in academic structures, OA diamond journals struggle to be properly integrated into the ecosystem of scholarly publications: “The biggest problem of small editors in OA is the lack of lobbying for the inclusion in important databases which could contribute to readings and impact increase of the journal.” (11819271522) They are rarely represented in significant institutions: “As small publishers, we are almost always left out of all conversations. You rarely find a representative for us on boards. Please involve us in future discussions!” (11928217593); “We have significant concerns about the strict requirements of Plan S favouring commercial publishers and being impossible to satisfy for community-run scholarly journals.” (11829154224)

Even more established formats are not well supported. While they remain an important format in the social sciences, monographs are much less covered by OA programs creating a lack of diversity of formats: “Monographs are just as important to us as our journal (...) The current publication funding policy in Germany does not take this very important field for the social sciences and humanities into account. This is a serious structural disadvantage for the social sciences and humanities.” (11820118156) Consequently, several respondents called to reframe some core concepts of science organisation, such as moving from impact factor to social impact: “The importance of real impact, and not just impact factor: universal rectification of metrics and their proper use (by universities, institutions, organisations) to measure only what they were meant to measure (without being misused as indicators of other things).” (11869288836)

3.2 Editorial work and quality assurance

3.2.1 Facts

3.2.1.1 What are the different types of content the journals publish?

Sources: Survey Q17 and Q39

The survey shows a large variety of journal content. Research articles are nearly universally published by OA diamond journals (97% of respondents) but this is far from being the only content. Half of the respondents publish book reviews (47%), while editorials (40%) and “Other formats” (37%) are common as well. These types of content play a wider role in terms of communication in the scientific communities that still has to be better understood. Their prevalence suggests that diamond journals are not simply producing publications but play a wider role in facilitating the communication of ideas and the dissemination of external works.

Disciplines are an important factor in the use of formats. Book reviews are strongly featured in the humanities and in the social sciences, which tends to drive their global share and they are a key component of a publishing ecosystem structured equally across journals, monographs and anthologies. Editorials and “opinions” remain in use in the biological sciences.
Emerging formats may contribute to enhancing this diversity in the coming years with the development of data papers in the physical sciences.

3.2.1.2 To what extent is the editorial work outsourced? To whom?

Sources: Survey Q24 and Q49

Just over half (51.5%) of the respondents do not outsource the editorial work. The two more important fields of outsourcing are both linked to editorial correction: typesetting (28.4%) and copy-editing (29.3%). This is a significant result since the interviews with hosting platforms for OA diamond journals showed that these actors do not believe that editorial correction should be part of their services. There is currently a lack of intermediaries to fill this need.

As shown in Figure 9, 63% of journals that outsource some part of their editorial work rely on volunteers. In contrast, half the respondents outsourcing typesetting, copy-editing and dissemination are assisted by volunteers.

More unexpectedly, the use of volunteers is not significantly lowered when journals outsource more activities. For instance, half of the respondents that outsource more than one editorial service still rely on volunteer participation (50% versus 51% of the
respondents) and the rate remains the same among the respondents that outsource more than two editorial services (17% versus 20% of the respondents).

Two-thirds of OA diamond journals answering the survey have a trained copy-editor (65%). This situation has a more pronounced impact on the participation of volunteers: 55% of journals with a trained copy-editor rely on volunteers versus 71% of journals without copy-editors.

These results suggest that volunteers are not simply an alternative, costless solution when the journal lacks the necessary resources to call for professionals. Volunteering remains an integral characteristic of community-driven publishing for numerous publications even when they can rely on outsourced services or the experience of a trained copy-editor.

3.2.1.3 What type of Peer Review (PR) is used by the journals and how is it managed?

Sources: Survey Q26 and Q48

Email and OJS are the most used systems for managing peer reviewing, as they are mentioned respectively by 53% and 45% of the respondents. Alternative significant solutions include spreadsheets, custom-made publisher’s systems and other solutions (mostly coming from established platforms like Janeway or Episcience), which are mentioned by roughly 10% of the respondents. Costly software solutions, such as ScholarOne or Manuscript Central, are uncommon (less than 2% of the responses), which is far from surprising since the large majority of the respondents have to deal with an annual budget inferior to $/€10,000.

OJS plays an important role as an accessible journal management tool. In Figure 10, OJS is the only peer review system that is strongly correlated with the size of the journal. The use of email and, to a lesser extent spreadsheets, appears to become less practical as the mean size of publication grows.

![Figure 10. Relationship between the review system (Q48) and the annual number of articles (Q16)](image)

Additionally, OJS is a widespread solution in the peer review management of journals with staff larger than 6 FTE (76% of mentions versus only 15% for email). While some respondents mentioned it was more complicated to set up in the first place, OJS appears to pay off when the journals grow to a significant size.

Regarding peer review practices, double-blind review is a huge majority use (67% of the
respondents). The other standard approach, single-blind review is a minority use (13%). These results seem strongly driven by the distribution of disciplines among OA diamond journals as displayed in Figure 11. Double-blind review is overwhelmingly preferred in the social sciences and the humanities, and is the main approach in the biological sciences. While single-blind review is prevalent in mathematics, computing and physical science, these disciplines are less represented in the OA diamond ecosystem.

![Figure 11. Distribution of peer review practices (Q26) per disciplines (Q40)](image)

Since the community seems to stick to established quality standards, open peer review is almost non-existent (16 respondents, representing only 3%).

3.2.1.4 To what extent do the journals’ editorial and scientific work align with industry best practices?

Sources: Survey Q51, Q52 and Q53

An overwhelming majority of respondents stated they comply with best practice guidelines on publication practice (78% positive answers, 19% “Unknown” and 5% negative answers). The negative and unknown answers occur mostly amongst journals that have a more unusual activity and/or strong links beyond the academic world (54% positive answers for journal publishing conferences and the same percentage for journals publishing editorial review). The effect of the size of the journal is much more limited, with 70% of journals with less than 1 FTE declaring they comply with best practice. Concretely, even smaller journals with limited funds and resources care significantly about the quality of scientific research and strive to enforce the standards in their fields.

Adhesion to the DOAJ is not a major factor either: 68% of respondents not indexed on DOAJ comply with best practice guidelines. For a variety of reasons that have been raised in more detail in the focus groups (lack of time to fill in the indexation procedure, metadata issues, non-conformity of the license), numerous quality OA diamond journals are currently not represented on the DOAJ.

82% of those who comply with best practices quote an explicit guideline (936 respondents out of 1,127). COPE is by far the most popular code of conduct with 259 respondents either citing it or the website publicationethics.org. Other significant alternatives mentioned by more than 10 respondents include:

- Recommendations from international organisations of open access journals, such as DOAJ (41 responses) or OASPA (30 responses). Most of these answers also mention COPE (30 respondents from DOAJ and 29 respondents from OASPA).
National guidelines, such as the Consejo Superior de Investigaciones Científicas (CSIC) in Spain (37 responses) or SCIndeks in Serbia (21 responses)

Guidelines set up by a specific university or a specific university publisher, such as the University of Coimbra (12 respondents), the State University of Maringá (10 respondents) or the Foscari University Press (10 responses)

Some initiatives focused on a specific discipline, such as the International Committee of Medical Journal Editors (13 respondents).

Beyond these few main resources, respondents quoted at least 390 different domain names, which may cover even more different journals (all the respondents hosted on OpenEdition use a different set of guidelines).

The majority of OA diamond journals use anti-plagiarism software (55% responded “Yes” versus 40% “No” and 5% “Unknown”). The practice is strongly correlated with the size of the journal staff: 92% of journals with 6-9 FTEs rely on it versus 40% of journals with less than 1 FTE. Crossref gives access to an anti-plagiarism service for a very limited fee, but this solution may be either too expensive for small journals with very limited funds or not sufficiently well known. Journals with few peer reviewed content are less likely to use anti-plagiarism tools (33% for journals that publish roughly 50% of peer reviewed research).

3.2.1.5 To what extent do diamond journals support innovative policies?

Results from the survey indicate moderate support for innovation in editorial practices. Three innovative policies have been evaluated: open research data (Q41), preprint publishing (Q46) and open peer review (Q26).

42% of the respondents have a policy or practice to stimulate open sharing of research data. We found an equal number of respondents who didn’t have a policy in place and an additional 15% of “Unknown” answers. We find few factors explaining the adoption of open data policies. The annual budget of the journal has no impact; we found the same rate of journals with open data policies among the publications with less than $/€1,000 of annual resources than with the publications with more than $/€50,000 annual budget. Most ownership models had a range of support of 35%-50% except for two extreme cases: journals owned by government agencies (73%) and journals owned by individuals (27%). Since we found no major external factors, open data policies seem more likely to be caused by individual decisions than by institutional incentive.

Only 38% of the respondents explicitly accept submissions that have been publicly shared as a preprint (Q57). Here the differences are much more marked across the ecosystem of diamond journals. Disciplinary culture has a large impact with a high rate of support for preprints in mathematics and computing science, a field that has traditionally used preprints. Interestingly, we also found that the size of the journal is negatively correlated with the acceptance of preprints: 42% of journals with less than 1 FTE accept preprints versus only 29% of journals with 6-9 FTEs. It is possible that larger diamond journals are more concerned with the impact of the acceptance of previously-published research on their reputation while smaller, less well-funded journals seem to embrace preprints more.

Finally, the adoption of open peer review (Q26) is extremely low and concerns just 1% of the respondents (n=16). The rate seems higher among the journals created less than five years ago (7%) or publishing data papers (8%), although in this case, the low rate of answers makes it harder to have representative results. This low rate seems comparable to the practices of APC open access journals registered in the DOAJ: 2.3% of them use open peer review.
Overall, diamond journals do not seem especially innovative. On the only topic where we could draw a quantitative comparison to commercial OA journals, open peer review, they are even slightly more conservative. Yet, it must be stressed that the three questions of the survey only targeted specific areas of “formal” innovation that are highly discussed among stakeholders. The focus groups, and to some extent the free text answers, bring a different perspective that will be addressed in the next section.

3.2.2 Strengths

3.2.2.1 Quality control

While diamond journals do not always have the most suitable tools to manage scientific and editorial quality optimally, they seem to stay in control of quality. In the survey, an overwhelming majority of respondents stated they comply with best practice guidelines on publication practice. Even small journals with limited funds and resources attempt to implement ethics and scientific standards. Respondents also expressed a strong preference for the most constraining form of peer review, double-blind review (67% of the respondents).

3.2.2.2 Uncharted innovations

The focus groups showed that the participants implemented “uncharted” innovation, in the sense that they are not always explicitly highlighted (even in the free text) and that they may not correspond to expected standard innovations in the field. For example, participants stated that they feel their ability to work regardless of profitability made it possible to test unusual editorial formats and practices: “We publish web texts, rather than articles. Each author designs his/her own article. We are completely at ease with our DIY aesthetic.” Diamond journals can also maintain formats that are highly specific to a community: “It is very difficult to publish monographs and long papers: we believe we offer a service [otherwise] a lot of research is not going to be published anymore.”

Provided they have some technical skills to do so, several OA diamond journals do not hesitate to set up their own publishing framework: "We can decide from one day to the next if we can do it. If it does not work, that's it. We still have the freedom to experiment." This autonomy is especially important in the area of governance and editorial format.

The most innovative publishing structures may not be classified as “journals” anymore and are simply excluded from most scholarly infrastructures: “[We are] a UFO in the ecosystem of scientific publication (...) This poses problems, e.g. the absence of [anonymised] from DOAJ, Pubmed, uncertainty regarding Plan S.” (11820575959) “Media-rich journals such as ours are not sufficiently recognised.” (11851814815) Experimental projects can become highly dependent on private hosting platforms since they do not meet the requirements of the main scholarly communication infrastructures: “The articles themselves are hosted on Vimeo, a private company.” (11919594687)

3.2.2.3 Commitment to changes

Several diamond journals are highly involved in the transformation process of scientific publishing. One of the participants of the focus groups stressed that: “Our journal is used in a case study on the future of scientific publishing.” Another participant has been largely involved in the redefinition of preservation since they had to handle complex multimedia contents: “We have worked with CLOCKSS to figure out the best workflow. It turned out that flat files, like the one we produce, are the best mechanism in the future. This is paradoxical since our format is considered unusual in regards to academic current practices.”

In the survey, several respondents take an active stance in the evolution of structural aspects of scientific publishing, such as the reward system, “influencing the definition of researcher in the national system of science and technology in order to assign scores
to the peer review of journals, books and thesis juries." (11823761310)

While the ecosystem of diamond journals remains highly varied and disparate, several responses to the survey underscored the emergence of global initiatives at a grassroots level, for example: "We have promoted the formation of collaborative work networks between institutions to begin to formalise this knowledge, so we proposed the creation of (...) a network of journal portals." (11820268427)

3.2.3 Challenges
Sources: Survey Q82, Q83 and Q86

3.2.3.1 Recognition of volunteers’ work
A large number of OA diamond journals from the survey are partly or fully maintained by scientists. 60% of the respondents stated they rely on volunteers (870 versus 579). These contributors intervene at all the stages of the scientific publication. More than half of the journals included in the focus groups were managed by a scientist and/or a group of scientists, although it was not a criterion for selection.

This reality is not well acknowledged in institutional settings and research assessments. Respondents stressed that their important editorial contributions have never been formally recognised. Several taxonomies have been created to acknowledge the diversity of scientific contributions like CREDIT and ADIRAH. Yet, editorial work remains hardly featured; most of the new proposed roles focus on experiments and statistical analysis rather than publishing.

Since OA diamond journals largely rely on volunteers for editorial management, participation of key contributors can become critical. The sustainability of the journal can be at risk each time a major contributor leaves: "The journal relies on the goodwill of a very small number of researchers" (11825253758); "Funding would relieve the researchers involved in the journal and would reinforce sustainability, which can be called into question in the event of disinvestment by one or more people." (11924661683) The transmission of skills can also become a major issue: "We rely heavily on the availability of a former co-founder of the journal and editor-in-chief, now retired, who devotes a significant amount of time to the journal at the editorial level" (11924661683); "Skills and competencies are not a current concern, but a future one (...). We detected a great weakness in the formation of new human resources capable of replacing in the long term, especially the figure of 'executive editor.'" (11820268427)

3.2.3.2 Editorial services

Figure 12 shows that editorial services are the main area of expected funders’ support in the form of tools and services. It collects the results of a semi-automated classification of the free text submitted to the question Q75.
The breakdown below the main plot shows that journals have a major need for assistance in copy-editing, which is already the main area of outsourced editorial work (196 respondents). This creates potential friction with hosting platforms that generally exclude copy-editing and other editorial works from their offer of shared services (partly because these tasks cannot be easily scaled).

Copy-editing is the most likely activity to be delegated to a professional, although OA diamond journals may lack the necessary funds to do so.

More experimental platforms have to learn by doing, as they deal with unprecedented formats or editorial workflow. This creates additional tasks for the journal managers, such as needing to define norms or provide training support.

OA diamond journals can provide additional services to their communities beyond the publication of articles, especially in terms of copy-editing and translation. They frequently publish non-English works, and the translation of abstracts, or even articles, can take up significant time and resources. These tasks add to the daily management of the journal.

3.2.3.3 Peer review

Lexical analysis of the free text challenges on peer review shows that finding, recruiting and retaining reviewers are by far the major concerns of the respondents regarding peer review challenges. Figure 13 lists the most important arguments in the free text submissions to the challenges on peer review. Finding reviewers features highly on this list (with 108 occurrences), all the more as it supplemented by numerous variants not shown in the visualisation, such as: “find evaluator”, “recruit reviewer”, “find referee”, etc.
Several respondents highlighted that they are unable to compete with major international commercial publishers for peer reviewer recruitment (11902005020): "The reviewers like to give their service for paid review or to high rank journals." (11816938775) Since they usually run on a tight budget, OA diamond journals with a more professional audience seldom have the possibility to pay the reviewers.

There are some significant variations of the "reviewer shortage" issue depending on the journal model and objectives:

✔ Reviewer pools can quickly be exhausted when a journal is too niche (11860395865, 11911599109, 11929391392, 11893925564), has a limited national scope (11820595111, 11930451349, 11817053886, 11911735875) or within an institution (11818023041).

✔ An interdisciplinary journal with a wide range of topics has a hard time maintaining a consistent network of reviewers (11930702393, 11907280275, 11817107425, 11818580619).

✔ The use of a non-English language makes it generally harder to find reviewers, especially if the language does not have a global distribution (11892021071, 11927166873, 11978133981).

✔ Emerging and innovative projects also have a very hard time building a reviewer network: "Very difficult to build up a new peer reviewers community from scratch." (11820038067)

Respondents mentioned several tools and policies to solve this, such as a database of reviewers, an enhanced infrastructure for peer review tracking, and a network of reviewers and paid reviews (Figure 14).
Figure 14. Solutions for peer review recruitment and management in the free text answers to peer review challenges (Q82).

Yet numerous respondents stressed they lack the necessary time to build up effective tools (like a database of reviewers) and to customize the recruiting process. The peer review process remains a highly time-consuming task, even with a good workflow and technical support (11919594687). Several respondents signalled they were not able to establish their desired peer review system on account of a lack of time and added complexity: “I would like to move towards a double-blind evaluation [but] I would need more colleagues.” (11930584542).

3.3 Technical infrastructure

3.3.1 Facts

3.3.1.1 Technology and workflow management

Sources: Survey Q56

Open Journal Systems is the leading infrastructure among the journals answering to the survey: 60% of the respondents use it for online publishing (Q56).

According to the free text submissions to the survey, journals reckon that OJS has noticeably simplified the editorial workflow: “The OJS workflow tool is very useful for management, tracking and tracing” (11828309616); with OJS 3 “The editorial workflow is smoother and better than before” (11818588595); “The OJS V2 system is clumsy. However, this system is to be upgraded to V3 and we look forward to better workflow,” (11967610280) Additionally, academic CMS appears to be used across the field of OA diamond journals, regardless of journal size. Figure 15 shows no difference in terms of the mean number of articles between journals using the two leading CMS (OJS, Lodel) and the journals that rely on an alternative system.
Despite the widespread use of OJS, all of its features are not actually used. Because of the lack of resources and technical skill, OA diamond journals switch occasionally to more or less improvised editorial systems in addition to OJS: “The workflow is not perfect, as it is primarily based on Google Drive tools and emails. This does not, for example, allow for tight tracking.” (11861460298) “Most editors, authors and reviewers in our field (history) prefer working over email.” (11908159569)

The two main alternatives to OJS are far behind: 8.5% of the respondents use a generic CMS, Wordpress, and 8% use Lodel. Lodel is exclusively associated with one platform, OpenEdition. Wordpress has a more unusual situation. According to one participant of the focus groups, it used to be a popular solution in the early 2000s due to the lack of open source software for academic publishing: “As we developed in the 2000s, generalist frameworks emerged like Drupal or Wordpress and, later on, OJS. A large number of OA diamond journals migrated to these frameworks.” However, Wordpress still remains popular among journals with strong links in non-academic circles, such as journals owned by NGOs/Charities (33% of respondents) or journals relying on editorial review (25% of respondents).

Respondents also mentioned numerous alternatives in 392 free text submissions identifying 128 unique cases. The most popular option after OJS, Wordpress, and Lodel is a home-made website (53 answers, 4% of respondents), which covers a very wide set of options from simple HTML pages to complex platforms. The persistence of custom solutions showcases the importance of technical autonomy for OA diamond journals. Additional tools with a non-anecdotal usage include frameworks developed by universities (SCIndeks, Hrcak, Bepress, J-Stage) or by commercial publishers (Ubiquity Press Journal Management System, ScienceOpen).

### 3.3.1.2 Hosting

Sources: Survey Q13, Q57 and Q58

According to the data retrieved from the survey, the OA diamond landscape is dominated by institutional platforms (40%), hosted by universities and other academic institutions. International platforms are the main alternative (25%), followed by national platforms (13%) and commercial hosts (11%). Only 11% of the respondents either are uncertain or rely on another kind of hosting.
The difference between publishing software and platforms is not well understood by the respondents: 623 respondents quote OJS as a platform or aggregator. The distinction has possibly become blurrier since OJS has increasingly endorsed features associated with platforms such as hosting by PKP or archiving. Other hosting examples mentioned align better with the common definition of an academic publishing platform: OpenEdition (79 respondents), Ubiquity Press (28), Hrčak (20) J-STAGE (13) or Redalyc (13).

Diamond journals rely on a large variety of websites to ensure their dissemination (Q57). The 1,437 respondents provided 783 different domain names. OpenEdition is first to appear with 80 respondents (which may be due either to the concentration of French OA diamond journals on the platform and to the large representation of French respondents). This situation is consistent with the strong institutional links of OA diamond journals, which depend on a variety of academic websites to find their audience.

### 3.3.1.3 Format

Sources: Survey Q27 and DOAJ

Publication formats can either include structured markup languages (in HTML or XML) or page descriptive language with a fixed layout (PDF). XML markup is currently a strong recommendation of cOAlition S, as it allows semantic information to be embedded into the scientific publication: “Availability for download of full text for all publications (including supplementary text and data) in a machine-readable community standard format such as JATS XML.”

![Figure 16. Formats used by the respondents (one respondent can use several formats)](image)

HTML is also a format that fulfils the requirement. 25.6% of diamond journals offer at least one of these formats (XML or HTML), including 63.4% of APC-based journals. The picture is a bit better when looking at articles, 31.5% of diamond OA and 84% of APC-based journal articles are published in one of the two formats.

The most popular format, PDF, is offered by 98.8% of diamond journals and 99.1% of APC-based journals.

Looking at diamond OA journals and assuming that both XML and HTML cover this requirement, we see that 20.9% of HSS journals comply, compared with 22.2% science and 46.1% medicine journals. We also see that the larger the journal — except for the largest journals publishing 500 or more articles per year — the higher the rate of compliance. The journals publishing 100–499 articles per year have a compliance rate of 49.1%.

The distribution of formats across hosting platforms and publishing infrastructures
is variable. As shown in Figure 17, respondents hosted on Open Edition Journals, SciELO, ScienceOpen or Ubiquity Press have largely implemented structured text formats. Conversely, independent journals relying on OJS are overwhelmingly PDF-only.

Figure 17. Distribution of formats (Q27) in three leading platforms (OpenEdition Journals, SciELO, ScienceOpen) and in individual journals using Open Journal Systems (Q13)

3.3.1.4 Content preservation
Sources: Survey Q28 and DOAJ

According to the survey, 57% of the respondents state that, to the best of their knowledge, they have no preservation policy in place (Figure 18).

Figure 18. Share of preservation plans in the survey (Q28)

This rate of no-preservation rises to 71.9% of the respondents with less than $/€1,000 of annual budget. This puts a large share of OA diamond journals at risk.

National libraries are currently the main service providers of content preservation for OA diamond journals (quoted by 11% of respondents). While it is not yet certain if they will be included in the recommendations of cOAlition S, national libraries are already
key stakeholders in practice and should be directly involved in future discussions regarding the preservation of academic publishing.

The established initiatives for preservation currently fare lower, such as LOCKSS (9%), CLOCKSS (6%) or Portico (4%).

OJS has a significant potential to address the issue of preservation of OA diamond journals. While the Publication Knowledge Project Preservation Network (PKP PN) is only quoted by 6% of the respondents, OJS is already extensively used as a publication tool, although this mechanism only works for the latest versions. In the future, international, national and institutional hosting platforms can become important intermediaries to make PKP PN a workable solution.

3.3.1.5 Article identifiers
Sources: Survey Q42

Survey data show that Crossref DOIs have become a standard in OA diamond journals with 69% of respondents using them (960 respondents out of 1,388). ORCID comes second with 38% of respondents. The use of alternative DOIs is significant as well (28%) and shows, once again, the diversity of community-driven publishing.

Conversely, unique identifiers for grants are hardly used. This is not entirely surprising since one of the key motivations for using a grant ID was the correct attribution of publication funding in commercial open access journals. This may be a problem when seeking to comply with Plan S. Grant ID is currently a mandatory technical condition for all publication venues: “Metadata must include complete and reliable information on funding provided by cOAlition S funders (including as a minimum the name of the funder and the grant number/identifier).”

As shown in Figure 19, the hosting situation is an important factor in the implementation of publication IDs.

International platforms and commercial host providers attain the highest rate of standardisations, with respectively 75% and 82% of the journal hosted there having DOIs. International platforms also have the highest rate of grant ID (17%) and Datacite DOIs (10%), while adoption of both indicators remains lower than average in commercial host providers. The results show that international and, to a lesser extent, national platforms play an important part in the implementation of publishing standards in the OA diamond landscape. Provided they are sufficiently funded, they will likely be critical actors in the implementation process of the requirements of cOAlition S.
3.3.2 Strength

OA diamond publishing journals have made significant steps towards open source software in the past years. OJS has been largely adopted with 60% of the respondents using it as a publication tool: “Open source publishing software has contributed to reducing the design costs of a large number of journals by disseminating automated procedures that have long been applied within large organisations such as Elsevier or Springer.” (Langlais 2016)

Shared hosting and dissemination platforms help meet increasing standard requirements with a limited cost: investments for implementing standards or integrating indexes can be managed at the scale of several hundred publications. Interviews with the platforms showed much more readiness with Plan S conformity than the text and focus groups from the individual journals.

3.3.3 Challenges

Sources: Survey Q83, Q84 and Q85

3.3.3.1 Use of OJS and other specialised scholarly communication tools and services

Support for tools and services is the preferred form of support expressed by the respondents to the question on funders’ support with 217 statements (Figure 20).

![Figure 20. Types of expected supports extracted from the free text answers to funders’ support (Q75)](image)

Open source infrastructures require regular investment and maintenance. In the free texts, respondents raised regular issues about training, technical support and missing features of standard CMS (Figure 21). OA diamond journals lack pre-existing skills to easily implement specialised tools like OJS.
Despite the generalisation of OJS and other specialised software, journals still largely depend on custom know-how in practice (with some editorial workflow relying on email, Google Drive or Excel). This combination of standardised CMS with non-standardised additional tools can create a two-tier system where the journals are mostly run by a core team without involving a larger circle of volunteers. Respondents noted that the learning curve is not that hard, but requires more regular training and practice: "The handling of tools (OJS, LODEL), especially by volunteer colleagues who only use them occasionally, is problematic." (11828309616); “The Janeway system that the journal uses is excellent. However, getting editorial staff up to speed with using it inevitably requires time.” (11931066578)

Some respondents also signaled a lack of interaction between the actors of OA diamond publishing and the development process of open software tools, which results in the removal of important functions like a database of readers (11817053886) or lack of development in some areas, such as log analytics.

### 3.3.3.2 Conformity to standard tools

Not all the necessary tools and norms are covered by academic CMS. Several important requirements are potentially costly for OA diamond journals with very limited funds.

- **Acquisition of DOIs.** DOIs are mentioned in 70 free text submissions to the survey. 52 of them (a large majority) stress the financial cost of DOIs for small journals: “This is perhaps the most pressing problem since the journal does not have any income” (11824266141); “We lack funding for DOIs” (11841587194); “We do not have the necessary funds to obtain the DOIs required by most indices” (11912173373); “We do not have money to arrange DOIs.” (1184881559) Respondents also called for extended support from funders or academic institutions: “We would be grateful for your effort to achieve a significant reduction or removal of the fees in dollars for DOIs” (11832229290); “The ideal model is that one of operating in a system where some costs such as DOI and resolution of DOIs” (11819271522); “We would like to be able to count on funding for DOI.” (11833592505) The acquisition of DOIs is one of the preferred areas of support for tools and services (along with copy-editing and hosting).

- **Use of an anti-plagiarism tool.** This service is already largely used by the respondents to the survey (820 “Yes” versus 589 “No” and 70 “Unknown”). Thanks to the partnership of Crossref with Authenticate, this service is relatively inex-
Pensive. Yet it adds up to the financial pressure incurred by small journals. Seven respondents have explicitly suggested that funders could provide anti-plagiarism service for free: “Supporting the use of plagiarism detection tools accessible or free of charge for open access scientific journals”; “Provide free anti-plagiarism software”; “Achieve a significant reduction or removal of the fees in dollars for (...) anti-plagiarism tools”; “Be able to pay anti-plagiarism software (now we use a borrowed one)”; “Provision of access to plagiarism detection software”; “Free plagiarism detection service”; “Paying the anti-plagiarism software on time.” Nine other respondents raised the issue of the amount spent on anti-plagiarism software in other free text questions.

Conversion to JATS-XML. For one of the interviewed journals, transforming PDFs to JATS-XML was the main expense: “They are produced in PDF but the publisher also wants JATS-XML. We need to pay them for the time to do that manually. It could be more efficient if we could have an automated tool. It's an important part of the cost of the journal.”

3.3.3.3 Content preservation

Preservation of OA diamond journals has recently become a crucial issue. In September 2020, an unprecedented study showed that at least “176 OA journals that, through lack of comprehensive and open archives, vanished from the web between 2000–2019.” (Laakso, Matthias, et Jahn 2020) The study only focused on journals that could be recovered through Internet Archive, so the real rate of loss may be significantly higher.

This “tragedy of the commons” had wide-range implications that are easily measured in the survey. As seen above, a large majority of the respondents to the survey have no archiving policies (855 respondents from a total of 1,575 answers to the question on archiving policy). Only 387 respondents use a standard archiving system (LOCKSS, PKP PN, CLOCKSS and Portico) that may be compliant to cOAlition S requirements. Additionally, some of the main archiving solutions are not yet compliant to Plan S. National libraries are important actors in the preservation of diamond journals, as they are quoted by 11% of the respondents. The cost and the complexity of the joining procedures to the existing archive services are likely key factors in this low adoption: “We can't afford to pay for preservation by other institutions, and thankfully we haven't needed to yet. We have published on our preservation techniques in multiple venues.” (11972804083)

Archiving was one of the main problems discussed in the focus groups. One of the participants underscored that “Archiving policy is currently a big issue. We are publishing multimedia content and currently there are no solutions, even though initiatives like Porticos are working on one. We can't afford any major backup plans.” Another participant currently relies on a private company for video hosting since there is no scientific infrastructure able to store and preserve this type of content in their home country.

The results of the survey, the data from the literature and the inputs from the focus groups all converge to make archiving one of the most pressing issues of the OA diamond landscape.
3.3.3.4 Indexation

As shown in Figure 22, indexation is the main technical challenge for diamond journals. Indexation can represent a significant burden for OA diamond journals with little administrative support: “Indexing means meeting certain formal and technical requirements that are not usually free. On the contrary, the system that has been created around the publication of journals (systems for detecting plagiarism, identifiers for articles, generation of XML files) is geared towards obtaining profits and pays little to the free nature of the knowledge” (11837383477); “Having to be always alert to new demands is utterly and completely exhausting” (11828350723); “The files to be filled in are heavy, the
waiting time is long, and the criteria for social sciences are unclear." (11850896848)

Several diamond journals simply lack the financial means necessary to perform the registration: "Unfortunately, we currently lack the capacity to run our registration, e.g. in DOAJ and a membership in OSPA." (11820118156)

Several respondents assimilated the process to a vicious circle: a journal already needs to have large international notoriety in the academic world to be accepted (11837999959, 11971627211, 11907280275): "It is a vicious, hegemonic circle — we're too small to be included, and we're kept small because we're not included" (11837999959); "Indexing continues to be a challenge due to the way indexes are seemingly set up to favour so-called 'high impact' journals or publishers." (11971627211) Once again, competition with established journals seems deeply unfair: "We have to compete against commercial publishers who have what appears to be infinite resources (marketing, large budgets etc.)" (11820176280); "The Anglo-Saxon hegemony and the big multinational publishers make a huge competition." (11907280275) Journals also feel restrained in their ability to experiment with new formats and new workflows: "Because of our innovative publishing model and the fact that we have no impact factor (do not intend to request one), we are usually not a first-choice venue." (11820488456)

Academic indexes also contribute to large-scale inequality, notably between Northern and Southern countries (11911599109, 11927166873, 11820595111, 11895638221, 11832229290, 11927166873). They frequently require the systematic publication of English abstracts as well as a large share of English-speaking articles: "Some demand more than 50% of articles in English and our journal was created to serve researchers in Latin America who have few resources" (11927166873); "We receive almost insulting unsigned letters to explain that we cannot be referenced given the level of the journal (which publishes 80% in French and that the reviewers do not read)." (11820595111) These policies are deemed unacceptable for several respondents: "We are a Latin American magazine for Spanish speakers. We understand that the indexes that require a high percentage of articles in English create an unacceptable inequality. They should index magazines from all countries and languages equally." (11832229290)

The focus groups also stressed that difficult procedures are the main problem. The participants were generally frustrated with the way indexes are managed: "Most of my time is spent with checking indexes. Why so many different indexes? With so many different criteria?"; "I tried to apply to the DOAJ last summer but did not succeed. I need another person with me. While I know everything that is needed about my journal, I am not familiar enough with the technological systems." The Spanish-speaking journals interviewed on the third focus groups similarly stressed that journal editors spend considerable resources in achieving quality and technical criteria required by many databases and indexes, but many national or institutional policies consider only private indexes such as Scopus or JCR to assign a score to a journal or researcher.

These difficulties raise the issue of the representativity of existing indexes. While largely used to analyse the academic publishing landscape, Scopus, WOS or even the DOAJ may not cover efficiently the entire diversity of the OA diamond ecosystem: "There are many journals that should be in there but are not. In practice, the DOAJ is not just DOAJ but with much more letters: Directory of Open Access Journals for Filling this Particular Form about Archiving, Editorial Use and about Licensing...."

Competing requirements of the international and national indexes have also been a major issue raised by the focus groups. The participants called for more harmonisations in terms of criteria, although they realize that the process is not that simple: "Global criteria can leave aside South Journals." Participants also quoted potential issues regar-
3.3.3.5 Joining a hosting platform: Overcoming the cost of entry

Joining a platform can significantly contribute to solving the above-mentioned challenges. In comparison with the editorial activities we addressed in the previous section, technical work can be more easily scaled. One shared platform can maintain the website and the software of dozens of journals at a fraction of the cost and resources that would be needed to maintain each journal individually.

Journals often have to prove their worth over time: “We have been likened to [a publisher], and there is some interest, but we have to have 3+ years of publishing history before this will be looked at seriously.” (11860395865); “The journal is less than five years old. Its sustainability will strongly depend on its membership in a platform such as OpenEdition Journals.” (11934713826) It may require a more professional management of the journal and, paradoxically, add more pressure to the editing management: “Moving on to another type of work, namely the integration in SciELo, a bibliographic and digital database of electronic publications, will require additional work that can no longer be done by a volunteering service.” (11919701208)

In some cases, the appropriate platform does not yet exist. Several journals currently attempt to create common initiatives: “We have promoted the formation of collaborative work networks between institutions to begin to formalise this knowledge, so we proposed the creation of the Sara Network, a network of journal portals.” (11820268427) Calls for mutualisation are recurrent as well in developing countries: “The authorities of Science and Higher Education in developing countries should invest in the creation of repositories for the preservation of archives, create sources of financing to access.” (11968939160) Hosting platforms are also important multilingual content providers in science, which is a major concern of non-English OA diamond journals.

Currently, shared platforms are mostly concerned with academic publishing. Several journals made a call for expanding this strategy to other aspects of scientific dissemination which could include, for instance, a public-owned international index: “A European, multilingual search engine, independent of the large financial groups such as Elsevier, is necessary.” (11820595111)

3.4 Conclusion: Profiling journals

At face value, OA diamond journals seem highly scattered. The 1,619 respondents to the survey are disseminated on 783 different domain names. Disciplinary culture and organisational structure create significant rifts in terms of format used, review process or editorial norms. The integration of OA diamond journals into the global academic publishing landscape remains partial: a significant share of the respondents are not even registered in the DOAJ.

Yet our analysis also underlined several recurrent patterns and convergent dynamics. The statistical comparisons showed that several variables had more explanatory power than others, such as the form of ownership, the type of host/platform, the budget of the journal or the average number of the articles. Their recurrence suggests that there are several consistent clusters of editorial practices, organisational structures and economic models.

Figure 23 displays a correspondence analysis of nine significant questions from the survey regarding the editorial, scientific and economic model of the journal: the peer review model (Q26), the identity of the owner (Q34), the scientific discipline (Q40), the type of host (Q58), the source of support (Q61), the source of funding (Q62), the total annual cost (Q66), the size of the staff (Q67) and the use of volunteers (Q69).
Figure 24. Typology of diamond journals through a correspondence analysis of nine questions from the survey. We manually identified five types of journals: voluntary-run (red), institutional (orange), publisher (blue), learned society (violet) and large structure (yellow).

The two axes of the correspondence analysis can be interpreted as two meaningful dimensions: the extent of financial support (y-axis) and the degree of autonomy from the institutional context (x-axis).

The graph highlights the high diversity of the OA diamond landscape. Five regular profiles can be identified in the graph:

- ✔ **Small voluntary-run journals**: They tend to have a very small budget (< $/€1000 annually) and less institutional support (the owner is more likely to be an individual). This profile occurs more frequently in the art and humanities disciplines and in the mathematics and computer science disciplines.

- ✔ ** Learned society journals**: funded and supported by a learned society, they get a significant source of funding through membership fees.

- ✔ **Institutional journals**: While their funding may be limited, they are well embedded in an academic organisation and benefit from in-kind support. This profile occurs more frequently in the social sciences.

- ✔ **Publisher journals**: supported by commercial and non-commercial publishers.
Large professional journals: thanks to a significant source of funding, these publications are able to recruit a professional editorial team and rely significantly less on volunteers.

These profiles obviously remain ideal-types. In practice, there is a lot of potential hybridisation, especially within the institutional model. If it is properly supported, this variety makes OA diamond journals more structurally resilient: bibliodiversity creates a healthy ecosystem that is able to cover a large range of needs and use from different scientific cultures and withstand a larger variety of issues, as it makes it more likely that several models will have the capacity to overcome new challenges.

More isolated models are also perceptible, such as journals supported by NGOs and other philanthropic associations. They show that the OA diamond ecosystem extends beyond the academic sector, as professional or NGO actors may lack the resources to access pay walled scientific publications or to pay for APCs: "Many of our readers do not have access to institutional subscriptions." (11822191482) This concern is especially apparent in the health sciences: "In the spirit of the journal’s aim to foster public engagement with research, authors come from both inside and outside of universities, and many are based in the community, in health or education systems, in business or voluntary organisations. None of these have access to funding for publishing research." (11930702393)

Beyond this breakdown in different profiles, our analysis highlighted the emergence of a latent culture of OA commons publishing. At present, most of these journals use a similar publishing framework following the widespread adoption of OJS. They have to overcome similar challenges, such as the lack of recognition of community-driven models and the retention of volunteer contributions. Finally, they tend to share common values: they value the ideals of open access, their autonomy, and their ability to develop innovative editorial formats or governing structures.

International and national platforms have the potential to support this convergence. Platforms are not significantly correlated with either profile as they aim to host journals from a wide variety of editorial, organisational and scientific models. They have the potential to maintain and sustain the diversity of the OA diamond journals profiles while bringing forward common standards and norms at a limited technical and organisational cost. This potential remains partially unfulfilled: unless they are strongly supported, platforms lack the means to lower their cost of entry for journals.

The OA diamond community is in the process of existing. A key stake of the coming years will be to develop the proper mechanism to support it and let it thrive.
The OA Diamond Journals Study
Understanding how diamond journals are funded and how sustainable they are

by Vanessa Proudman
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Contents

4.1 Facts
  › 4.1.1 The cost of running journals 110
  › 4.1.2 Voluntary work 115
  › 4.1.3 Financial support 117
  › 4.1.4 How research funders might support the financial sustainability of OA diamond journals 119
  › 4.1.5 Financial stability 120
  › 4.1.6 Confidence in the OA diamond model 122

4.2 Strengths 123

4.3 Challenges and opportunities
  › 4.3.1 The cost of running journals and voluntary work 124
  › 4.3.2 Confidence in the current funding model/OA diamond model 125
  › 4.3.3 Financial stability 126
  › 4.3.4 Financial support 126
The study’s survey found that over 60% of journals reported annual costs in the previous year under $/€10,000, including in-kind contributions as shown in Figure 1. Just under half of these reported costs lower than $/€1,000, as seen in Figure 2. Journal costs are low across the 54 surveyed countries; 65% of all country respondents from all continents with the most journals running at this cost include France (39), USA (37), Brazil (34), Italy (34) and Spain (24) (these are also the countries with the most respondents) with a long tail of 30 countries with three or fewer at this cost.

Three percent of respondents reported higher costs between $/€50,000 and $/€100,000. The majority of high costs journals come from Europe (16) — the continent with the most respondents — and North America, including Mexico (10) with four from Asia, three of which are Japanese.
Nineteen percent reported not knowing costs of the previous year. Figure 3 shows that it is university presses and universities that have the most difficulties reporting costs, with 28% of all university press-owned and 21% of university-owned journals.

Figure 3. Number of journals reporting costs unknown by type of organisation in % (n=267); survey Q66

Figure 4 shows that the annual costs for journal editing and operational work are mainly under $/€10,000 (70%), with just over a third of the total report costs below $/€1,000 (36%). Almost one-fifth are unaware of the specifics of personnel costs for editing and operational costs.

Figure 4. Annual amount paid in $/€ for editing and operational costs in % (n=1,388); survey Q68

Journals from 64 countries reported low annual costs of under $/€1,000. Almost half of these come from Europe, as can be seen in Figure 2, with Asian and African countries as hosts coming in second place. Of the 29 European countries, fewer than half of these are from higher income countries.

The 25 journals with the highest costs of above $/€50,000 come from Europe (13), North America—including Mexico—(8) and Asia—including Japan—(3). These are largely universities, learned societies, government agencies and others.

When comparing the average number of articles per year to the total annual costs of the journal (including in-kind institutional contributions), it is possible to estimate a cost per article for the OA diamond journals in our survey. The median cost per article
calculated in this way is $/€208 across all journals. The median cost per article decreases with journal size, ranging from $/€556 for journals publishing five to nine articles per year to $/€48 for those publishing 100-499 articles per year (Figure 5).

Figure 5 shows box-and-whisker plots where boxes indicate first and third quartiles (25th and 75th percentiles), with the horizontal line indicating the median, and the box width proportional to the number of observations. Whiskers extend to the smallest and largest value not exceeding 1.5 IQR (interquartile range). For survey Q16 and Q66, n=965.

There are various limitations to these estimates relating to both the completeness and interpretation of the data. Data for both article number and total cost were available for 965 of 1,619 journals in the survey, making this a relatively small sample, especially for some subgroups. Moreover, annual costs were presented in the survey as brackets (ranging from $/€0-1,000 to $/€50,000-$/€100,000) rather than exact amounts. For these brackets, a middle value was taken which was then divided by the reported number of articles per year. This means that all individual data points, and consequently all aggregate measures, are estimates within a range.

Annual costs include both fixed (or indirect) costs of running the journal, as well as variable (or direct) costs that are commensurate with the number of articles published, including cost of editorial staff. A recent exploration by Brembs and Grossmann (2020) estimated per-article cost for a conventional pre-publication peer-reviewed journal with a 50% rejection rate, with production services outsourced at market prices and all editorial duties performed by in-house staff, at US$ 643 for a journal publishing 100 articles per year to US$ 565 for a journal publishing 1,000 articles per year. In this model, direct costs (e.g. copy-editing, formatting, Crossref DOIs) are estimated to amount to US$ 267, editorial staff to US$ 290 and indirect costs (e.g. platform hosting, archiving, Crossref membership) to between US$ 8.70 (for 1,000 articles) and US$ 87 (for 100 articles).

These numbers are considerably higher than the numbers calculated here, raising the question as to whether many diamond OA journals actually operate on lower costs, or if all costs were actually included in the estimates given by survey respondents. For example, while survey respondents were specifically asked to include institutional in-kind contributions (like staff costs) in their estimates, what in fact was and was not included in the annual costs reported may have differed among respondents. This necessitates caution in the interpretation of the numbers reported here. In addition, for many dia-
mond OA journals, strong reliance on voluntary labour means that a part of the total costs will remain invisible.

Another caveat concerns differences in price levels across the globe. All costs were reported in euros and U.S. dollars, but many costs will be made locally, against local price levels. A journal operating in Indonesia, for example, could be expected to have lower costs converted to dollars/euros than a journal operating in Switzerland. While it could be argued that this hampers meaningful comparison of costs, varying costs across the globe could also be considered a real indication of the amount of money that is involved globally. Also, outsourcing has increasingly become a global market, especially for big Western publishers that profit from low wage levels in India, for example, to which a lot of copy-editing and administration has been outsourced. While we stay far from a global market and cost assessment with the limited data available here, it is interesting that no clear trends are observed when comparing estimated cost-per-article for journals from different regions in our sample (Figure 6).

Figure 6 shows box-and-whisker plots where boxes show first and third quartiles (25th and 75th percentiles), with the horizontal line indicating the median, and the box width proportional to the number of observations. Whiskers extend to the smallest and largest value not exceeding 1.5 IQR (interquartile range). Survey Q14, Q16, Q66, n=951.

As seen in Figure 7, the five main expenses/payables of the journal are editing (531), copy-editing (463), technical and software support (393), typesetting (384), and design (336). Marketing (44) and peer review (90) are reported the least frequently. From the “Other” responses, by far the most common expense was printing (94) with translation (54) as the second most common expense. For those who wrote in “Translation” and specified a language, it was English in all cases apart from one, which was from French to German. Other common expenses were editorial salary (40), DOIs (39) and Crossref (18). Membership (9) was mentioned separately and included DOAJ, REDALYC, COPE, and OASPA. In rare cases, metadata standards were mentioned as incurring costs for journals; metadata standards that were also prominent included: XML (15) and JATS (7), which were mentioned by name. As to the aforementioned costs reported far less frequently, these numbers are low and show that the vast majority of journals do not have expenses in these areas, meaning that these activities could be largely met through in-kind contributions or voluntary work. We are not aware of the reasons behind why some journals do not report incuring costs in certain areas. This may be due to the fact that they do not carry out these activities, the work is done in-house, by volunteers or via other in-kind contributions.
As regards personnel costs for journal editing and operational work, just over half of all journals reported personnel costs for less than 1 Full Time Equivalent (FTE) and just over one quarter fund 1-2 FTEs, as visualised in Figure 8. Over 80% of the cohort has limited personnel costs of 2 FTE or under. Fewer than 2% need 6-9 FTEs; the majority of whom are from Brazil (10) and Mexico (4) with one percent with 10-20 FTEs. These high-cost venues stem from five countries: Colombia, Indonesia, Spain, Turkey and the UK; most of these are owned by universities, and one learned society is also included.

A very large majority of OA diamond journals publish fewer than 50 articles per year (86%). When analysing paid staff for journal editing and operations by size of the journal where provided, i.e. by number of journal articles per year, 81% run on 1-2 FTEs or less. However, there are some outliers: of the 724 journals with under 25 articles per year, 10 journals run on 6-9 FTEs or more. On the other end of the scale, 15 journals run on under 1 FTE, publishing more than 100 articles per year. See Figure 9.
When analysing paid staff by owner of the journal/organisational type, Figure 10 shows that the vast majority of learned society journals have a staff of less than 1 FTE, as do universities, although 1-2 FTEs is also common amongst them. The majority of university presses are also run at low cost with less than 1 FTE. Other research organisations and other non-profit publishers are similarly largely run on under 1 FTE. Almost all individuals who own journals invest in less than 1 FTE. Government agency journals usually use between 3 - 5 FTEs. For those journals that have paid staff of more than 10 FTEs, these are mostly universities.

4.1.2 Voluntary work

Sources: Survey Q69, Q70 and Q71

Sixty percent of respondents report using volunteers whereas 40% do not. Of those who use volunteers, a large proportion reported to what extent they are reliant on volunteers and of these, 86% reported either having a high or medium reliance on volunteers. Sixty-four percent of the total stated a high reliance on volunteers, whereas under a quarter (23%) reported a medium reliance on volunteers. The countries whose journals declared the highest reliance on volunteers are the US (64%), Italy (59%) and Croatia (41%).

Figure 11 shows that when comparing the reliance on volunteers with reported 2019 costs, the majority that rely highly on volunteers run on under $/€10,000. Those who reported the highest dependence on volunteers are those running on 1 FTE. They have an 81% medium or high reliance on volunteers.
The OA Diamond Journals Study

Figure 11. Reliance on volunteers compared to 2019 costs (n=1,369); survey Q70 and Q66

When comparing the reliance on volunteers with the size of paid staff for journal editing and operational work, the majority that rely highly on volunteers also use fewer paid staff, i.e. under 1 FTE (376), although there is also a significant number of this group (212) that did not report reliance on volunteers. Compared to those who declare costs for 2019, those who provided FTEs are slightly less reliant on volunteers, as shown in Figure 12, with 64% of those running on 1 FTE with a med-high reliance.

Figure 12. Reliance on volunteers by size of paid staff for journal editing and operational work (n=1,427); survey Q70 and Q67

To understand what volunteers are used for, excluding peer reviewing and editorial board membership, volunteers are used across the whole publishing process with editing (538), proofreading (482) and copy-editing (467) being the most frequent, as seen in Figure 13.
4.1.3 Financial support

The majority of journals have largely been financially supported (including salary costs) over the last two years by Research Performing Organisations (541), by national funding/government agencies (351) and by publishers (320). Scholarly or learned societies supported 187 of the cohort. Museums/archives/heritage institutions (28), NGOs or charities (31), international funding agencies (38) and national academies (45) are the least likely to have funded OA diamond over the last two years. RFOs are named by 70 respondents. “Others” included a mix of organisations and revenue models. In order of size: individuals (23), professional associations (15), industry (8), freemium, graduate programmes, platforms, print sales, sponsors, conferences, advertisements and 12 other single mentions. Note that when “Other” mentions correspond to the given variables, these have been included in the figure.

To fund their journals, respondents reported a range of funding mechanisms, with in-kind support by home institutions reported highest (536). Voluntary labour, work (excluding scientific) came second (475) and grant funding was much lower in third place with 212, as shown in Figure 15. These are not only recent diamond OA journals or...
The OA Diamond Journals Study

start-ups, as just under half of these journals were created before 2000. When comparing RFOs as financial supporters of journals with mentions of grant funding, they are mentioned together in 26 cases, however, 44 other cases of RFO support are mentioned without grant funding, showing that some RFOs are contributing in other ways than grant funding. Ten percent indicated collectively organised funding mechanisms working for them. Apart from those mentioned under “Other”, the least reported funding mechanisms are syndication/hosting/reposting (14), subscribe-to-open (19), endowment/interest (24) and freemium content/services (34).

“Other” responses included organisations first of all with, often, names of universities (184) and governments (93), which refer to national research councils (National Ministry of Science, UKRI, etc.), or other governmental agencies. Learned societies come in third place (28). The next topic relates to voluntary work with 27 mentions. Subscriptions were also recorded by 12 respondents referring to the print edition of the journals, which some journals retain given that they’re also published via diamond open access. A small number of libraries provide financial support, along with "donations". "Advertising" in the print edition and "sponsorship" of individual issues were also mentioned, along with NGOs, charities, and membership. Unique topics were as follows: patron, venture capital, alumni association, book sales, commercial revenue, conference fees, industry, medical centre, museum, paid workshops, tax revenue, third party and WHO.

Figure 15. Funding mechanisms (n=1,408); survey Q62

When asked whether journals had always been funded this way, a very large majority of OA diamond journals (94%) affirmed this.

Ninety-one percent of journals (1,186) reported not charging for any of their services. Of those who do, printing (52), layout (43) or copy-editing (39) are the most frequent sources of chargeable income. Ebook versioning (2), HTML conversion (11) and XML markup (13) are the least commonly reported by a minute proportion as seen in the following figure. Those 216 journals who do charge for services are mainly from universities (41), learned societies (20), university presses (12) or “Other” research organisations (8), and only four of the 16 are for-profit publishers. Sixty percent of those who charge services are those that have been established in the last 20 years, with 39% established between 2010-2019 and 21% between 2000-2009 and 19% in 1990-1999.
4.1.4 How research funders might support the financial sustainability of OA diamond journals

When asked how research funders might support the financial sustainability of OA diamond journals, 869 responses were provided.

Most funds are needed for payables and where in-kind contributions cannot be found. Twenty-five percent called on funders or institutions to provide direct support and shared services, with about one-quarter of these calling for funding for platforms. Direct support is needed for editorial services, including copy-editing and proof-reading, translation and plagiarism support. Financial support for technical infrastructure is called for by numerous respondents, with hosting costs most commonly stated. The costs of DOIs are also a clear concern. A trade-off is also mentioned between using shared services and sometimes resulting increased demands on the journal.

Sixteen percent called for more long-term structural funding to help sustain their journal: “Having a long-term funding model would go a long way to secure the long-term viability of the journal.” Several respondents underlined that small funds can go a long way: “Directing to journals and/or publishers some of the funds that would otherwise go to individuals for paying-to-publish or paying for open access (...) For example, a single APC fee on a top journal would be enough to sustain us for one to two years.” With more structural funding, journals can plan ahead and stabilise and strengthen their services rather than just get by on the resources they have to stay afloat.

Eight percent called for more short- or medium-term funding.

Ten percent needed more staff resources, either FTE or in-kind contributions from universities or their libraries for editorial and technical support. Some respondents proposed formally sharing expertise between journals, either in the form of personnel or delivered by a shared platform or service.

Only 8% saw grants as a way that funders can support OA diamond, and 6% asked for...
the more radical redesign of grant funding. Grants are considered an unreliable source of funding by some, and considered an unstable source of income.

**Micro-grants** could fund more lightweight procedures such as hosting or financial administration, i.e. "a more easily or automatically renewable source of funding, providing the journal meets the conditions required," also since acquiring funding is an expertise in itself and grant criteria do not always speak to all forms of publication or disciplines.

**Sponsorship** is not frequently mentioned as a solution to funding. This could be since it is a little known, hardly utilised and scarcely available source of income. Libraries, funders and academic institutions are considered the main expected sponsors. Some expressed a desire to stimulate more sponsorship of OA diamond.

Some respondents underlined that it is an ethical responsibility for funders to **support or even favour non-profit journals** by providing them with some basic level of support, also since their size often excludes them from many discussions on funding OA.

Some were critical about external funding as a general principle as it can bring additional constraints and alter the general management of the journal. Having the expertise and staff resources can be more essential than obtaining extra funding.

4.1.5 Financial stability

Sources: Survey Q73 and Q74

When analysing the financial status of the OA diamond journal, 43% of journals reported that they break even and 25% make a loss, as shown in Figure 17. Thirty-one percent stated that their financial status is "Unknown". One percent makes a profit and of these, six are universities, four are university presses and three are associations.

![Figure 17. Current financial status of the journal (n=1,393); survey Q73](image)

Of those who reported a loss, 60% were journals owned by government agencies, although 38% of for-profit publishers, of a total of 16, also reported losses. Those that reported the least losses proportionally are universities and other research organisations, both at 17%. The country with the highest loss ratio for journals is Spain (64/138: at 46%) with over half coming from government agencies. Journals from Brazil (26/97: 27%), UK (23/73: 32%), France (20/145: 14%) and Croatia (18/76: 24%) also reported a higher frequency of losses than other countries—though it should be mentioned that they are also the countries with the highest number of responses.
Thirty-one percent of journals reported "Unknown" as to what their financial status is, with the highest proportion reported by university-owned journals (38%) and 33% of all university presses. Journals owned by learned societies are some of the fewest who reported not knowing their status (14% of total).

Only 19 respondents reported making a profit. Those that make a profit are above all from France (7), and also the country with the highest responses, with Brazil, Argentina, Canada, Chile, Croatia, Finland, Portugal, Sri Lanka and Turkey reporting one to two journals or platforms. Six of these are universities and four are university presses.

When asked how sustainable the journal is in the next three years on a scale of one to 10 where 10 is very secure, 64% considered themselves as secure or very secure (eight or above) with 33% of the total considering themselves as very secure. Only 18% were less confident about their financial stability reporting five or under. Twenty-eight percent were on the fence between five and seven, however. Of those that reported less confidence in their financial security, 29% of all reported university presses expressed the greatest concerns with journals owned by individuals and learned societies at 24% and 18% respectively. Those with by far the least concerns are government agencies (5%). Those with less confidence are journals mostly established in the last 10 years (36%), between 2000-2009 (22%) or those from 1990-1999 (18%). Those with the least confidence (one or two rating out of 10) are more likely to be from journals established between 1990-1999 (34%) and then more recent journals from 2010 and 2019 (28%), with those from 2000-2009 with the third highest concerns (19%).

For those who answered both questions: on the financial status and how sustainable they consider the journal in the next three years, of those with greater confidence in the sustainability of the journal, the majority reported breaking even. However, over 100 of those who had the most confidence also reported a loss, which shows that perceptions do not always reflect reality. When journals have less confidence, i.e. five or under, this generally shows a higher proportion of losses to break even. See Figure 18 for more information.

Figure 18. Journals by financial status and how sustainable they consider the journal in the next three years on a scale of one to 10 where 10 is very secure; survey Q73 and Q74
4.1.6 Confidence in the OA diamond model

Sources: Survey Q76 and Q77

A significant majority of journals reported no intention of moving away from this model (73%) while 20% either perhaps consider doing so or affirm that this is a plan, as shown in Figure 19.

Figure 19: Journals that consider moving away from the OA diamond model (n=1,426); survey Q76

Those journals that reported that they are considering moving away from the OA diamond model and with a year of establishment provided, are largely those who were established in the last nine years 2010-2019 (44%) and 2000-2009 (25%) or between 1990-1999 (13%), as shown in Figure 18. Of those journals who are perhaps considering moving models, 88% are journals that went diamond between 2000-2019. Only 22% of those who went diamond in the last 20 years indicated they wanted to move models.

Figure 20: Journals that are considering moving away from the OA diamond model by journal creation year and percentage (n=279); survey Q76 and Q30

The majority reported longer-term feasibility (249) and economic viability (231) as reasons for reconsidering the model, with the importance of the impact factor coming in third place (184), as seen in the following figure.
Fifty-four "Other" reasons for changing the business model were provided, including the dependence on volunteers. The next most common topic, survival (10), had some quite stark responses, including: "The journal is at risk of disappearing due to the exhaustion of those involved," and "I am going to die one day," or "I am old. I cannot do this forever." Six reported concerns with the decreasing funding available.

### 4.2 Strengths

As far as costs are concerned, the majority of OA diamond journals do not use extensive resources to maintain their publications, with 60% of journals reporting annual costs in 2019 as coming in under $/€10,000. Just under half of these reported costs lower than $/€1,000 from 54 countries, i.e. 65% of all respondent countries. Some of these are countries high on the GNP list or high on the Big Mac Index such as the US, France or Italy. Only 3% reported high costs between $/€50,000-$/€100,000.

Variable costs such as journal editing and operations are similarly low for many, with over one-third reporting costs below $/€1,000 and 70% reporting costs under $/€10,000. Certain countries who feature high on the GNP index or on the Big Mac Index such as the US, France, Spain or Italy, and half of European countries who do not come from low-income countries, also reported significant numbers of journals running at low costs.

Note that the majority of those who reported running below $/€1,000 or run on less than 1 FTE, also heavily rely on volunteers. This could mean that they do not cost much to run, that they are being efficiently managed, that they are making the best use of money with little waste, that in-kind contributions are not always recorded or, rather, that the term cost is not understood correctly. Alternatively, they could be underfunded or working with infrastructure that is well developed.

Personnel costs for journal editing and operations are equally low, with 80% of the cohort who reported personnel costs for 2 FTE or less, and just over half running on less than 1 FTE. Only 2% reported needing 6-9 FTEs, and 1% 10-20 FTE.

The majority of OA diamond journals are financially supported by stable, large institutions such as RPOs and national funding/government agencies. This shows a significant
commitment to supporting scholarly communication as part of their missions to support research. Numerous institutions consistently show their strong support by providing in-kind support. OA journals use a range of funding models to fund their journals; collective funding being a reasonably popular choice.

Over 60% of surveyed journals considered themselves financially sustainable and secure or very secure, with over 30% of journals considering themselves as very secure. This shows clear confidence in the model and in the sustainability of the venue by many.

OA diamond journals showed a clear confidence in the current funding model, i.e. in their venue and business or financial model since 94% of OA diamond journals have always been funded this way and 73% have no intention of moving away from the model. This indicates that the large majority intend to remain not-for-profit and independent. Almost all journals do not charge for any services so keep the costs down for authors and readers.

4.3 Challenges and opportunities

A range of challenges were reported by OA diamond journals in the survey and focus groups. Common challenges can be grouped into four key areas:

4.3.1 The cost of running journals and voluntary work

Although over 60% of journals reported running on under $/€10,000, when resources are needed, they are for payables and where in-kind contributions cannot be found. Twenty-five percent called on funders or institutions to provide direct support and shared services, with about one-quarter of these mentioning platforms. Direct support for editorial services, including copy-editing and proof-reading, translation, hosting and anti-plagiarism support are mentioned explicitly. The costs of DOIs are also a clear concern. A trade-off is also mentioned between using shared services and sometimes results in increased demands on the journal.

Some were also concerned about the lack of trained personnel or experts in translation, editing, peer review, formatting, technical support/infrastructure or other areas. While some mentioned collaboration as a solution to some challenges like these, others also talked of the challenge of joining forces on common platforms, for example, since it calls for other expertise or professional standards that cannot be provided by volunteers.

OA diamond journals are largely dependent on volunteers at 60%. Of those reliant on volunteers, 86% are either medium or highly reliant on them. Volunteers are used across the entire publishing process, which could indicate consistent use of voluntary staff for standard tasks. Certain countries rely more on volunteers than others, such as the US, Italy and Croatia. Those running on less than 1 FTE or less than $/€1,000 also have the highest reliance on volunteers, indicating that costs would be much higher than without them, with the US, Italy and Brazil benefiting the most from this. This does not have to be a challenge since in some regions, such as Latin America, it is standard practice to engage staff in voluntary publishing activities as part of post-doc researcher staff development. However, when asked about sustainability challenges, 48 respondents expressed concerns about the reliance on the goodwill of volunteers and on the dedication of certain individuals who sustain journals who cannot necessarily be relied upon in the mid- to long-term, also since free time is becoming increasingly limited. “Model is viable, but relies too much on goodwill.” One should point out that volunteering is not always seen as a structural concern, but also as a strength: “It is uncertain if there can be a next generation of editors who can put in the same amount of dedication.”
The very large majority of OA diamond journals are small outfits that publish fewer than 50 articles per year (86%). Of those declaring operational costs, 81% run on 1-2 FTEs or less. However, there are some outliers reporting significant costs: of the 724 journals with under 25 articles per year, 10 journals run on 6-9 FTEs or more. On the other end of the scale, 15 journals that publish more than 100 articles per year run on under 1 FTE. The extent of funding of some journals may be of concern since certain journals have high annual costs, above $/€50,000, when relating it to the GNP or Big Mac Index in some countries. Similarly, of the 2% needing 6-9 FTEs for journal editing and operations, the majority are from Brazil and Mexico. Journals with 10-20 FTEs, most of which are owned by universities, come from both low- and high-income countries, such as Colombia, Indonesia, Spain, Turkey and the UK. Government agencies who own journals usually use 3-5 FTEs, which is also higher than most. More investigation is needed to understand the high costs of some venues and their service offering to see where costs can be reduced and efficiencies gained, where feasible. High costs may result from platforms or journals that provide advanced infrastructure, in which case these instances may be candidates for providing shared services to other smaller journals.

A further challenge relates to monitoring and administering costs, since almost 20% reported not being aware of the costs of their journal, with half of these at universities and many learned societies, university presses or other research organisations reporting the same. Similarly, just over one-fifth are unaware of the payable specifics of personnel costs for editing and operational costs. In the best case, this might have something to do with who filled in the survey; however, it might well have to do with the accounting rules or lack of them at the institution. It does indicate that many journals are not able to monitor budgets and expenditure or use them to see where efficiencies might be gained.

When looking at the costs of OA diamond, one area where OA diamond journals seem not to be investing in is marketing — at least, it is not often reported as a main expense. Survey data also show that almost 200 journals who use volunteers use them to fill that marketing gap. While extensive marketing may not be necessary for all journals, and other expenses may be more important, almost 10% indicated that marketing is one of the reasons why some journals consider moving away from the OA diamond model, hence its importance.

4.3.2 Confidence in the current funding model/OA diamond model

Although a large percentage are confident in the OA diamond model, twenty percent of OA diamond journals either consider or plan to move away from the current funding model and 69% of these were journals who were established in the last 20 years. Eight-eight percent of these were journals that went diamond in recent years between 2000-2019. They reported a lack of confidence in the long-term feasibility of the model and/or its economic viability or due to the impact factor. Reliance on volunteers is also a reason for some to consider change, with one respondent stating: "It feels wrong to have to fund the journal I co-founded and co-edit with my own money, when also co-editing a not open access journal from which the support from the for-profit publisher is minimal. I however think it’s the for-profit journal that needs to change, not truly open access ones."

The importance of prestige and the impact factor was also perceived as a challenge for OA diamond journals with almost 200 journals (ca. 12%) reporting this as a reason to move away from the current OA diamond funding model. Some respondents were also concerned that funding is sometimes impacted by the lack of the perceived prestige of the journal.
4.3.3 Financial stability

As regards the financial health of the journal, only just over 40% reported that they break even, and the rest reported a loss, profit or said they were unaware of their financial status. Sixty percent of all government agency-owned journals stated a loss. Despite reporting a loss, some of these journals expressed extreme confidence in the stable sustainability of their venue, the reasons for which need further investigation, which could be due to structural funding, consistent in-kind contributions, strategic choices that are not influenced by the financial status of the journal by the institution, or other reasons.

Thirty-one percent of journals reported “Unknown” as to what their financial status is, with the highest proportion reported by university-owned journals (38% of the total), and 33% of all university presses, which makes accounting for specific financial sustainability issues and economising difficult.

Of those that reported less confidence in their financial security in the next three years, 29% of all reported university presses expressed the greatest concerns, followed by journals owned by individuals and learned societies at 24% and 18% respectively, which shows that more stable funding is needed to serve the needs of the academic publishing with university presses and learned societies in particular.

4.3.4 Financial support

The majority who reported challenges related to sustainability were concerned about the uncertainty of funding, even in the case that basic costs are covered by government funding or by universities. Journals are concerned that university or learned society ownership and funding might also be threatened by changes in policy or sudden crises, like the COVID-19 pandemic. Those worried about current funding levels are usually worried about covering DOI and indexing costs for their journals.

Respondents also mentioned a lack of long term grant funding or sponsorship for OA diamond journals. Over 200 respondents (13%) reported grant funding as a mechanism to fund their journal, which one would normally associate with funding development projects rather than operations. Grants are not only mentioned by recent OA diamond journals or start-ups, with just under half of these journals created before 2000. It is not known as to whether grants are being used or requested to sustain operations or to innovate and develop journals or platforms.

Although 22% reported being funded by national funding/government agencies, which shows research funder commitments, only 5% reported RFOs as supporting journals so far, which gives RFOs food for thought. RFOs and grant funding are not always mentioned together, with 44 cases of RFO support reported, showing that RFOs are sometimes contributing in other ways than grant funding, which is of interest when stimulating more RFOs to fund OA diamond in the future.
The references listed below are the ones cited in the report. The full bibliographical database constituted for the literature review can be consulted as a Zotero Group.


DOAJ (2021). Why did we stop collecting and showing the open access start date for journals? https://blog.doaj.org/2021/02/05/why-did-we-stop-collecting-and-showing-the-open-access-start-date-for-journals/.


Annex
Contents

OA Diamond Journals Study Dataset
List of journals and platforms consulted
Questionnaire
CSI study
This dataset contains data used by and partly generated by the OA Diamond Journals Study on open access journals that do not charge authors. It contains the datafiles themselves as well as some readme texts with variable lists.

Identifier: 10.5281/zenodo.4553103

Available files:
1. Survey questionnaire, English version (PDF)
2. Survey data without identifying information and without free texts answers (CSV). This includes, for some questions, data from DOAJ for journals present in that database.
3. Readme text with the variable list for the survey data file (TXT)
4. Stratified sample of 500 records from the ROAD database of open access journals downloaded 20201102 (CSV)
5. Readme text with the variable list for the ROAD database sample (TXT)
6. Directory of Open Access Journals (DOAJ) metadata downloaded 20200602 (CSV)
7. Directory of Open Access Journals (DOAJ) metadata downloaded 20200918 (CSV)
8. Added and Removed change log DOAJ, downloaded 20210121 (CSV)
9. Readme text with variable list for the Added and Removed change log DOAJ (TXT)

All data are available for reuse under a CC0 license.

Additionally, an online version of the survey results (excluding DOAJ data and excluding free text answers) is available from SurveyMonkey.
Platforms interviewed

1–AJOL
2–Hrcak
3–PKP
4–openjournals.nl
5–OpenEdition
6–Redalyc
7–Scielo
8–Sciendo
9–Ubiquity Press
10–Swedish Open Access Journals on Joint Platform (project)

Journals participating in the online survey

(only those who accepted to have their name listed)

1–Anil Islam: Jurnal Kebudayaan dan Ilmu Keislaman (http://jurnal.instika.ac.id/index.php/AnilIslam/index)
2–[sic] - a journal of literature culture and literary translation (http://www.sic-journal.org/)
4–21: Inquiries into Art History and the Visual Beiträge zur Kunstgeschichte und visuellen Kultur (https://journals.ub.uni-heidelberg.de/index.php/xxi/index)
5–A&P Continuidad (http://www.ayp.fapyd.unr.edu.ar/)
6–AACADigital (www.aacadigital.com)
7–AATEX (https://www.jstage.jst.go.jp/browse/aatex/)
8–Academicus - International Scientific Journal (http://www.academicus.edu.al)
9–Acarologia (http://www1.montpellier.inra.fr/CGBP/acarologia/)
11–ACSCentral Science (https://pubs.acs.org/journal/acscii)
12–Acta Adriatica (http://jadran.izor.hr/acta/)
13–Acta Agrícola y Pecuaria (http://aap.uaem.mx/index.php/agricolaypecuaria)
16–Acta Chimica Slovenica (http://acta.chem-soc.si/)
17–Acta Iassyensia Comparationis (http://literaturacomparata.ro/aic/?page_id=157&lang=en)
18–Acta Informatica Pragensia (http://aip.vse.cz)
Alsic (apprentissage des langues et systèmes d’information et de communication) (http://alsic.revues.org/)

Alteridades (https://alteridades.izt.uam.mx)

Alternatí Política (http://alternatifpolitika.com/)

Altre Modernità (http://riviste.unimi.it/index.php/AMonline/index)


Ambiances (http://ambiances.revues.org)

American Studies Journal (http://www.asjournal.org/)

Anais de História de Além-Mar (http://cham.fcsh.unl.pt/ext/pages/publicacoes_anais.htm)

ANALES CERVANTINOS (http://analescervantinos.revistas.csic.es/index.php/analescervantinos)

ANALES DEL JARDIN BOTANICO (http://rjb.revistas.csic.es)

Análisis Económico (http://www.analisiseconomico.azc.uam.mx)

Análisis filosófico (http://analisisfilosofico.org/index.php/af)

Analysis. Claves de Pensamiento Contemporáneo (https://studiahumanitas.eu/ojs/index.php/analysis/)

Andean Geology (http://www.andeangeology.cl/index.php/revista1)

Angles: New Perspectives on the Anglophone World (https://journals.openedition.org/angles/)

Animal Biodiversity and Conservation (http://abc.museucienciesjournals.cat/?lang=en)

Ankara University Faculty of Educational Sciences (http://dergipark.gov.tr/auebfd)

Annales de la Faculté des Sciences de Toulouse (https://afst.centre-mersenne.org/)

Annales Henri Lebesgue (https://annales.lebesgue.fr)

Annales Kinesiologia (http://ojs.zrs.upr.si/index.php/AK/index)

Annales Mathématiques Blaise Pascal (https://ambp.centre-mersenne.org/)

Annali di Ca’ Foscari - Serie orientale (http://edizionicafoscarini.unive.it/en/edizioni/riviste/annali-di-ca-foscari-serie-orientale/)


Anthropologie & Santé (http://anthropologiesante.revues.org/)

Anthropology & Aging (http://anthro-age.pitt.edu/ojs/index.php/anthro-age)

Anthropology of Food (http://aof.revues.org/)

Anthropozoologica (http://sciencepress.mnhn.fr/fr/periodiques/anthropozoologica)

Anti-Trafficking Review (https://antitraffickingreview.org/index.php/atrjournal)

Antropologia (http://www.ledijournals.com/ojs/index.php/antropologia)

Antropologia Portuguesa (https://impactum-journals.uc.pt/antropologiaportuguesa)

Antropológicas (https://revistas.rcaap.pt/antropológicas/)

Anuario Colombiano de Historia Social y de la Cultura (http://www.revistas.unal.edu.co/index.php/achsc)

ANUARIO DE ESTUDIOS AMERICANOS (http://estudiosamericanos.revistas.csic.es)
364–English Literature (http://edizionicafoscar.unive.it/en/edizioni/riviste/english-literature/)
365–English Studies at NBU (http://esnbu.org)
366–Ennen ja nyt: Historian tietosanomat (https://journal.fi/ennenjanyt/)
367–Ensayos Pedagógicos (http://www.revistas.una.ac.cr/index.php/ensayospedagogicos/index)
368–Ensino em Re-Vista (http://www.seer.ufu.br/index.php/emrevista)
369–Entangled Religions (http://er.ceres.rub.de/)
373–Épournal de Géométrie Algébrique (https://epiga.episciences.org/)
374–EQA International Journal of Environmental Quality (http://eqa.unibo.it/)
376–ERLACS - European Review of Latin American and Caribbean Studies (http://www.erlacs.org)
377–ESAIM: Proceedings and Surveys (http://www.esaim-proc.org/)
378–eSamizdat. Rivista di culture dei paesi slavi (http://www.esamizdat.it/ojs/index.php/eS)
379–Escritos de Psicologia - Psychological Writings (http://www.escritosdepsicologia.es/index.php)
380–Eskişehir Osmangazi Üniversitesi İlahiyat Fakültesi Dergisi (Journal of Eskişehir Osmangazi University Faculty Of Theology) (http://dengipark.gov.tr/esoguifd)
381–Esprit critique (http://espritcritique.uiz.ac.ma/accueil/index.asp)
383–Estação Científica (UNIFAP) (http://periodicos.unifap.br/index.php/estacao)
384–Estudios de Asia y América (http://estudiosdeasiayamerica.colmex.mx/index.php/eaa/index)
386–Estudios de Filosofía (https://revistas.udea.edu.co/index.php/estudios_de_filosofia)
391–Estudios Economicos (https://estudioeconomicos.colmex.mx)
392–Estudios económicos (www.estudioeconomicos.uns.edu.ar)
393–Estudios Económicos de El Colegio de Mexico (https://estudioeconomicos.colmex.mx/index.php/economicos/inicio)
394–Estudios Fronterizos (http://ref.uabc.mx/)
501–Historical Life Course Studies (http://www.ehps-net.eu/journal)
502–Historiká. Studi di Storia Greca e Romana (http://www.ojs.unito.it/index.php/historika)
503–History Education Research Journal (www.uclpress.co.uk/pages/history-education-research-journal (from 20/10/20; www.ingentaconnect.com/content/ioep/herj until then))
504–History of Science in South Asia (https://journals.library.ualberta.ca/hssa/index.php/hssa/index)
505–Historyka (http://journals.pan.pl/hsm/117793?language=en)
507–Horizonte de la Ciencia (http://revistas.uncp.edu.pe/index.php/horizontedelaciencia)
510–Humanités numériques (https://journals.openedition.org/revuehn/)
511–Hungarian Cultural Studies (http://ahea.pitt.edu)
513–Huria: Journal of the Open University of Tanzania (https://www.ajol.info/index.php/huria)
514–HyperHiz: New Media Cultures (http://hyperhiz.io)
515–Hystrix the Italian Journal of Mammalogy (http://www.italian-journal-of-mammalogy.it/)
518–Íconos Revista de Ciencias Sociales (http://www.revistaiconos.ec)
519–Ideas y Valores - Revista Colombiana de Filosofía (http://revistas.unal.edu.co/index.php/idval)
520–Identidades (https://identidadesess.wordpress.com/)
522–Il Tolomeo (http://edizioniacofarli.unive.it/en/edizioni/riviste/il-tolomeo/)
523–Images re-vues (http://imagesrevues.revues.org/)
527–INCAS BULLETIN (http://bulletin.incas.ro)
528–Incontri: Rivista Europea di Studi Italiani (http://www.rivista-incontri.nl/)
529–INDIANA (https://journals.iai.spk-berlin.de/index.php/indiana/index)
530–Indonesia Accounting Journal (https://ejournal.unsrat.ac.id/index.php/iaj/index)
532–Información cultura y sociedad (http://revistascientificas.filobuba.ar/index.php/ICS/index)
534–Information Research: an international electronic journal (http://informationr.net/ir/)
Information Technologies and Learning Tools (http://journal.iitta.gov.ua)
Information Technology and Libraries (http://ejournals.bc.edu/ojs/index.php/ital/index)
INFORMES DE LA CONSTRUCCION (http://informesdelaconstruccion.revistas.csic.es)
Ingeniería e Investigación (https://revistas.unal.edu.co/index.php/ingeinv)
Ingeniería Revista Académica de la Facultad de Ingeniería Universidad Autónoma de Yucatán (http://www.revista.ingenieria.uady.mx/ojs/index.php/ingenieria)
Ingeniería y Competitividad (https://revistaingenieria.univalle.edu.co/)
INRAE Productions Animales (https://productions-animaux.org/)
Insights (http://insights.uksg.org/)
Integers: Electronic Journal of Combinatorial Number Theory (http://integers-ejcnt.org)
Integral Review (http://integral-review.org/)
Interculture Journal (http://www.interculture-journal.com)
Interdisziplinäre Zeitschrift für Südasienforschung (https://crossasia-journals.ub.uni-heidelberg.de/index.php/izsa)
Interface Critique (https://interfacecritique.net/)
Interfaces Image-Texte-Language (https://preo.u-bourgogne.fr/interfaces/)
International Journal for Digital Art History (https://dahj.org/)
International Journal for Engineering Modelling (https://hracak.srce.hr/ijem)
International Journal of Dream Research (https://journals.ub.uni-heidelberg.de/index.php/UoDR)
International Journal of Health Professions (http://www.degruyter.com/view/j/ijhpf)
International Journal of Language Teaching and Education (https://www.ijtarp.org)
International Journal of Medical Students (http://www.ioms.info)
INTERNATIONAL JOURNAL OF SCIENCE ANNALS (http://ijsa.culturehealth.org/)
International Journal of Telerehabilitation (http://telerehab.pitt.edu)
International Journal of Transactional Analysis Research & Practice (http://www.jtarp.org)
International Journal of Virtual Reality (https://ijvr.eu/)
International Productivity Monitor (http://www.csls.ca/ipm.asp)
642–Journal of Health and Social Sciences (http://journalhss.com/)
643–Journal of Hebrew Scriptures (jhsonline.org)
644–Journal of Historical Syntax (http://historicalsyntax.org)
646–Journal of Information and Organizational Sciences (http://jios.foi.hr/index.php/jios/index)
648–Journal of Information Technology in Construction (http://www.itcon.org/)
650–Journal of Intercultural and Interdisciplinary Archaeology (https://journals.ub.uni-heidelberg.de/index.php/jiia/index)
651–Journal of Interdisciplinary History of Ideas (http://www.ojs.unito.it/index.php/jihi/index)
652–Journal of Krishna Institute of Medical Sciences University (http://www.jkimsu.com)
656–Journal of Librarianship and Scholarly Communication (http://jlscc-pub.org/)
657–Journal of Literature and Science (http://www.literatureandsceince.org)
658–Journal of Mechanism and Institution Design (http://www.mechanism-design.org/)
661–Journal of Nonsmooth Analysis and Optimization (https://jnsao.episciences.org)
664–Journal of Open Source Software (http://joss.theoij.org/)
666–Journal of Patient-Centered Research and Reviews (http://digitalrepository.aurorahealthcare.org/jpcrr/)
668–Journal of Philosophical Economics (https://jpe.ro/)
670–Journal of Political Ecology (http://jpe.library.arizona.edu/)
672–Journal of Privacy and Confidentiality (https://journalprivacyconfidentiality.org/)
676–Journal of Scientometric Research (http://jscires.org)
677–Journal of Stress Physiology & Biochemistry (http://www.jspb.ru/)
678–Journal of Student Affairs in Africa (http://www.journals.ac.za/index.php/jsaa)
680–Journal of the LUCAS Graduate Conference (http://hum.leiden.edu/lucas/jlgc/)
681–Journal of the Medical Library Association (http://jmla.mlanet.org/ojs/jmla)
683–Journal of the Norwegian Medical Association (https://tidsskriftet.no/)
686–Journal of the Turkish Chemical Society Section A: Chemistry (https://dergipark.org.tr/jotcsa)
688–Journal of Water and Environment Technology (https://www.jstage.jst.go.jp/browse/jwet)
690–Journal of Youth Development (http://journalofyouthdevelopment.org)
691–JSEALS (the Journal of the Southeast Asian Linguistics Society) (https://evols.library.manoa.hawaii.edu/handle/10524/52368)
692–JTK (Jurnal Tadris Kimiya) (http://journal.uinsgd.ac.id/index.php/tadris-kimiya/index)
694–Judgment and Decision Making (http://journal.sjdm.org)
695–Jurnal Borneo Administrator (http://samarinda.lan.go.id/jba/index.php/jba)
697–Jurnal Manajemen Industri dan Logistik (https://jurnal.poltekapp.ac.id)
698–Jurnal Manajemen Teknologi (http://journal.sbm.itb.ac.id/index.php/mantek/index)
699–Jurnal MensSana (http://menssana.ppj.unp.ac.id/index.php/jm)
700–K@iros (http://revues-msl.uca.fr/kairos/)
702–Kairos: Evandeoski teološki časopis (https://kairos.bizg.hr/)
703–Kalpana- Revistas de investigación (http://revistas.udetonline.com/index.php/kalpana/index)
704–Kasmera (http://produccioncientificocaluz.org/index.php/kasmera/index)
705–Kniha a dějiny (knihyadjejiny.cz)
706–Knjižničarstvo : glasnik Društva knjižničara Slavonije Baranje i Srijema (https://nova.knjiznicarstvo.com.hr/)
780–MDCCC1800 (http://edizionicafoscaruni.unive.it/en/edizioni/riviste/mdccc-1800/)
783–Medicina Interna de México (https://medicinainterna.org.mx/)
784–Medicina Moderna - Modern Medicine (http://www.medicinamoderna.ro/)
785–MedienPädagogik - Zeitschrift für Theorie und Praxis der Medienbildung (http://www.medienpaed.com)
786–Medievalista (https://journals.openedition.org/medievalista/)
787–Memorias del Instituto de Investigaciones en Ciencias de la Salud (http://revistascientificas.una.py/index.php/RIIC/index)
788–Mental Health: Global Challenges Journal (http://www.mhgcj.org)
789–Metallurgical and Materials Engineering (http://metall-mater-eng.com/)
790–Métropoles (http://metropoles.revues.org)
791–Metropolitiques (metropolitiques.eu)
792–México y la Cuenca del Pacífico (http://www.mexicoaylaucancadelpacifico.cucsh.udg.mx/index.php/mc)
793–MHC (https://www.jstage.jst.go.jp/browse/mhc/-char/ja)
794–Middle Atlantic Review of Latin American Studies (http://www.marlasjournal.com)
795–Millenium (http://revistas.rcaap.pt/millenium/index)
796–Mischellaneous (hrcak.srce.hr/mhm)
797–Mitteilungen der Vereinigung Österreichischer Bibliothekarinnen und Bibliothekare (https://journals.univie.ac.at/index.php/voebm/)
798–Modernités russes (https://publications-prairial.fr/modernites-russes/)
799–Mokslo taikomiejityrimai Lietuvos kolegijose//APPLIED RESEARCH LITHUANIAN UNIVERSITIES OF APPLIED SCIENCES (http://ojs.kaunokolegija.lt/index.php/mttlk/index)
800–Moment Journal (http://www.momentjournal.org)
802–Moneta e Credito (http://www.monetaecredito.info)
803–Montesquieu.unibo.it (http://montesquieu.unibo.it)
804–MUNDO AGRARIO (https://www.mundoagrario.unlp.edu.ar/)
805–Mundo de Antes (http://mundodeantes.org.ar/)
806–Música Oral del Sur (http://www.centrodedocumentacionmusicaldeandalucia.es/opencms/documentacion/revistas/revistas-mos/)
807–Musicologica Austriaca - Journal for Austrian Music Studies (http://www.musau.org/)
809–Mythos. Rivista di Storia delle religioni (http://journals.openedition.org/mythos/716)
810–Mythos. Rivista di Storia delle religioni (http://journals.openedition.org/mythos/716)
811–NAAJ. Revue africaine sur les changements climatiques et les énergies renouvelables (https://www.revues.sciencesafrique.org/naaj/)
882–Philologica Canariensia (http://ojssspdc.ulpgc.es/ojs/index.php/PhilCan)
884–Philosophy Theory and Practice in Biology (https://www.ptpbio.org/)
885–Philosophy and the Mind Sciences (PhiMiSci) (https://philosophymindscience.org)
887–Philostrato. Revista de Historia y Arte (http://philostrato.revistahistoriayarte.es)
888–Physio-Géo - Géographie Physique et Environnement (http://physio-geo.revues.org/)
890–PIRINEOS (http://pirineos.revistas.csic.es)
893–Pittsburgh Tax Review (https://taxreview.law.pitt.edu)
894–plaNext - Next Generation Planning (http://journals.aesop-planning.eu/)
896–PODIUM (http://revistas.uees.edu.ec/index.php/PODIUM/index)
897–Poligrafi (http://ojs.zrs-kr.si/index.php/poligrafi/index)
900–Política Internacional (http://rpi.isri.cu/es)
901–Političke perspektive - časopis za istraživanje politike (https://hrac.srce.hr/politicke-perspektive)
902–Politiikka (https://journal.fi/politiikka)
903–Poljoprivreda (https://hrac.srce.hr/poljoprivreda?lang=en)
906–PORTES revista mexicana de estudios sobre la Cuenca del Pacífico (http://www.portesasiapacifico.com.mx)
907–Prassi Ecdnotics della Modernità Letteraria (https://riviste.unimi.it/index.php/PEML)
909–Praxis Filosófica (http://praxisfilosofica.univalle.edu.co/)
910–Pretexto (http://www.fumec.br/revistas/index.php/pretexto)
911–Prilozi Instituta za arheologiju u Zagrebu / Contributions of Institute of Archaeology in Zagreb (https://hrac.srce.hr/prilozi-iaz?lang=en)
912–Primenjena psihologija (http://primenjena.psihologija.ff.uns.ac.rs/index.php/pp)
913–Primerjalna književnost (https://ojs-gr.zrc-sazu.si/primerjalna_književnost)
914–Príncipe de Viana (http://www.culturanavarra.es/es/principe-de-viana)
1153–SER Social (http://periodicos.unb.br/index.php/SER_Social)
1154–Serbian Journal of Management (http://www.sjm06.com)
1155–Sestrinski glasnik/Nursing Journal (https://hrcak.srce.hr/sgnj)
1156–SHILAP REVISTA DE LEPIDOPTEROLOGÍA (https://www.redalyc.org/revista.oa?id=455&tipo=coleccion)
1157–Shima (http://www.shimajournal.org/)
1158–Sícles (https://journals.openedition.org/siecles/)
1159–Siembra (http://revistadigital.uce.edu.ec/index.php/SIEMBRA)
1160–Significação: revista de cultura audiovisual (http://www.revistas.usp.br/significacao)
1161–SILLAGES CRITIQUES (http://sillagescritiques.revues.org)
1162–Sincronia (http://sincronia.cucsh.udg.mx/)
1164–Sínéctica revista electrónica de educación (https://sinctectica.iteso.mx)
1165–Slavia Meridionalis (https://ispan.waw.pl/journals/index.php/sm/index)
1166–Slovenska literatura (https://www.sav.sk/?lang=sk&doc=journal-list&journal_no=52)
1170–Social Psychological Bulletin (Psychologia Spoleczna) (https://spb.psychopen.eu/)
1172–Sociedade e Estado (http://www.scielo.br/se)
1173–Società e diritti (http://riviste.unimi.it/index.php/SED)
1174–Sociología del Trabajo (http://revistas.ucm.es/index.php/STRA/)
1175–Sociologie du travail (http://www.sociologiedutravail.org/)
1176–Sociologisk Forskning (https://sociologiskforskning.se)
1177–Sociopoétiques (http://revues-msh.uca.fr/sociopoetiques/)
1179–Solum (http://journalsolum.faperta.unand.ac.id)
1180–Sortuz (http://opo.iisj.net/index.php/sortuz)
1187–South Asia Multidisciplinary Academic Journal (http://samaj.revues.org/)

1188–Southeastern European Medical Journal (SEEMEDJ) (http://seemedj.mefos.unios.hr/index.php/seemedj/index)


1190–Southwest Journal of Pulmonary and Critical Care (http://www.swjpcc.com/)


1192–SPAL. Revista de Prehistoria y Arqueología (https://editorial.us.es/es/revistas/spal)


1195–Sri Lanka Journal of Child Health (http://sljch.sljol.info)


1197–STATISTICA (http://rivista-statistica.unibo.it)


1199–Strenæ (http://strenae.revues.org/)

1200–Student Success (https://studentsuccessjournal.org/)


1202–Studi Tributari Europei - European Tax Studies (ste.unibo.it)

1203–Studi Umbri (http://www.studiumbri.it)

1204–Studia ethnologica Croatica (http://hrvak.srce.hr/index.php?show=casopis&id_casopis=99)


1207–Studia Heideggeriana (http://studiaheideggeriana.org/)


1209–Studia Orientalia Electronica (https://journal.fi/store/)

1210–Studia Polensia (http://hrcak.srce.hr/studiapolensia)

1211–Studia Psychologica (http://www.studiapsychologica.com/)

1212–Studia Romanica et Anglica Zagrabiensia (sraz.ffzg.unizg.hr)


1214–Studier i Pedagogisk Filosofi (https://tiddskrift.dk/spf)

1215–Studies in the Maternal (http://www.mamsie.bbk.ac.uk/)

1216–Subjetividades/Subjectivities (https://periodicos.unifor.br/mes/index)


1218–SVMMA. Revista de Cultures Medievals (http://revistes.ub.edu/index.php/SVMMA/index)

1219–Swiss Medical Weekly (http://www.smw.ch)

1220–Symposion - Warenlehre - Technologie (http://www.warenlehre.at/publikationen.html)
1256–The Journal for Undergraduate Ethnography (http://undergraduateethnography.org/)
1257–The Journal of British and Irish Innovative Poetry (https://poetry.openlibhums.org/)
1258–The Journal of Business Administration (https://ac-aba.net/journal.html)
1263–The London Journal of Canadian Studies (https://www.uclpress.co.uk/pages/the-london-journal-of-canadian-studies)
1264–THE MICROMERITICS (https://www.jstage.jst.go.jp/browse/micromeritics)
1267–The Quantitative Methods for Psychology (http://www.tqmp.org/)
1268–The Trumpeter: Journal of Ecosophy (http://trumpeter.athabascau.ca)
1270–Theoretical Roman Archaeology Journal (TRAJ) (https://traj.openlibhums.org/)
1273–Theory Methodology Practice (http://tmp.gtk.uni-miskolc.hu)
1274–Theriologia Ukrainica (http://terioshkola.org.ua/en/journal.htm)
1275–tic&société (http://ticetsociete.revues.org)
1277–To Vima tou Asklipiou (http://ejournals.teiath.gr/index.php/tovima/index)
1280–Tordesillas revista de investigación multidisciplinar (TRIM) (https://revistas.uva.es/index.php/trim)
1281–Trabajo Social (http://www.revistas.unal.edu.co/index.php/tsocial)
1282–TRABAJOS DE PREHISTORIA (http://tp.revistas.csic.es)
1283–Tracés. Revue de sciences humaines (http://journals.openedition.org/traces/)
1284–Tractus Aevorum (http://belsu-tractus-aevorum.ru/en/)
1285–Traitément Automatique des Langues (https://www.atala.org/revuetal)
1286–Transactions of the Nebraska Academy of Sciences and Affiliated Societies (https://digitalcommons.unl.edu/tnas/)
1288–Transformative Works and Cultures (http://journal.transformativeworks.org/)
1290–Transposition (https://journals.openedition.org/transposition/)
1291–Travaux Interdisciplinaires sur la Parole et le Langage (TIPA) (http://tipa.revues.org/)
1292–Trends in Mathematics and computer intelligence (TIMCI) (https://timci-preprod.episciences.org/user/dashboard)
1293–Tribology in Industry (http://www.tribology.fink.rs/)
1294– tripleC: Communication Capitalism & Critique (http://www.triple-c.at)
1295–Tropical Grasslands-Forrajes Tropicales (http://www.tropicalgrasslands.info)
1296–Tropicultura (http://www.tropicultura.org/)
1299–Türkiye Tanmsal Araştırmalar Dergisi (http://dergipark.gov.tr/tutad)
1303–Undergraduate Journal of Politics and International Relations (UJPIR) (https://www.ujpir-journal.com/)
1304–University of Pittsburgh Law Review (https://lawreview.law.pitt.edu)
1305–University of Saskatchewan Undergraduate Research Journal (https://usurj.journals.usask.ca)
1306–Unizik Journal of Arts and Humanities (UJAH) (https://www.ajol.info/index.php/ujah)
1309–USAbroad - Journal of American History and Politics (http://usabroad.unibo.it/)
1310–Vavilov Journal of Genetics and Breeding (http://vavilov.epub.ru/)
1312–Vertebrate Anatomy Morphology Palaeontology (https://journals.library.ualberta.ca/vamp/index.php/vamp)
1313–Vértices (Campos Goitacazes Online) (http://www.essentiaditora.iff.edu.br/index.php/vertices)
1314–Vertigo - la revue en sciences de l'environnement (http://vertigo.revues.org/)
1315–Viaticca (http://revues-msh.uca.fr/viaticca/)
1318–Vjesnik Arheološkog muzeja u Zagrebu (https://hrnak.srce.hr/vjesnik-amz?lang=en)
1320–Vojnotehnički Glasnik / Military Technical Courier (http://www.vtg.mod.gov.rs/index-e.html)
Introduction

You are invited to participate in a survey dedicated to growing our understanding of the global landscape of open access journals and platforms that don't charge authors to publish OA; this is commonly referred to as the “diamond model”: journals that are free for both readers and authors. This survey takes place in the context of the Diamond Open Access study commissioned by cOAlition S. With a dissemination of the survey on an international scale, we hope to bring greater visibility and a deeper understanding of this landscape, and provide insights that will help a range of actors, such as research funders, governments and universities to develop effective policies towards supporting this sector.

Scope

The survey specifically targets journals and platforms that provide immediate open access content and do not charge authors a fee to publish. If you belong to the scientific or editorial team of a journal, you can take the survey on behalf of your journal. We ask you not to answer for an entire hosting/technical platform which could have many journals on it.

A preliminary question will ask if the journal is already registered in the Directory of Open Access Journals (DOAJ). If you answer “yes” to this first question, you will be able to skip a number of questions because we already have the data from DOAJ.

What you will get in return

We understand that completing the survey can be an effort. As a reward to this effort, you'll be able to have, if you wish:
- the name of the journal published on a public webpage on cOAlition S Website listing all the journals that have participated in the survey. With this webpage we look forward to showcasing the breadth of the OA offering.
- a file containing all of your answers sent to you by email in September when the survey will be closed, that you’ll be able to share as the “identity card” of the journal with third parties such as funders, research organizations, etc.
- The final report of the study will be sent to you at the end of the year.

Instructions

To obtain a comprehensive analysis of this Diamond landscape, we structured the survey questionnaire in short sections covering different aspects of the journal:

1. legal structure and governance
2. authorship
3. content and metadata
4. editorial quality assurance practices
5. technical framework
6. funding model
7. dissemination and readership
8. challenges

You can download the complete list of the questions in a PDF file before providing your answers.

Do not be discouraged if you are unable to answer all questions. You'll be able to skip those you can't answer. The survey is available in English, French, Spanish, German, Italian and Portuguese. Answers in those languages are accepted. You can access the language menu in the top-right corner of your screen.

Completing the survey will take you around half an hour. At the end of the survey we'll ask you an open question about your ideal model to support open access journals. We hope that going through the different questions of the survey will help you reflect on the question so that you can share with us your expectations for a better future regarding the open access landscape at the end of the survey.

Thank you for your contribution and don't hesitate to contact us if you have any question or issue answering the survey: operas
Data sharing policy
The survey questionnaire is managed by OPERAS with a consortium of partners. Answers will be reported in a report and a dataset which will be deposited on Zenodo with a CC0 licence. The dataset will be fully anonymized before sharing: identification of the journal and the respondent will be removed before the dataset is deposited on Zenodo. Therefore, the contact information and identification asked on the first page of the survey will be used for internal purposes only and will not be shared outside of the consortium of partners participating in this study, including cOAlition S and Science Europe.

* 1. Consent

Please select your choice below.
Clicking on the “agree” button below indicates that:

- you have read and understood the above information
- you voluntarily agree to participate

If you do not wish to participate in the research study, please decline participation by clicking on the “disagree” button.

 Agree
 Disagree
2. If one of the following applies to your journal or platform, you should not proceed with filling in the survey:

- The journal is not peer-reviewed
- The journal is "delayed" open access (access to full text of the articles is opened to everyone only after a certain period of time)
- The journal requests “article processing charges” (APC) to be paid at least by some authors for publishing
- The journal business model is based on “APC”, but reduced to 0 for some or all of the authors thanks to specific agreements (partial or universal, temporary or permanent waivers)
- The access to the full text of some of or all the articles is normally based on subscription but opened thanks to specific “Transformative agreements”.

☐ I confirm none of the above situations apply

☐ Leave survey
Diamond Open Access Survey

Contact Information

* 3. Journal Title

* 4. Respondent name

* 5. Respondent Email

* 6. Respondent role in the journal

* 7. Is the journal already registered in DOAJ?
   - Yes
   - No
   - Unknown
### Diamond Open Access Survey

#### DOAJ questions

8. **URL of the journal**

9. **Journal ISSN (print version)**

*10. **Journal ISSN (online version)**

11. **Publisher of the journal**

12. **Learned society or Institution that owns the journal**

13. **Platform, host or aggregator disseminating the journal**

14. **In which country is the publisher of the journal based?**

15. **Year when the journal has been made available open access:**

16. **Average number of published articles each year during the three last years:**
17. What type of content does the journal publish? (Tick all that apply)

- [ ] Book reviews
- [ ] Conference proceedings
- [ ] Data paper
- [ ] Editorial
- [ ] Opinion
- [ ] Research article
- [ ] Other (please specify)

18. Select the language(s) that the full text of the articles can be published in (tick all that apply)

- [ ] English
- [ ] Portuguese
- [ ] Deutsch
- [ ] French
- [ ] Spanish
- [ ] Italian
- [ ] Russian
- [ ] Chinese
- [ ] Korean
- [ ] Japanese
- [ ] Arab
- [ ] Other(s), please specify

19. Does the journal embed or display licensing information in its articles? (Tick all that apply)

- [ ] Yes in pdf
- [ ] Yes in html
- [ ] Yes on the landing page
- [ ] No
- [ ] Unknown

20. Does the journal allow reuse and remixing of content in accordance with a Creative Commons license or other type of license with similar conditions?

- [ ] Yes
- [ ] No
- [ ] Unknown
21. Which one(s)? (Tick all that apply)

- [ ] CC-0
- [ ] CC-by
- [ ] CC-by-sa
- [ ] CC-by-nc
- [ ] CC-by-nc-sa
- [ ] CC-by-nd
- [ ] CC-by-nc-nd
- [ ] Other(s), please specify

22. Does the journal allow the author(s) to retain the copyright without restrictions?

- [ ] Yes
- [ ] No
- [ ] Unknown

23. If not, does the journal intend to allow the author(s) to retain publishing rights without restrictions in the future?

- [ ] Yes
- [ ] No
- [ ] Unknown

24. For editorial management, does the journal use an external publisher or publishing service to perform certain functions? This includes commercial or non-commercial services. (Tick all that apply)

- [ ] Copy-editing
- [ ] Dissemination
- [ ] Organising peer review
- [ ] PR & marketing
- [ ] Submissions system
- [ ] Training
- [ ] Triaging
- [ ] Typesetting
- [ ] None of these

25. Is there a URL for the Editorial Board page?

- [ ] No
- [ ] Yes (please provide the URL)
26. Please select the review process for papers published by the journal
- Author and reviewer identities known to each other
- Double blind peer review
- Editorial review
- Peer review
- Reviewer identities published
- Single blind peer review
- None

27. Please indicate which formats of full text are available (Tick all that apply)
- XML
- HTML
- PDF
- DOC
- TXT
- ePub
- Mobi
- Other, please specify

28. What digital archiving policy does the journal use?
- no policy in place
- CINES
- CLOCKSS
- LOCKSS
- PKP PN
- PMC/Europe, PMC, PMC/Canada
- Portico
- A National Library
- Other

29. Does the journal provide article download statistics?
- Yes
- No
- Unknown
30. Year of the creation of the journal

31. What year was the journal made available online?

32. What year was the journal made available open access?

33. What year was the journal made available open access without charging authors?
Diamond Open Access Survey

Legal structure and governance

34. Who owns the journal?
   - Learned Society
   - University press
   - Other non-profit publisher
   - For-profit publisher
   - University
   - Other research organisation
   - Government agencies
   - Individual
   - Unknown
   - Other (please specify)

35. Is there a legal document establishing this ownership?
   - Yes
   - No
   - Unknown
Diamond Open Access Survey

Authorship

Please tell us more about your authors.

36. Approximate share of authors from outside the owning organisation

0%  50%  100%

37. Approximate share of authors from outside the country where the publisher is based

0%  50%  100%
38. How has the number of yearly articles published by the journal developed over the last 5 years?

- Increased
- Constant
- Declined
- Fluctuating
- Not-relevant because the journal is younger than 5 years

39. What proportion of content published by the journal is peer-reviewed research content (in percentage)?

- 0%
- 50%
- 100%  

40. Main discipline covered by the journal

41. Do you have any policy or practice to stimulate open sharing of research data?

- Yes
- No
- Unknown

42. Which persistent identifiers does the journal attribute or use attached to articles, authors, research grants? (Tick all that apply)

- Crossref DOIs
- Datacite DOIs
- Other DOIs
- ORCID
- Grant ID
- Other, please specify
43. Does the journal provide abstracts for all its research articles:
- [ ] In the same language as article language
- [ ] Additionally in English
- [ ] Additionally in French
- [ ] Additionally in Spanish
- [ ] Additionally in German
- [ ] Additionally in Portuguese
- [ ] Additionally in Italian
- [ ] No abstract at all
- [ ] Additionally in other language(s) please specify

44. Does the journal provide keywords:
- [ ] In same language as article language
- [ ] Additionally in English
- [ ] Additionally in French
- [ ] Additionally in Spanish
- [ ] Additionally in German
- [ ] Additionally in Portuguese
- [ ] Additionally in Italian
- [ ] No keyword at all
- [ ] Additionally in other language(s) please specify

45. Does the journal accept submissions that have been publicly shared as a preprint or working paper before or on submission?
- [ ] Yes
- [ ] No
- [ ] Unknown

46. Are the journal's metadata compliant with the [OpenAIRE standard](#)?
- [ ] Yes
- [ ] No
- [ ] Unknown
47. Does the journal or its publisher deposit articles (in a machine-readable community standard format such as JATS XML, and including complete metadata) into author designated or centralised Open Access repositories that fulfil the Plan S criteria?

- [ ] Yes
- [ ] No
- [ ] Unknown
48. How is the peer-review process managed by the journal?

- [ ] Email
- [ ] Spreadsheet
- [ ] OJS
- [ ] Manuscript Central
- [ ] Scholar One
- [ ] Publisher’s system
- [ ] Other(s), please specify

49. Does the journal have a trained copy-editor?

- [ ] Yes
- [ ] No
- [ ] Unknown

50. Does the journal publish annually at least basic statistics? covering in particular:

- [ ] The number of reviews requested
- [ ] The number of reviews received
- [ ] The approval rate
- [ ] The average time between submission and publication
- [ ] None of them
- [ ] Other (please specify)

51. Does the journal use a plagiarism detection service on all submissions received?

- [ ] Yes
- [ ] No
- [ ] Unknown
52. Does the journal comply with best practice guidelines on publication practices?

- Yes
- No
- Unknown

53. Which ones (please provide the URL if available)?

<table>
<thead>
<tr>
<th>URL</th>
</tr>
</thead>
</table>

54. Does the journal require linking to data, code, and other research outputs that underlie the publication and are available in external repositories?

- Yes
- No
- Unknown

55. Does the journal provide openly accessible data on citations according to the standards of the Initiative for Open Citations (I4OC)?

- Yes
- No
- Unknown
56. What software does the journal use to publish online?
- OJS
- Lodel
- Wordpress
- Dspace
- Pubsweet
- Other, please specify

57. Where is the journal hosted for its online dissemination? (Please provide the URL)

58. What is the type of the dissemination host or platform?
- International platform
- National platform
- Institutional platform
- Commercial host provider
- Unknown
- Other, please specify

59. Does the journal allow, legally and technically, text and data mining of the full text of articles by third parties?
- Yes, unrestricted
- Yes, restricted
- Yes, on request
- No
60. What are your main motivations in pursuing an open access model that does not charge authors or readers?

61. Who has financially supported the journal or platform (including salary costs) over the last 2 years? (Tick all that apply)

- [ ] Foundation / Trust / Philanthropic Funder / Institutional Philanthropic Organisation
- [ ] International funding agency
- [ ] Library
- [ ] Museum/archive/heritage institution
- [ ] National academy
- [ ] National funding/Government agency
- [ ] NGO/Charity
- [ ] Research department
- [ ] Research Funding Organisation (RFO)
- [ ] Research Performing Organisation (RPO), including University or equivalent
- [ ] Scholarly or Learned Society
- [ ] Publisher
- [ ] Other, please specify
- [ ] Other (please specify)
62. How do you currently fund the journal or platform? What funding mechanisms do you use? (Tick all that apply)

- [ ] Collectively organized funding
- [ ] Commercial revenue
- [ ] Cross-subsidized by other (publishing) activities of the organization
- [ ] Donations or gifts
- [ ] Endowment / interest
- [ ] Funding proportional to articles published (by institutions/funders)
- [ ] Freemium content/services
- [ ] Grant funding
- [ ] In kind support by home institution
- [ ] Membership
- [ ] Shared infrastructure
- [ ] Subscribe-to-open
- [ ] Syndication/hosting/reposting (on e.g. JSTOR)
- [ ] Voluntary labour, work (excluding scientific)
- [ ] Other, please specify

63. Has the journal or platform always been funded this way?

- [ ] Yes
- [ ] No

64. If the way you fund the journal or platform has changed over time, please briefly describe
65. If you receive income from charging for services, what do you charge for? (Tick all that apply)

- [ ] We do not charge for services
- [ ] Copy-editing
- [ ] Ebook versioning
- [ ] Printing costs
- [ ] HTML conversion
- [ ] Layout
- [ ] XML mark-up
- [ ] Other, please specify

66. What were your total annual costs last year? Please also include in-kind institutional contributions.

- [ ] 0 - 1000 US$ or €
- [ ] 1000 - 10000 US$ or €
- [ ] 10000 - 50000 US$ or €
- [ ] 50000 - 100000 US$ or €
- [ ] Unknown

67. What is the size of paid staff for editing & operational work for the journal (in Full-Time Equivalent (FTE))?

- [ ] Less than 1 FTE
- [ ] 1-2 FTE
- [ ] 3-5 FTE
- [ ] 6-9 FTE
- [ ] 10-20 FTE
- [ ] Over 20 FTE

68. What is the annual amount paid for editing & operational costs?

- [ ] 0-1000 US$ or €
- [ ] 1000 - 10000 US$ or €
- [ ] 10000 - 50000 US$ or €
- [ ] 50000 - 100000 US$ or €
- [ ] Unknown

69. Do you use volunteers?

- [ ] Yes
- [ ] No
Diamond Open Access Survey

Volunteering

70. To what extent do you rely on volunteer effort?
- High level of reliance
- Medium level of reliance
- Low level of reliance

71. If you have volunteers, what do volunteers do? (Tick all that apply) Note that peer reviewing and editorial board membership are excluded.
- Copyediting
- Design
- Editing
- Hosting
- Marketing
- Proof reading
- Technical / software development
- Technical / software support
- Training
- Typesetting
- Other, please specify
Sustainability

72. What are the three main expenses/payables of the journal?

☐ Copyediting
☐ Design
☐ Editing
☐ Editorial Board support
☐ Hosting
☐ Marketing
☐ Peer Review
☐ Proof reading
☐ Technical / software development
☐ Technical / software support
☐ Typesetting
☐ Other, please specify

73. Which of the following options describes the current financial status of the journal or platform?

☐ Break-even
☐ Profit
☐ Loss
☐ Unknown

74. How sustainable do you consider the journal or platform in the next 3 years? On a scale of 1-10 (where 10 is very secure)

☐
75. How might research funders support the financial sustainability of the journal or platform?

76. Are you thinking of moving away from this model to another?
   - Yes
   - No
   - Maybe
   - Unknown

77. If you are reconsidering this model, what are the reasons for doing so? (Tick all that apply)
   - Economic viability
   - Importance of the Impact Factor
   - Marketing
   - Longer term feasibility
   - Scalability
   - Other, please specify
Diamond Open Access Survey
Dissemination and Readership

78. How many downloads does the journal have per year?

79. How many unique visitors does the journal have per year?

80. Is the journal readership more important in numbers outside of the journal’s country?
   - Yes
   - No
   - Unknown
81. List of directories and indexes where the journal is indexed (tick all that apply)

- [ ] DOAJ
- [ ] Ebsco A-to-Z
- [ ] ExLibris
- [ ] Dimensions
- [ ] Google Scholar
- [ ] Latindex catalog
- [ ] Lens
- [ ] Primo Central
- [ ] Proquest
- [ ] Redalyc
- [ ] Scielo
- [ ] Scopus
- [ ] Serial Solutions
- [ ] Summon
- [ ] Worldcat Primo
- [ ] WoS
- [ ] 360
- [ ] Other, please specify


Diamond Open Access Survey

Challenges
For each of the following topics, please rate and describe the challenge you face. 1 corresponds to low concerns, 5 corresponds to very important/significant concerns.

82. Peer-Review management

Comment

83. Editorial workflow

Comment

84. Dissemination

Comment

85. Indexation and visibility

Comment
86. Skills and competences

Comment

87. Sustainability and funding

Comment

88. Other topic

89. What in an ideal world is your ideal model, how would it be financed? What needs to happen?
Diamond Open Access Survey

* 90. Do you accept to be contacted later on to participate in an interview?
   - Yes
   - No

* 91. Do you agree to have the name of your journal published in the list of Diamond Journals participating to the survey on cOAlition S website?
   - Yes
   - No

* 92. Do you want to receive your responses as a file after the end of the survey?
   - Yes
   - No

* 93. Do you want to receive the final report of the study and further information about its follow-up?
   - Yes
   - No
Diamond Open Access Survey

Thank you for your participation. Don't hesitate to contact us: operas@operas-eu.org

https://operas.hypotheses.org/

94. Include

☐ Yes
Description of the Diamond SEPS Study, granted by the French Higher Education, Research and Innovation Minister (MESRI)

March, 1st, 2021

Building on the previous study on transformative agreements and the OPERAS Diamond Study, this study will deepen the analysis of OA Diamond business models and explore the consent and feasibility of conditional support from actors such as Research Funders.

It will start with as an complementary survey targeting as a priority the more than 800 journals in the sample gathered by OPERAS that have agreed to participate in new surveys. This body of knowledge will make it possible to produce a detailed mapping of funding models, both for journals available on major dissemination platforms (Redalyc, Scielo, OpenEdition, OLH, ...) and for those that are independent (university and scholarly society portals, own website).

From these results, associated to our knowledge on partial coupled support instruments included in transformative agreements, we will build sketches and models, as support for journals. These models will take into account the need to identify specific research articles (based on authors, grants) and to quantify them. They will be presented, discussed and tested through a workshop, in order to measure the willingness and feasibility on the funders side.

The study will be carried out by Quentin Dufour, David Pontille and Didier Torny and will be monitored by the French Open Science Committee, in particular its Publications Committee.

For the CSI research Team

Didier Torny