DIAMAS

Developing Institutional Open Access Publishing Models to Advance Scholarly Communication

5.2 National overviews on sustaining institutional publishing in Europe

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Document overview

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Acronyms

AAMs	Author accepted manuscripts
ACS	American Chemical Society
AEI	The Spanish State Research Agency
AERES	Agence d'évaluation de la recherche et de l'enseignement supérieur
AES	Health Research and Development Strategy
AEUP	Association of European University Presses
AIP	American Institute of Physics
AISA	Italian Association for the Advancement of Open Science
ALPs	Academic-led publishers
ANECA	National Agency for Quality Assessment and Accreditation (Spain)
ANR	French National Research Agency
ANWUR	National Agency for the Evaluation of Universities and Research Institutes
APCs	Article Processing Charges
APCZ	Akademicka Platforma Czasopism
APIs	Application Programming Interfaces
APRE	Agency for the Promotion of European Research
ASN	Abilitazione Scientifica Nazionale
BMBF	Federal Ministry of Education and Research
BPCs	Book Processing Charges
CDTI	The Centre for the Development of Industrial Technology
CIEMAT	The Research Centre for Energy, Environment and Technology
CKRASP	Conference of Rectors of Academic Schools in Poland
CLA	Copyright Licensing Agency
CMOs	Collective management organisations
CNR	Consiglio Nazionale delle Ricerche
CNRS	Centre National de la Recherche Scientifique
COAR	Confederation of Open Access Repositories

CoARA	Coalition for Advancing Research Assessment
CoNOSC	Council for National Open Science Coordination
COPE	Committee on Publication Ethics
CoPER	Committee of Presidents of Public Research Organisations
COPIM	Community-led Open Publication Infrastructures for Monographs
COS	Committee for Open Science
CoSo	French Committee for Open Science
CRUE	The Conference of Rectors of Spanish Universities
CRUI	Conference of Italian University Rectors
CRUI-Care	Gruppo di Coordinamento per l'Accesso alle Risorse Elettroniche
CSIC	Spanish National Research Council
CSUC	Consortium of University Services of Catalonia
CVN	The Normalised Curriculum Vitae
DAAD	German Academic Exchange Service
DABAR	Digital Academic Archives and Repositories
DFG	German Research Foundation
DOAB	Directory of Open Access Books
DOAJ	Directory of Open Access Journals
DOAG	Diamond OA List Germany
DOI	Digital Object Identifier
DORA	San Francisco Declaration on Research Assessment
EDIB	Equity, Diversity, Inclusion, and Belonging
EECTI	Spanish Strategy for Science, Technology and Innovation
ENCA	National Open Science Strategy (Spain)
ENEA	Agenzia Nazionale per le Nuove Tecnologie, l'energia e lo Sviluppo Economico Sostenibile
EOSC	European Open Science Cloud
EPRs	Public Research Entities
ESA	European Space Agency
ETER	The European Tertiary Education Register

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EUCT	Statistics of Universities, Centers, and Degrees
FECYT	The Spanish Foundation for Science and Technology
FNSO	French National Open Science Fund
FTE	Full-Time Equivalent
FZJ	Forschungszentrum Jülich
GARR	Gestione Ampliamento Rete Ricerca
GCRF	UKRI Global Challenges Research Fund
Hcéres	High Council for Evaluation of Research and Higher Education
HEIs	Higher Education Institutions
IAC	The Institute of Astrophysics of the Canary Islands
ICDI	Italian Computing and Data Infrastructure
ICM UW	Interdisciplinary Center for Mathematical and Computational Modeling at the University of Warsaw
INAF	Istituto Nazionale di Astrofisica
INFN	Istituto Nazionale Fisica Nucleare
INGV	Istituto Nazionale di Geofisica e Vulcanologia
INTA	The National Institute of Aerospace Technology
IP	Institutional publishers
IPSP	Institutional publishers and service providers
IRIS	Institutional Research Information System
IRRPs	Institutional Rights Retention Policies
ISCIII	The Institute of Health Carlos III
ISSN	International Standard Serial Number
JIF	Journal Impact Factor
KEN	The Science Evaluation Committee (Poland)
KNAW	The Royal Netherlands Academy of Arts and Sciences
LOSU	The Spanish Organic Law of the University System
MIAR	Information Matrix for the Analysis of Journals

MICIU	Ministry of Science, Innovation, and Universities (Spain)
MNiSW	Ministry of Science and Higher Education (Poland)
MSES	Ministry of Science, Education and Sport
MUR	Ministero dell'Università e della Ricerca
NAWA	Polish National Agency for Academic Exchange
NÅHST	Norskspråklege opne tidsskrift innanfor humaniora og samfunnsvitskap
NCBR	National Centre for Research and Development (Poland)
NCN	National Science Centre (Poland)
NIHR	National Institute of Health and Care Research
NFU	The Netherlands Federation of University Medical Centres
NORA	Norwegian Open Research Archives
NOS-HS	The Joint Committee for Nordic Research Councils in the Humanities and Social Sciences
NPOS	National Programme Open Science
NPRH	National Programme for the Development of the Humanities (Poland)
NRP	National Research Programme
NUPs	New University Presses
NWO	Dutch Research Council
OA	Open Access
OABN	OA Books Network
OACF	The Open Access Community Framework
OACIP	Lyrasis Open Access Community Investment Program
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting
OASPA	Open Access Scholarly Publishing Association
OCW	Onderwijs, Cultuur en Wetenschap
OECD	Organisation for Economic Co-operation and Development
OFF	Ordinary Financing Fund
OIPA	Open Institutional Publishing Association
OJS	Open Journal Systems
OMP	Open Monograph Press

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OPIs	The Public Research Bodies (Spain)
ORCID	Open Researcher and Contributor ID
ORE	Open Research Europe
OSM	French Open Science Monitor
OSNL	Regieorgaan Open Science NL
PCN	Portal Czasopism Naukowych
PEICTI	State Plan for Scientific and Technological Research and Innovation
PKP	Public Knowledge Project
PLS	Publishers Licensing Society
PNSA	Piano Nazionale per la Scienza Aperta
REF	Research Excellence Framework
RCN	The Research Council of Norway
RCUK	Research Councils UK
RI	Research Infrastructure
RFOs	Research funding organisations
RPOs	Research performing organisations
RSC	The Royal Society of Chemistry
RR	Rights Retention
SECTI	Spanish Science, Technology and Innovation System
SEP	Strategy Evaluation Protocol
Sikt	Norwegian Agency for Shared Services in Education and Research
SOMMa	Alliance of Excellence Research Institutions and Research Units (Spain)
SP	Service providers
STEM	Science, technology, engineering and mathematics
STM	Scientific, Technical and Medical
SSH	Social Sciences and Humanities
TAs	Transformative agreements
THE	Times Higher Education

UHR	Universities Norway
UKRI	UK Research and Innovation
UNC	Universities National Council
UNE	Union of Spanish University Publishers
UNL	Universiteiten van Nederland
UPs	University presses
URICI	Unit of Scientific Information Resources for Research
UUK	Universities UK
UvA	University of Amsterdam
VQR	Valutazione della qualità della ricerca
WoS	Web of Science
ZonMw	The Netherlands Organisation for Health Research and Development

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Executive Summary

The richness of Diamond Open Access (OA) publishing is characterised by its diversity: from the wide-ranging disciplines it serves in multiple languages to the types of organisations and networks involved in developing, running or maintaining it. Local, regional and national interests driving it are underpinned by the context of the country's publishing industry and national political, social, and economic OA priorities, policies, and practices. Understanding the current state and potential future of Diamond OA publishing across the European Research Area is a key goal of the DIAMAS project. This report presents research findings in the early 2024 context of Diamond OA publishing in 10 countries from across the various regions of Europe.

This report shows how national contexts differ and create unique conditions for Diamond OA publishing in each country. Diamond OA particularly flourishes in countries with strong community leadership and public funding. In some countries, national journal publishing is financially supported through public financing to maintain a prosperous and locally relevant scholarly communication environment in national languages, often realised through Diamond OA publishing. In countries where institutional publishers are coordinated at the national level, more public funding may be available for Diamond OA. However, this is not necessarily a condition for robust national infrastructures to support Diamond publishing. Creating conditions for Diamond OA publishing to flourish in a national context requires recognising the following factors:

- **The role of Diamond OA in the scholarly publishing landscape differs across countries**

  Large mature Diamond publishing platforms have been developed through collaboration and are mature in France and Croatia. Most publishers operate on the basis of not-for-profit models in Croatia, and Diamond OA journals predominate. Learned societies are also a significant driving force among Diamond OA publishers in Poland, and especially in Finland, where a national umbrella organisation coordinates learned societies. The scholarly publishing landscape in the UK has become notably diverse over the last decade as new university presses and scholar-led publishers that offer Diamond publishing or related services have emerged on the scene. However, Gold and Hybrid remain the dominant OA models nationally. Academic institutions and their libraries are the most prevalent Diamond journal publishers here. Some well-established large commercial publisher communities in certain countries, such as Germany, have yet to transition from Gold or hybrid to Diamond OA publishing. Many countries have limited quantitative data on the number of Diamond journals, which speaks to the need for better discovery and indexing services for these types of publications internationally.

- **Diamond OA is by and for the national community**

  Collaboration between higher education institutions and research funders is vital for OA publishing industries to flourish and a condition for Diamond OA. The level at which institutional publishers are coordinated within a country varies between national contexts. Bottom-up initiatives promote and enable Diamond OA in several national contexts. Croatia is exemplary in demonstrating how national OA publishing in small countries can almost exclusively follow the Diamond model when serving the national community. In Norway, a consortium for journal funding organises the funding through a central model. In Finland, a robust national umbrella organisation for learned societies is a crucial driving force for delivering technical services, distributing public financing, and speaking to policymakers on behalf of institutional publishers. In contrast, even though the quality of journals is evaluated by the Ministry of Science and Higher Education in Poland, scholarly publishing in this country is notably decentralised.

- **Diamond OA must be incentivised**

  Researchers in Norway and the Netherlands are incentivised to publish OA via the national research assessment systems, while in Finland, OA is incentivised through the funding model of public higher education institutions. Strategic changes to research evaluation in the Netherlands support the national transition to 100% open science, especially by rewarding researchers who have an open science track record. Spain is one of several countries where the primary research funding bodies require that publications from publicly-funded research and the data necessary to validate them be deposited in open access repositories. However, in Italy, the relatively small presence and limited monitoring of Diamond OA publishing reflects the fact that researchers are not incentivised to publish OA. Comparing the state of institutional publishing in different European countries reveals a connection between research evaluation practices and Diamond OA publishing.

- **Public funding is necessary for IPSPs and infrastructures that enable Diamond**

  Across Europe, more institutional funding needs to be directed towards Diamond. Public research funding in Norway requires that all nationally funded journals comply with the Diamond OA business model. This form of organised national support for Diamond OA differs from most other countries. In Poland, institutional publishers are primarily institutionally funded, while government funds are available to those striving to increase their impact or quality rather than those publishing OA. Some universities/libraries fund Diamond OA publishing independently of national funding bodies. Community-led and publicly-funded infrastructures enable the prevalence of Diamond OA publishing in Croatia. A very high level of collaboration in France has created a system of national infrastructures for OA, but these infrastructures are still underfunded. Even as this sector grows, as in the UK, thanks to institutional and library support, dedicated public funding is still needed to extend the reach of Diamond publishers and service providers.

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- **National strategies for open science can, but do not always, promote Diamond publishing**

  Some countries have developed effective strategies to achieve their open science goals via robust, centralised mandates. In the UK, despite the absence of national funding to support Diamond OA journals or publishing platforms (although a funding programme for Diamond OA books exists), government and research funders have had a pivotal role in driving the shift towards OA since 2003. Norway has a long-term plan for research and higher education that includes OA promotion and, specifically, a transition to Diamond OA publishing for journals. This stands apart from the national plans of other countries like Spain, where Diamond is not yet prioritised over other routes to OA publication.

Introduction

DIAMAS WP5: Exploring and supporting the sustainability of institutional publishing aims at gaining a better understanding of IPSP costs, funding, and business models and to provide this intelligence to institutional publishers and service providers (IPSPs), funders, and other stakeholders. Since the national publishing contexts differ widely across Europe, influencing how publishing is funded, T5.3 provides a range of national institutional publishing overviews, including policy contexts and funding practices. Partners involved include CSI, EIFL, FFZG, IBL-PAN, Jisc, and SPARC Europe, with the lead of the report being the Federation of Finnish Learned Societies (TSV). This report focuses on 10 European countries, and each is treated as an individual case study. Studies explore how institutional publishing operations are funded, sustained, and influenced by policy and publishing traditions in Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Spain and the UK. Each of the 10 reports follows a similar structure with the same main headings to present the key information (see Figure 1 for the summary). The DIAMAS project focuses on OA Diamond journal publishing, and this deliverable shares that emphasis, but it does not a-priori exclude other forms of publishing where discussion of them is relevant and possible.

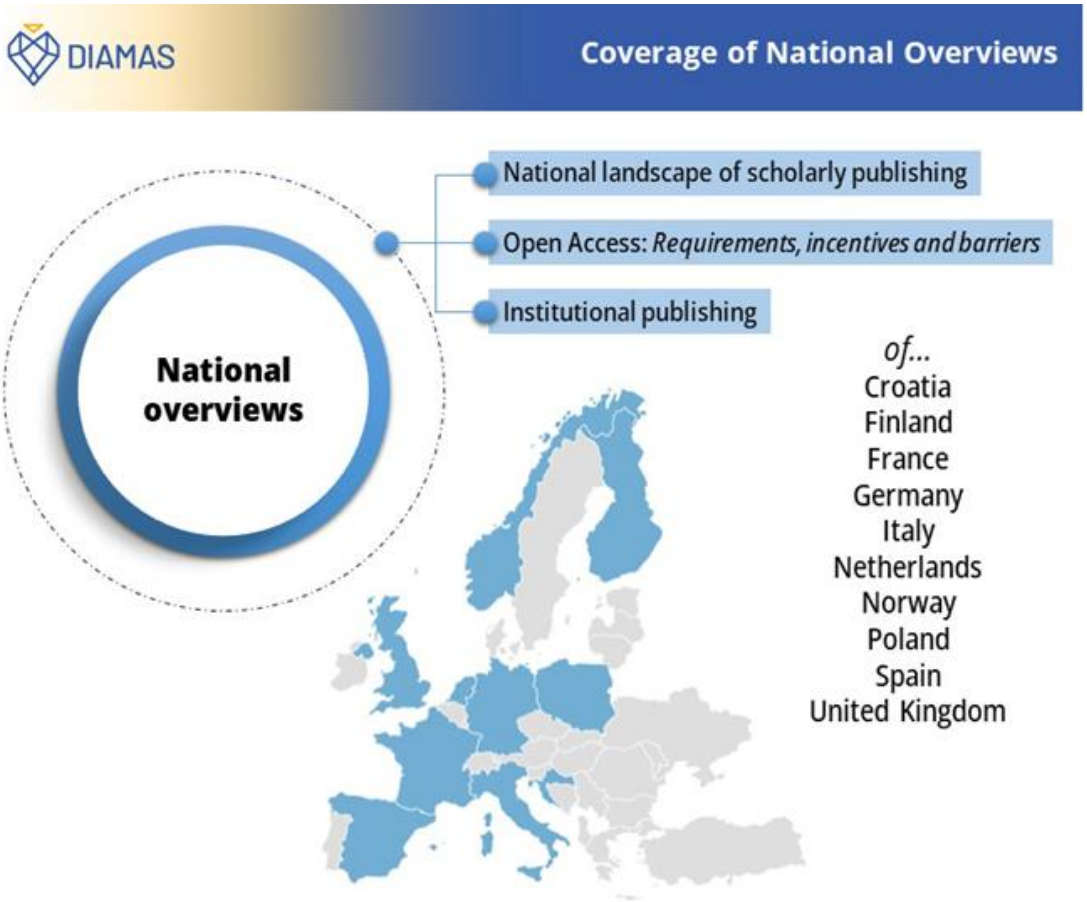

Figure 1. Coverage of national overviews

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National Landscape of Scholarly Publishing: This section presents an overview of the national research policy environment related to scholarly publishing. It addresses questions such as the organisation of scholarly communication on a national level, the presence of national or sectoral agreements with publishers, distinctive features of the publishing culture, and the influence of large international publishers. In addition, it examines funding and assessment systems, including performance-based funding models for higher education institutions, which allocate a portion of the higher education budget according to specific performance measures, journal indexing practices, recruitment and promotion procedures, research assessment procedures, and publication priorities.

Open Access - Requirements, Incentives, and Barriers: This section outlines the open access policies and practices within each country, including requirements set by major funders and research sector actors. It explores the existence of national open access policies, incentives for open access publishing, monitoring mechanisms for open access uptake, and the extent of adoption of open access policies among various stakeholders. In addition, it discusses issues related to national copyright regimes, Creative Commons licences, rights retention and self-archiving exemptions. The subsection "Open access-related infrastructures" covers trends and developments in technical infrastructures supporting open access publishing.

Institutional Publishing: This section presents findings from the DIAMAS WP2 surveys, country reports, and WP5 surveys/focus groups regarding the presence and nature of IPSPs within each country. Subsections include:

- **Funding and Sustaining IPSPs:** This section describes the funding environment for IPSPs, including available financial support channels and the long-term dependability of such support. It also explores opportunities for collective funding mechanisms and the role of libraries in funding publishers.
- **Collaboration between Publishers and Service Providers:** This section examines collaboration patterns and opportunities based on survey and focus group results, shedding light on partnerships between publishers, service providers, and funders, sponsors and donors.

The report aims to provide comprehensive insights into the dynamics of scholarly publishing at both national and institutional levels across diverse contexts, using a combination of quantitative and qualitative data. Each section is underpinned by quantitative data derived from bibliometric indicators, higher education statistics, and publisher information. While this report primarily focuses on the publication environments for journals, it acknowledges that many organisations involved in diamond open access also engage in book publishing. However, to maintain a manageable scope, the detailed analysis will concentrate mainly on journals, with relevant information on book publishing included where applicable. Data collection and visualisation methods are provided in the Methodology section.

Methodology

Journal landscapes

All country reports include detailed infographics that provide an overview of the journal landscapes within each respective country; these are either presented integrated into the text or at the end of each overview as a separate section. These infographics showcase the number of journals published in each country. The broader dataset is compiled from the ISSN portal, published by the ISSN International Centre, which offers access to a worldwide database containing over 2.3 million bibliographic records, encompassing newspapers, magazines, journals, monographic series, and continuing resources in both print and online formats across 234 countries.[1]

The journal data sources and collection processes are outlined as follows:

- **ISSN Portal:** Data collection for our analysis from the ISSN Portal took place in September 2023. Access to this database granted access to language and country-specific data, as well as other pertinent information about the journals, TSV conducted an extensive integration and deduplication process. We then compiled a comprehensive list of 178,000 unique serials sourced from various scholarly databases, including Crossref, PKP, Bielefeld list, Ulrichsweb, Scopus, JUFO, and DOAJ. This dataset represents an evolved iteration of the data outlined in Laakso & Pölönen (2023).
- **Ulrichsweb Journal List:** Ulrichsweb Global Serials Directory serves as a crucial data source/index for librarians due to its extensive coverage. We acquired Ulrich's journal list by country to analyse the journal landscape according to Ulrich's data (Data collection date: September 2023).
- **Journal lists of citation indexes:** We gathered journal lists from the international citation indexes (WoS and Scopus), which serve as primary data sources for research evaluation in many countries. Specifically, we obtained journal data from WoS and Scopus collections to understand the distributions of journals within each country. For Scopus journal lists, we utilised Scimago's[2] dataset and downloaded the data as a CSV file in November 2023. This dataset provided comprehensive coverage of journals indexed in Scopus. Regarding WoS journals, we utilised Taşkın et al.'s (2023) dataset, which covers the Master Journal List for the year 2022. This dataset was instrumental in capturing the landscape of journals indexed on the Web of Science collection.
- **DOAJ Journal List:** The list of journals from the Directory of Open Access Journals (DOAJ) and their respective characteristics were collected using the CSV download option of DOAJ[3] in November 2023.
- **Number of journals using OJS:** Data regarding the number of journals utilising the Open Journal Systems (OJS) platform was obtained from the PKP Usage

[1] https://portal.issn.org/
[2] https://www.scimagojr.com/
[3] https://doaj.org/csv

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Statistics[4] link in November 2023. OJS is an open-source software platform developed by the Public Knowledge Project (PKP) to facilitate the management and publication of academic journals online. It is an infrastructure designed to provide various features and tools to support journal editors, authors, and reviewers, including manuscript submission, peer review management, editorial workflow tracking, and online publication. OJS serves as a decentralised approach to journal publishing, empowering institutions and scholarly societies to manage their publications independently.

- **Number of journals indexed in Sherpa/ROMEO per country:** Information on the number of journals indexed in Sherpa/ROMEO, categorised by country, was gathered from the Sherpa/ROMEO publication list by country[5] in November 2023.
- **Number of journals listed in MIAR per country:** Data pertaining to the number of journals listed in Information Matrix for the Analysis of Journals (MIAR) per country was downloaded from MIAR Statistics[6] in November 2023.

Figure 2 presents the comparative statistics for various platforms, offering a comprehensive overview of the data gathered. Additionally, each national overview within the report provides detailed information on the journal landscapes specific to the respective country.

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Comparison of 10 countries
Data Sources

	ISSN portal	Ulrichsweb	Scopus	Web of Science	DOAJ	OJS	Sherpa/ROMEO	MIAR
European Average	***1,417***	***734***	***382***	***279***	***232***	***157***	***426***	***595***
European Median	***509***	***206***	***71***	***51***	***72***	***56***	***72***	***140***
Croatia	488	198	161	121	154	65	114	206
Finland	509	175	40	22	65	101	100	140
France	3,477	1,214	534	368	310	59	435	1,322
Germany	5,965	3,319	1,469	1,142	358	325	1,178	2,445
Italy	3,224	1,713	598	418	507	308	602	1,266
Netherlands	5,122	2,836	1,842	1,329	408	59	592	2,277
Norway	390	213	32	48	125	56	154	108
Poland	3,129	1,603	522	348	830	511	777	778
Spain	3,387	1,226	730	721	974	1,277	547	3,880
UK	11,128	7,752	6,413	4,581	2,059	277	9,904	6,506

Figure 2. Comparison of the number of journals per country across different journal platforms/sources

[4] https://pkp.sfu.ca/software/ojs/usage-data/
[5] https://v2.sherpa.ac.uk/view/publication_by_country/
[6] https://miar.ub.edu/stats/PAIS

Higher education systems

We gathered information from various platforms and sources for the higher education sector of each country in October 2023 across all countries. The data sources are described below:

- **The European Tertiary Education Register (ETER) Database:** ETER database[7] served as a crucial resource for gathering data on the number of higher education institutions and total faculty Full-Time Equivalent (FTE). ETER offers a European-level repository containing information on Higher Education Institutions (HEIs) and their activities, including students, graduates, personnel, and finances. For the national overviews, we referenced data from 2019 due to its completeness for the 10 case countries and the other available data from the sources of the World Bank and OECD for the years 2018 and 2019.
- **World Bank Databank[8]:** We utilised data from the World Bank for various metrics, including total students (enrolment in tertiary education, all programmes, both sexes) from 2018, researchers in R&D from 2019, number of patents from 2019, and the research and development share of GDP from 2019.
- **OECD iLibrary[9]:** Data from the 2019 OECD was employed for higher education total costs (in USD millions). Notably, Croatian data for higher education total costs was omitted from the national overviews, as OECD data is exclusively provided for member countries.

Figure 3 provides a comparative analysis of higher education systems across ten countries, presenting a comprehensive overview of key statistics gathered. It is important to note that these numbers are restricted to HEIs and are not representative of the entire set of researchers employed in each country; for instance, Germany has approximately 600,000 researchers according to European Commission numbers.[10] Each national overview within the report offers detailed insights into the specific characteristics and dynamics of the higher education landscapes within their respective countries.

[7] https://www.eter-project.com/about/
[8] https://databank.worldbank.org/
[9] https://www.oecd-ilibrary.org/
[10] https://ec.europa.eu/eurostat/statistics-explained/index.php?title%3DR%2526D_personnel%26oldid%3D624836&sa=D&source=docs&ust=1716800664802806&usg=AOvVaw1fL_BrUQZJSWPlbDj61_Zq

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	N of HE institutions	Total faculty FTE	Total students	HE total costs (USD, Millions)	Researchers in R&D	N of patents	R&D of GDP
European Average	***83***	***37,329***	***936,027***	***4,522***	***3,795***	***3,488***	***1.5***
European Median	***47***	***18,887***	***306,743***	***2,640***	***3,750***	***684***	***1.3***
Croatia	39	12,776	164,826	N/A	2,135	117	1.1
Finland	39	24,029	294,516	1,975	7,227	1,588	2.8
France	206	130,892	2,618,729	14,543	4,812	12,771	2.2
Germany	401	228,199	3,127,927	25,526	5,396	42,260	3.17
Italy	207	N/A	1,895,990	8,701	2,656	10,061	1.5
Netherlands	57	51,792	889,506	6,168	5,715	2,198	2.2
Norway	33	18,390	288,739	2,640	6,674	880	2.2
Poland	243	91,726	1,492,899	6,032	3,188	4,010	1.3
Spain	83	90,196	2,051,826	6,540	3,081	1,431	1.3
UK	257	175,590	2,467,086	13,178	4,684	11,990	1.7

Figure 3. Comparison of 10 countries in terms of higher education system size

Publication languages

Each national overview includes an infographic depicting the distribution of journal languages, showcasing data from the ISSN portal, Ulrichsweb, and WoS for each country, alongside European and global averages. Languages were categorised into three classes: English, multilingual, and other languages. The multilingual class encompasses journals published in English and one or more additional languages.

It's important to note a limitation of this analysis, which arises from the use of language data provided by different data sources. There may be variations in the classification methods employed for multilingual journals and other languages across these platforms. However, the percentages of English, multilingual, and other language journals relative to the platforms offer valuable insights into the diversity of the European journal landscape in terms of languages, as well as the discrepancies observed between platforms. Figure 4 illustrates the comparative analysis of publication languages across ten countries. It provides a comprehensive overview of language distribution statistics. Furthermore, each national overview offers detailed insights into the specific language preferences and trends within the scholarly publication landscape of the respective countries.

Figure 4. Comparison of 10 countries in terms of journal languages

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Journal subjects

In each national overview, we present the subject distribution of journals in Ulrichsweb and WoS. Given that subject classification varies across platforms, we employed the OECD major fields for standardisation purposes. This systematic approach ensured consistency in categorising journal subject categories.

For WoS, we utilised a conversion table provided by Clarivate Analytics[11] to map subject categories to OECD major fields. A journal belonging to multiple subject categories in WoS was classified as 'multidisciplinary.' Regarding Ulrichsweb classification, subjects were categorised as provided in Table 1.

Table 1. Conversion table used for Ulrichsweb and OECD subject categories

ULRICHSWEB subject category	OECD major subject
Business and Economics Education Ethnic Studies, Gender, and Lifestyle Government, Law and Public Administration Reference and Bibliographies	Social sciences
Medicine and Health Sports, Hobbies, and Recreation	Medical and health sciences
Biological Sciences and Agriculture Chemistry Earth, Space, and Environmental Sciences Mathematics Physics	Natural and agricultural sciences
Social Sciences and Humanities	Humanities and the arts & Social sciences
Technology & Engineering	Engineering and technology
Arts and Literature Philosophy and Religion	Humanities and the arts

Figure 5 presents a comparative analysis of journal subjects based on the Ulrichsweb Global Serials Directory classification across ten countries, offering a comprehensive overview of subject distribution statistics. Moreover, some national overviews delve into the specific subject areas prevalent within the scholarly publication landscape of the respective countries.

[11] https://incites.help.clarivate.com/Content/Research-Areas/oecd-category-schema.htm

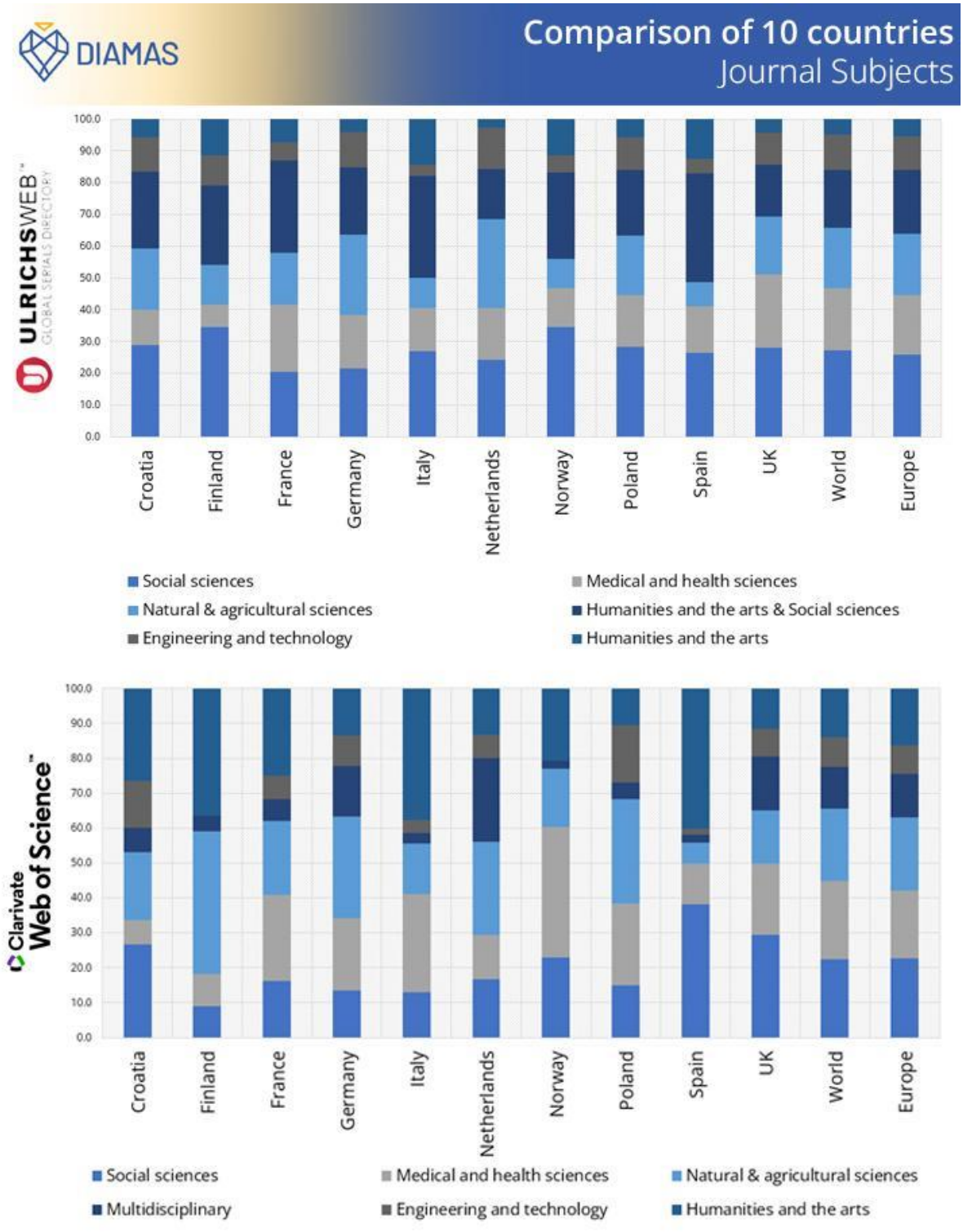

Figure 5. Comparison of 10 countries in terms of journal subjects

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Types and sizes of publishers

Each national overview includes two infographics depicting publisher types:

Publisher Landscape: This infographic illustrates the percentage of journals published by professional, university, university press, and society publishers. To classify publisher types, we adopted the method proposed by Taşkın et al. (2023). We utilised the classified research data from their study for the WoS data. For the Ulrichsweb classification, we applied the same method. Publisher types are as follows:

- **Professional Publishers:** Publishers with names containing terms such as INC, PRESS, and similar descriptors were identified as professional publishers. Lists such as oligopoly publishers (Larivière et al., 2015) and the OASPA list provided additional clues for classification. It is important to note that the term 'professional' in this context follows OASPA's categorisation, and is used here to maintain consistency with their established labels.
- **Society Publishers:** Journals maintained by associations, foundations, societies, or communities were classified as "society publishers," considering different languages for classification (e.g., Gesellschaft, associação).
- **University Publishers:** Universities, research institutes, governmental organisations, and science academies were categorised as "university publishers." All languages were considered. In addition, for Ulrichsweb classification, we introduced a new class titled "university press" to highlight professional university presses in the infographic.
- **Unknown:** Unrecognised publisher names were classified as "unknown".

For this part of the analysis, it is important to consider the limited capability of bibliometric information to completely disclose information about ownership/governance of journals. There are situations where a journal is published by a certain organisation without the ownership and governance of the title always belonging to that organisation, for example when a scholarly society makes use of an external publisher for publishing services under contract. As such, results like this should always be interpreted with this limitation in mind.

Publisher Sizes: We employed the OASPA publisher size classification method to categorise publishers based on total annual publishing revenue. Size categories include: Small (below 500,000 Euros), Medium (500,000 to 5 million Euros), Large (5 to 100 million Euros), and Very Large (above 100 million Euros). Each country report presents the distribution of publisher sizes among very large, large, medium, and small publishers.

Figure 6 displays a comparative analysis of publisher types based on data from Ulrichsweb and WoS across ten countries. It provides a comprehensive overview of the distribution of professional, university, university press, and society publishers. In

addition, each national overview offers detailed insights into the specific publisher landscape prevalent within the respective countries' scholarly publication ecosystems.

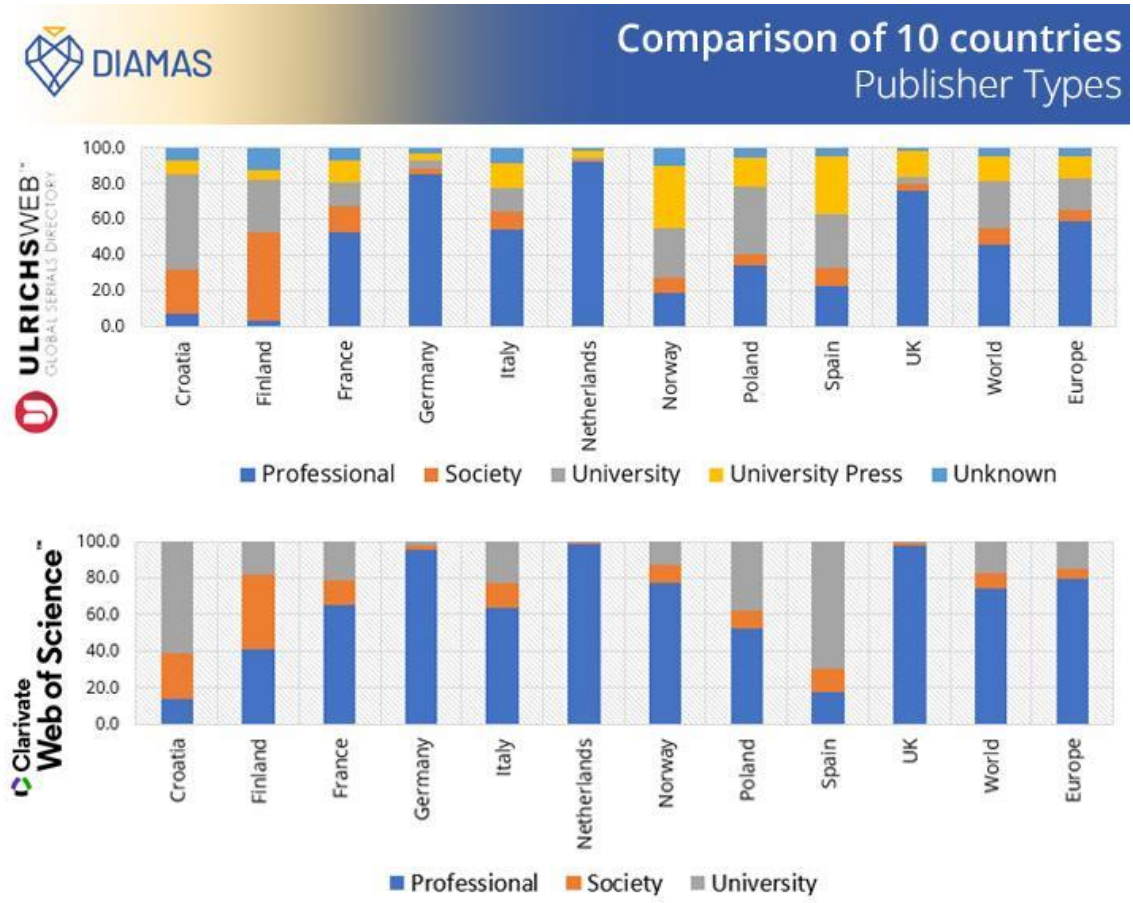

Figure 6. Comparison of 10 countries in terms of publisher types

References and further reading

Laakso, M., & Pölönen, J. (2023, October 15). Why do we still know so little about the total landscape of scholarly journals: Leveraging public data for building a common foundation [Presentation]. figshare. https://doi.org/10.6084/m9.figshare.24312571.v1

Larivière, V., Haustein, S., & Mongeon, P. (2015). The Oligopoly of academic publishers in the digital era. *PLOS ONE*, 10(6), e0127502. https://doi.org/10.1371/journal.pone.0127502

Taşkın, Z., Pölönen, J., Kulczycki, E., & Laakso, M. (2023, July 3). Learned societies as publishers in the international journal landscape. International Society of Scientometrics and Informetrics Conference 2023 (ISSI 2023), Indiana, Bloomington.

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National overviews

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Croatia

National landscape of scholarly publishing

Looking at the outputs of Croatian scholars, two distinct bodies of literature can be observed. One is the body of literature (dominantly journal articles) published by international publishers, large or small, commercial companies or international learned societies. The other part is the literature (journal articles, but also frequently monographs, edited volumes and conference proceedings) published by Croatian publishers or smaller nationally oriented publishers from other countries. It is difficult to establish the exact shares of these two sets of publications, due to incomplete data that is available. On one hand, we have the Croatian National Scientific Bibliography CROSBI[12] which is comprehensive, but does not enable filtering by publishing country or by the name of the publisher. On the other hand, we have data sources such as Scopus or WoS, which have very limited coverage of the literature published by domestic publishers.

Journal publishing

Published articles in international journals that are indexed in WoS and Scopus show some interesting trends in recent years. While the share of articles published in journals by big international publishers (such as Elsevier, Springer, Wiley etc.) has been relatively stable throughout the years, lately we can observe a steep rise in the number of articles published in MDPI (and to a much lesser degree, Frontiers) journals (Petrak et al. 2022). The rationale for this can be explained by the way most research in Croatia is funded, but also by the lack of transformative (or read & publish) licence agreements with big international publishers. According to the ESAC data, the Croatian Academic Libraries Consortium only signed one transformative agreement, for one year (2019/20) with a publisher that is not publishing a significant share of Croatian-affiliated content[13]. Therefore, Croatian authors have a choice of either publishing in closed access with international publishers, publishing in OA journals by paying individual APCs (and then often choosing publications with lower priced APCs) or publishing in Diamond OA journals. Currently, there are no announcements of imminent publish & read national agreements, primarily due to financial constraints.

When it comes to domestic publishers, we should make a distinction between journal publishing and book publishing.

Croatian-based journals are dominantly published by not-for-profit publishers: academic institutions, learned societies and other public organisations. Only a few private publishing houses publish scholarly journals, often in collaboration with public institutions or learned societies. Further to that, there are examples (not many, but the number seems to be growing in recent years) of academic institutions and societies

[12] https://www.croris.hr/crosbi/
[13] https://esac-initiative.org/about/transformative-agreements/agreement-registry/cam2019calc/

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entering into collaboration with international publishers or service providers (such as Taylor & Francis, De Gruyter's Sciendo and others). Still, these cases remain rare examples, and there are currently no local offices of international journal publishing companies located in Croatia.

Croatian journals are almost exclusively OA, most often Diamond OA. This can be explained by the fact that since the early 2000s, there has been a strong bottom-up approach to building open access infrastructure in Croatia and advocating for OA principles. Another reason for the prevalence of Diamond OA is pragmatic: Croatian academia is a small market, so selling online subscriptions was never a viable strategy for sustainability. Most Croatian journals transitioned directly from print-only editions to Diamond OA. However, many still haven't ceased publishing print counterparts (especially those that are targeting not only academic but also professional or cultural audiences).

Among the journals published in Croatia, the majority are in the disciplines of Social Sciences or Arts and Humanities, and the minority are in STEM fields. It is visible in Figure 7 that the disciplinary distribution of Croatian journals, therefore, deviates from the overall global or European distribution, both according to the data from Ulrichsweb and WoS.

This can be easily explained by the fact that researchers in STEM disciplines are incentivised to publish in high-impact international journals much more than researchers in SSH disciplines. SSH researchers are, in their publishing habits, still dominantly oriented towards national journals. In addition to that, national journals in SSH fields are often valued not just as scholarly communication venues but also as "guardians" of national culture and language.

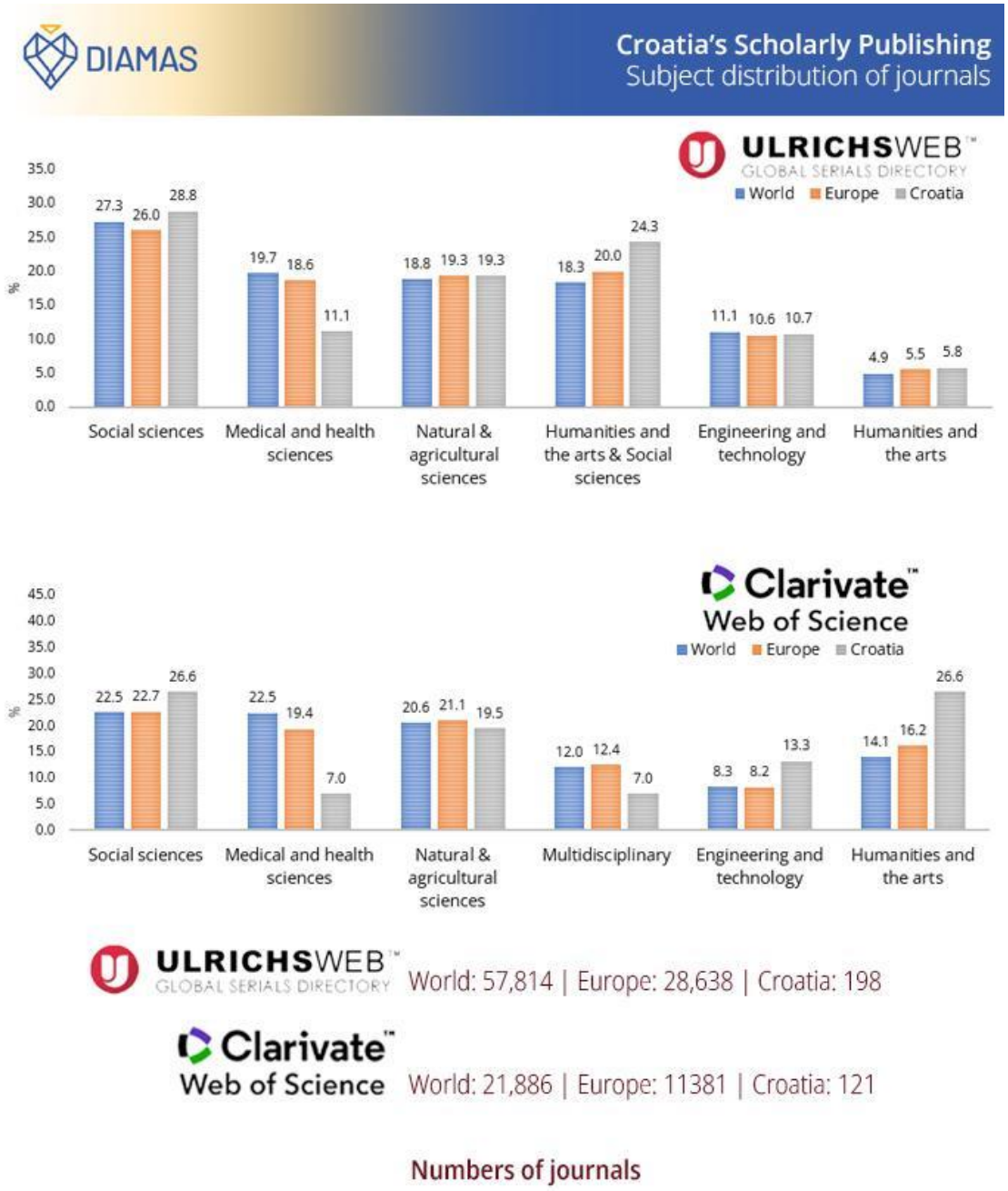

Figure 7. Subject distribution of journals in Croatia

Book publishing

Croatian scholarly book publishing differs from journal publishing in several aspects. Firstly, publishers of scholarly books are often small and mid-sized private publishers, some of them specialised in original scholarly works, but more often publishing wider portfolios of books (including textbooks, translations, popular work or even literature titles). With very few exceptions, these publishers only publish print editions. There are also several academic institutions (with their presses or publishing departments) that publish scholarly books. Such academic presses are more likely to take part in digital publishing, making their books available OA, either through the publishing platforms, depositing digital copies in institutional repositories or simply making them available on their websites.

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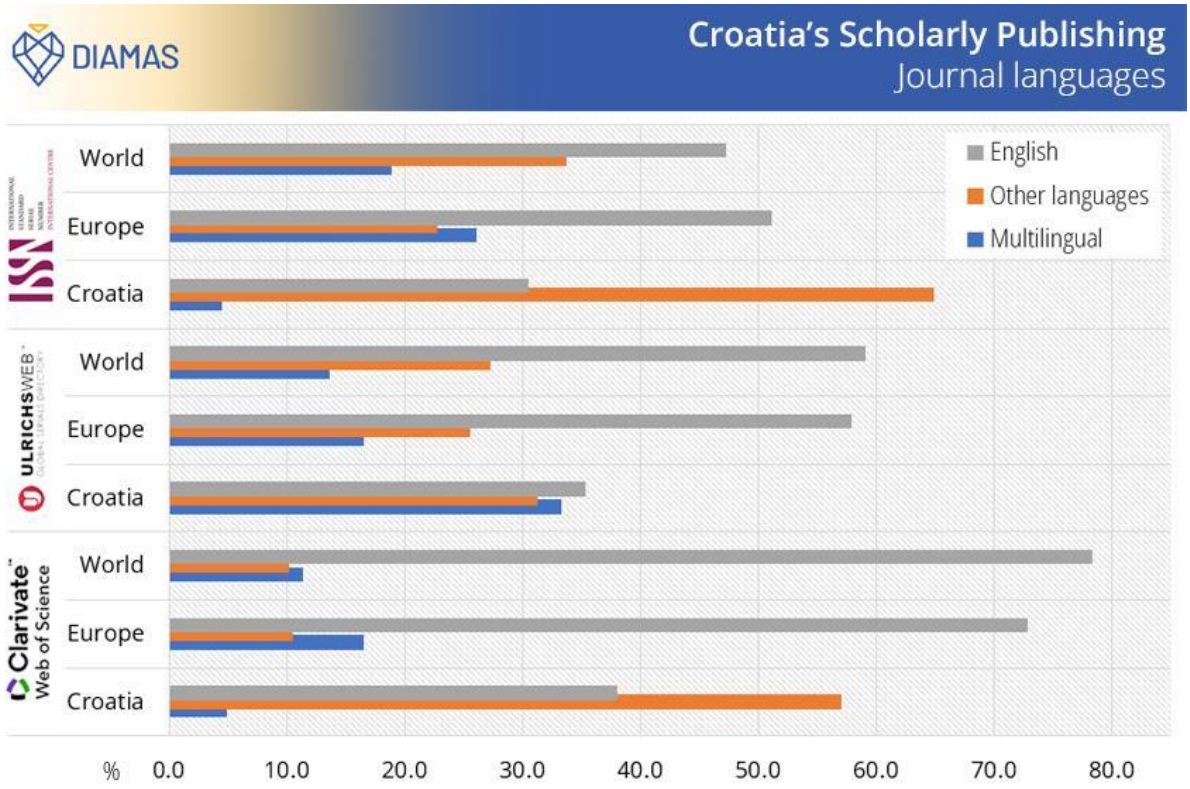
Publishing languages

The dominant languages in journal publishing are Croatian and English. However, the data that is available in the known sources, like ISSN registry, Ulrichsweb or WoS, as presented in Figure 8, are not consistent and do not provide a full overview.



Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	Croatia	Europe	World	Croatia	Europe	World	Croatia	Europe	World
English	149	26,665	77,372	70	16,584	34,172	46	8,298	17,155
Other languages	317	11,866	55,140	62	7,315	15,756	69	1,202	2,231
Multilingual	22	13,629	30,977	66	4,733	7,860	6	1,881	2,500

Figure 8. Croatia's scholarly publishing: journal languages

An important number of journals (particularly in STEM fields) have transitioned to English-only, or if they are more recently established, were founded as English -only journals. They aim to attract international submissions, so the language choice is reflected in the composition of authors. For some journals, most of the content is authored by researchers with foreign affiliations. Some journals still accept and publish only articles in the Croatian language. This is most often the case with journals covering certain topics (for instance, related to Croatian history, art or philology) or journals that address not only academic but also domestic professional audiences. The majority of

journals, however, publish in multiple languages (Bosman et al. 2024). Most often, they accept and publish papers in either Croatian or English. In addition, some also accept content written in other languages, particularly the dominant European ones or the ones spoken in neighbouring countries (like German, Italian, French, Serbian or Slovenian).

There are examples of journals that are fully bilingual, in the sense that they publish each of their articles in two languages in the same document (typically, in Croatian and in English). Such practice broadens the reach of the journals' content, but is costly and requires professional translators from the publishers who provide translations.

Publishing at least the metadata (titles, keywords and abstracts) in at least two languages is practically the norm in Croatian journals. The fact that Croatia represents a small scientific community with a position of scholarly "semi-periphery" is a reason for this awareness of the importance of using at least a minimal degree of multilingualism to achieve better visibility and international recognition.

Funding and assessment systems

The years 2023 and 2024 are bringing some significant changes in the way that research activities in Croatia are assessed, evaluated and awarded. We are witnessing changes in the regulations, procedures and criteria for national performance-based funding, quality assurance in higher education and science, recruitment and promotion procedures and project grants allocation. Some of the reforms have already been performed (but their full consequences are not yet fully visible), while others are still underway.

National performance-based funding model for academic institutions

Croatia is one of the countries where the majority of Global Budgetary Allocations for R&D is allocated through institutional funding, and the minority through project funding (Zacharewicz et al., 2019). However, if we only look at the publicly performed research, then it is mainly funded through project grants, and to a much lesser degree through institutional research funding (European Commission, 2016).

Until 2013, institutions were funded through block funds allocated by the Ministry of Science, Education and Sport (MSES). In 2013, the first "Regulation on Public Multi-annual Institutional Financing of Scientific Activities at Public Universities and Public Scientific Institutes in the Republic of Croatia in 2013, 2014 and 2015."[14] was enacted, and that marked the beginning of performance-based funding (based on ex-post research assessment). Funding was awarded on a three-year basis, with funding amounts

[14] https://narodne-novine.nn.hr/clanci/sluzbeni/2013_06_69_1367.html

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determined based on institutional performance indicators (quantitative and bibliometric-based).

After the enactment of the new Law on Higher Education and Scientific Activity in 2022,[15] the government formulated, based on this Law, a "Regulation on the Program Financing of Public Universities and Public Scientific Institutes in the Republic of Croatia" in 2023.[16] This Regulation foresees that public institutes and HEIs will be in a position to negotiate certain quality indicators on which their future funding will be based. Up to now, the program contracts were only negotiated and signed with the public institutes, but not yet with the public HEIs (which will be a lengthier and more complicated process). Based on the text of the Regulation, unfortunately, the principles of open science are only vaguely mentioned as strategic goals. Still, most importance is given to international publications indexed in WoS and Scopus.

A significant change that was introduced by this Regulation was the abandonment of the long-standing system of central governmental subsidies for journals published by Croatian publishers.

Until last year, for decades, journals were subsidised through the regular annual calls issued by the Ministry of Science and Education, and all types of publishers were eligible, as long as they published in open access (with content available on the national platform (Hrčak) and complied with a certain set of quality and impact criteria. In previous years, the Ministry would directly allocate subsidies to publishers of approximately 170 to 190 titles of scholarly journals. With the introduction of the Regulation on Program Financing, the program of central subsidies will no longer exist, and the funding of the journals published by the public institutes and HEIs are to be covered by the program contracts. Learned societies will have a special call for subsidies for their overall activities, which will include journal publishing. Certain specific institutions that are not in either of these categories, like the Croatian Academy of Arts and Sciences (with a substantial journal publishing program), will not be able to apply for any kind of state publishing subsidies.

This shift in the funding mechanism could bring some positive consequences (institutions will need to have a better overview and take better care of their journal titles), but also some unwanted ones: with the loss of central state criteria, some publishers could give less value to OA and be more prone to commercialisation of their institutional publishing.

[15] https://narodne-novine.nn.hr/clanci/sluzbeni/2022_10_119_1834.html
[16] https://narodne-novine.nn.hr/clanci/sluzbeni/2023_07_78_1245.html

National quality assessment

Quality assurance of all institutions in higher education and science is performed by the Croatian Agency for Science and Higher Education,[17] with criteria based on the Standards and guidelines for quality assurance in the European Higher Education Area. Each institution needs to go through the initial accreditation procedure (resulting in a licence to perform research or deliver study programmes), and be reassessed at regular 5-year intervals. During 2023, the Agency has revised its "Quality standards for evaluation in the process of reaccreditation of higher education institutions".[18] The new quality standards put a strong emphasis on open science (having an open science policy defined, the share of research outputs in open access, but also having its own institutional publications available in open access). These new criteria should serve as a strong motivation for institutions to adopt openness as a goal.

National research funding

The main source of funding for research projects in Croatia is the Croatian Science Foundation, with its national research programmes.[19] From 2013, the Foundation assumed the role of funding national scientific research projects, previously held by the Ministry of Science and Education. In 2014, the Foundation also took up funding of young researchers' career development. The Foundation's two-stage project proposal evaluation procedure is based on peer review, conducted by international scientists, and the practice of panel evaluation, conducted by Croatian scientists. Quantitative and impact indicators play a significant role in the evaluation of grant applicants. The Foundation is a Science Europe member, but is not a signatory of Plan S (nor a member of cOAlition S). Until the most recent funding call for research projects in 2024, open access wasn't mandatory for the project outputs (publications or data), but it was recommended, and the publication of data management plans has been mandatory since 2023.

OA publishing costs are eligible costs in the Foundation's programme, without further conditions (except that it should apply to the leading journals in the field), but it is capped at 15,000 EUR per 3-year project.

It is expected that the 2024 funding cycle will bring additional clarifications and more detailed propositions for the OA mandate.

National recruitment/promotion procedure

The procedures and criteria for promotion or hiring researchers (both in public institutes and in HEIs) are unified to a large extent and primarily defined at the national level.

[17] https://www.azvo.hr/en
[18] https://www.azvo.hr/wp-azvo-files/uploads/radne-grupe/12/20/Standardi-kvalitete-za-vrednovanje-u-postupku-reakreditacije-visokih-ucilista.pdf
[19] https://hrzz.hr/en/

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The 2022 Law on Higher Education and Scientific Activity introduced some changes in the procedure that could possibly result also in some changed criteria of assessment, but at the moment, the public discussion on the future regulations is only beginning.

Up to now, the main document that governed the promotion procedures was the "Regulation on conditions for selection into scientific positions" (the last edition of the Regulations is from 2022[20]). The body that is in charge of defining these Regulations is the National Council for Science, Higher Education and Technological Development[21] appointed by the Croatian Parliament. The document specifies the minimal criteria required to be promoted and is based entirely on the quantitative indicators of publication outputs. The criteria are adjusted to the specific scholarly fields (natural sciences, biomedicine and health, technical sciences, biotechnical sciences, social sciences, humanities, and interdisciplinary research). In some scholarly fields, there is a strong focus on publishing in international high-impact journals, while in others (e.g. humanities) it is less pronounced. Being indexed in WoS or Scopus is considered an indicator of international recognition.

In addition to these criteria of scientific quality, there were also the more inclusive criteria for promotions in HEIs specifically, defined by the Croatian Rectors Council. These necessary conditions for the evaluation of teaching and scientific-professional activities in the selection procedure for scientific-teaching positions included the selection of performance indicators related to different activities and engagements in academic life. None of those documents required open science contributions.

However, the year 2024 could possibly bring some changes to the existing system. In the coming months, the new national criteria for promotions should be defined. Whether they will embrace some principles of open science and responsible research assessment (in line with DORA and CoARA principles) is yet to be seen. Unfortunately, the uptake of these principles among Croatian academic institutions has been very weak: only one institution, The University of Rijeka, signed the CoARA agreement.

In conclusion, the Croatian evaluative framework (at all levels, individual, project or institutional) is currently going through a transformation. All involved policymakers are in the process of defining their new policies or criteria (Croatian Science Foundation; National Council for Science, Higher Education and Technological Development; Croatian Rectors Council), or in the early phase of testing and adopting the new procedures (Ministry of Science and Education; Croatian Agency for Science and Higher Education).

Some of the actors that are the main drivers of these changes are more aware and more in favour of open science and reforming research assessment, while others lack such

[20] https://narodne-novine.nn.hr/clanci/sluzbeni/2022_09_111_1637.html
[21] https://www.nvzvotr.hr/

dedication and understanding. This diversity in approaches could result in mixed incentives for researchers and institutional managers.

Open access - requirements, incentives, and barriers

The major actors (funders, policymakers and evaluators) in the research sector have already been described in the previous section:

- The Ministry of Science and Education
- The Croatian Science Foundation
- The National Council for Science, Higher Education and Technological Development
- The Croatian Rectors Council
- The Croatian Agency for Science and Higher Education.

Except for the Croatian Agency for Science and Higher Education, none of them has a detailed and clearly defined open science or OA policy. Furthermore, it is difficult to give an overview of their requirements related to OA, given that their policies are currently under revision and transformation.

The Ministry of Science and Education was, until 2023, a funder for Croatian-based publishers of open access journals. In its requirements, there was no mention of open licences, rights retention or data availability statements. The only condition was free access to recent journal content on the Croatian open access journal platform Hrčak.

The Croatian Science Foundation is the only relevant research funder (all others, public or private, are very limited in their scope and allocated grants, and do not mention open access requirements at all). In allocating its subsidies to book publishers, there was no requirement for open access whatsoever.

The progress of OA and open science in Croatia has been primarily through a bottom-up approach, where the main actors were certain institutions (and their libraries), groups of institutions gathered around a project or initiative, groups of professionals with a common interest, or the national representatives of the European infrastructures.

- Research performing institutions - early implementers of institutional open repositories, OA policies or OA presses: Ruđer Bošković Institute, University of Zagreb Faculty of Humanities and Social Sciences, University of Zagreb Medical School, University of Rijeka, University of Zadar
- Croatian representatives of the Open Science related European infrastructures (CROSSDA, Dariah-HR, OpenAIRE NOAD, OPERAS national node, RDA node, EOSC representatives.)
- University of Zagreb Computing Centre - Srce, as the central IT support institution for open infrastructures like Hrčak and Dabar
- Governance bodies of open infrastructures (Hrčak Council and Dabar Steering Board)
- Croatian Association for Scholarly Communication ZNAK.

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In 2021, the Initiative for Croatian Open Science Cloud was established (with representatives from 21 organisations, including the representatives of the Ministry of Science and Education and the Croatian Science Foundation), with the aims to coordinate the activities related to Open Science in Croatia and develop open research infrastructures to support it, but primarily to define the national open science plan. The working group for drafting the proposal of the national plan and open science policy delivered the proposal, it was approved by the Initiative's Council and submitted to the Ministry of Science and Education in April 2023. A year later, no official approval or response from the Ministry was received, so Croatia currently still lacks the national open science/access plan.

No national open science/access monitoring system is in place at the moment. No Croatian institution contributes to the Open APC registry, either.

Several research performing organisations have open science or OA policies, but they are usually not strong mandates and are only encouraging self-archiving, rights retention or the use of open licences (they do not monitor or enforce them).

Open access-related infrastructures

The central OA publishing infrastructure for journals in Croatia is the Portal of Croatian scientific and professional journals HRČAK.[22] It was established in 2006 and has been serving the community of scholarly journal editors and publishers ever since. For many journals that were then only available in print, this was the only affordable solution for building an online version of the journal. All the journals present on the Hrčak platform are available in OA. Currently, 542 titles are included (among them, 410 active ones). The platform was a community-led effort initiated by the Croatian Information Society and its OA working group. The technological development was performed by the University of Zagreb Computing Centre Srce. Srce is still in charge of the IT development and support, and the Hrčak is governed with the input from the Advisory Board, consisting of the representatives from journal editorial boards, library professionals, and the representative of the Ministry of Science and Education.

Srce is also providing the central national instance of the OJS platform[23] and the OMP platform[24] (for conference proceedings only, not for monographs or other book types). In addition to that, many journals have their own websites, own OJS instances, or are using other commercial services and hosting providers.

Three institutional presses have established their own open access book platforms based on the PKP OMP software: MorePress[25] from the University of Zadar (91 titles), FF

[22] https://hrcak.srce.hr/en
[23] https://hrcak.srce.hr/ojs/
[24] https://hrcak.srce.hr/omp/
[25] https://morepress.unizd.hr/books/

Open Press[26] from the University of Zagreb Faculty of Humanities and Social Sciences (141 titles) and FFOS e-naklada[27] from the University of Osijek (18 titles).

Another important national OA infrastructure is the network of repositories - DABAR[28] (Digital Academic Archives and Repositories). It was initiated by 5 institutions that still form the governing body, while Srce provides the IT development. It is home to 175 repositories (mostly institutional repositories). A few institutions started using their repositories as the primary venues for publishing their open access books, instead of using specialised platforms (like OMP).

The abovementioned infrastructures (Hrčak, Hrčak-OJS, Hrčak-OMP, Dabar) are publicly funded and publicly governed, and are free for institutions and journal publishers to use.

Institutional publishing

The large majority of Croatian journal publishers could be considered as "institutional publishers" according to the definition of the DIAMAS project (they are mostly RPOs or learned societies). This is clear from Figure 9. Only a minority of publishers are professional private companies (small or mid-sized). There are no large commercial journal publishers located in Croatia, but some Croatian institutional publishers publish their journals in collaboration with large international companies.

Croatian professional private publishers are not OASPA members, which explains the absence of small and mid-sized publishers in the Ulrichsweb data (Figure 10).

[26] https://openbooks.ffzg.unizg.hr/
[27] https://naklada.ffos.hr/knjige/
[28] https://dabar.srce.hr/

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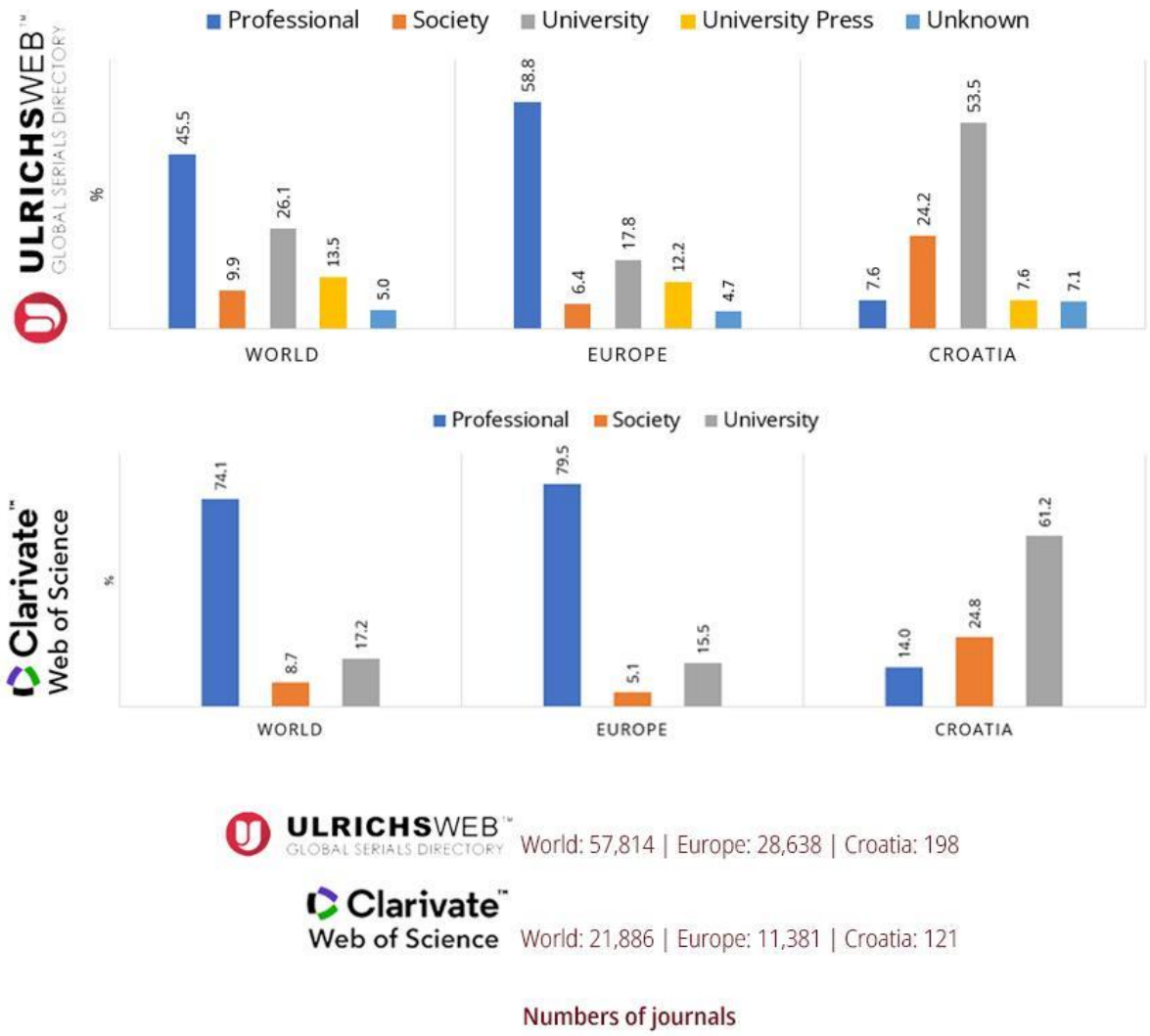

Figure 9. Croatia's scholarly publishing: Publishers landscape

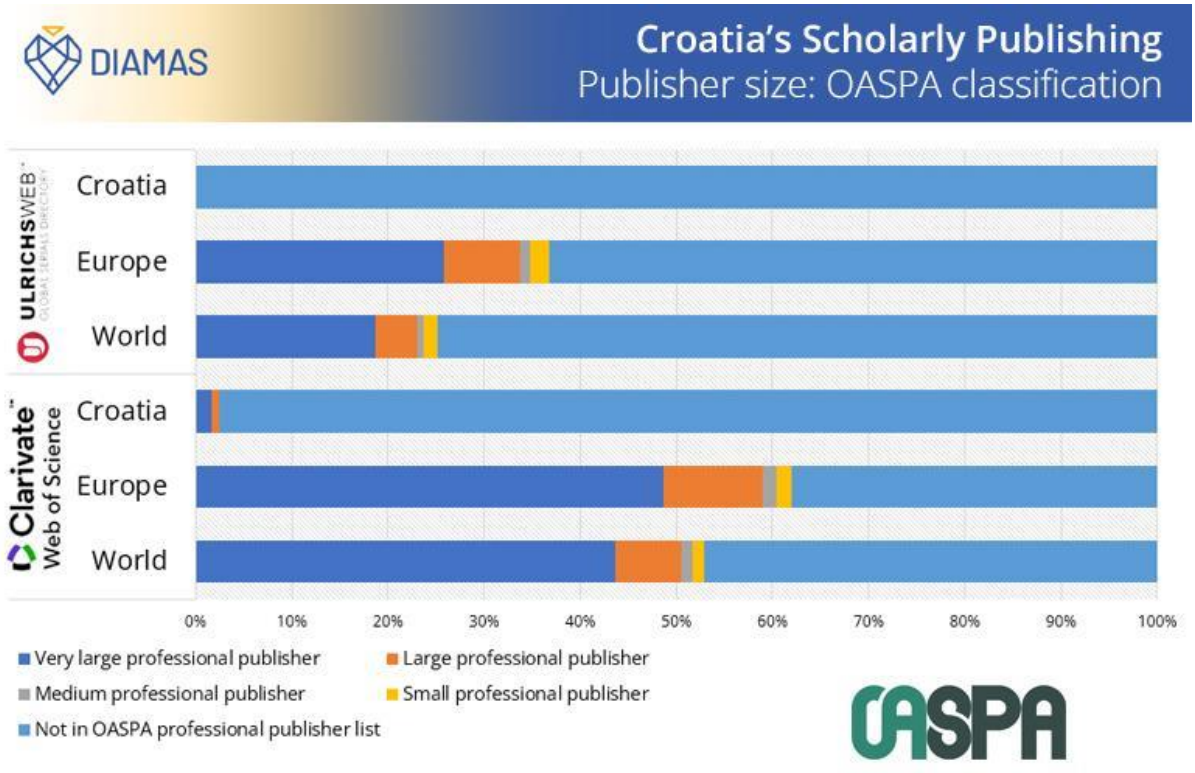

Figure 10. Croatia's scholarly publishing: Publisher size OASPA classification

Given that the numbers of Croatian HEIs or the total of faculty FTEs (Figure 11) are significantly below both the European median and average values, and the expenditures of GDP to R&D are also below the median, it is interesting to note that the number of journals (Figure 12) is, according to both Ulrichsweb or ISSN registry, around the same as the European median values. The number of journals is larger than could be expected based on the number of institutions, researchers or investments, and is certainly to a large extent the result of the centralised governmental and public support in the past decades, both through the system of state financial subsidies and through the support of the centralised publishing platform.

The number of journals indexed in Scopus or WoS is far above the European median. This is probably the result of several factors: the strong focus of the Croatian evaluative framework on international publications (where inclusion into WoS or Scopus is used as a proxy for internationality) that resulted in the increased efforts of journal editors and publishers to satisfy the WoS/Scopus inclusion criteria and apply successfully, together with the concerted efforts of the teams of Hrčak portal and lately the ZNAK association in coordinating this application processes.

The number of Croatian journals in DOAJ is also far above the European median, but still surprisingly low if we have in mind that there are currently 411 active OA journals on the Hrčak platform. Unfortunately, it seems that Croatian journals were not stimulated enough by the funders and evaluators to make an effort of applying to DOAJ, and are not all fully aware of all the benefits that inclusion in DOAJ could bring to their visibility. That certainly became evident from the results of the DIAMAS survey (Armengou et al., 2023).

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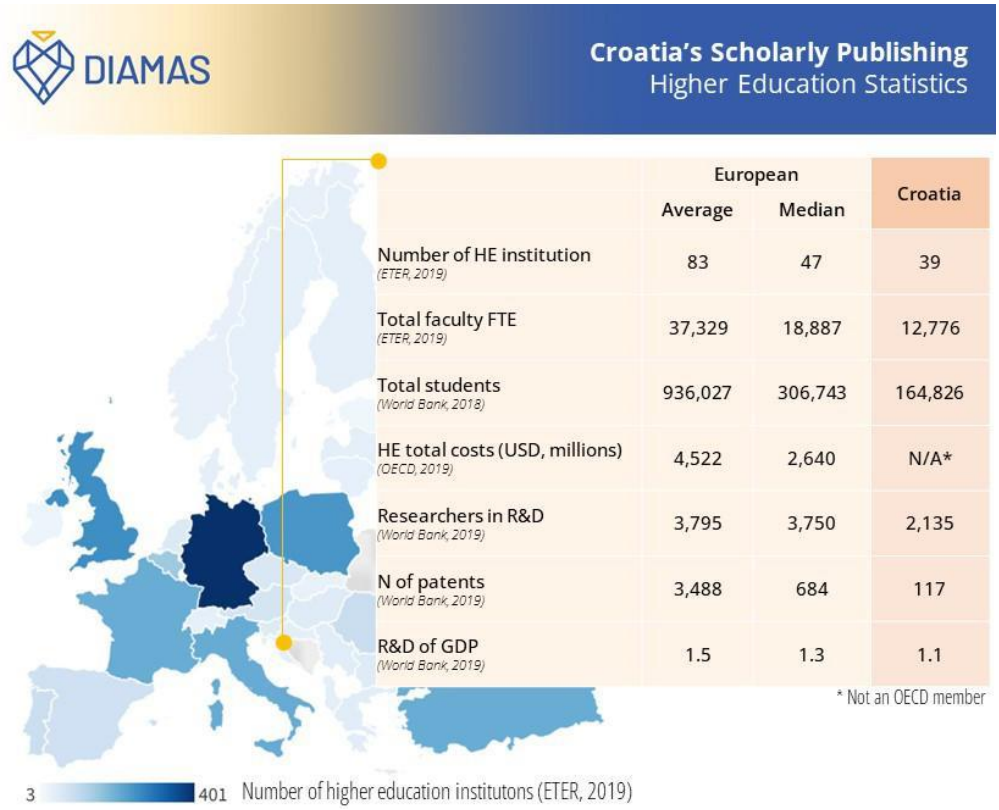

Figure 11. Croatia's higher education statistics

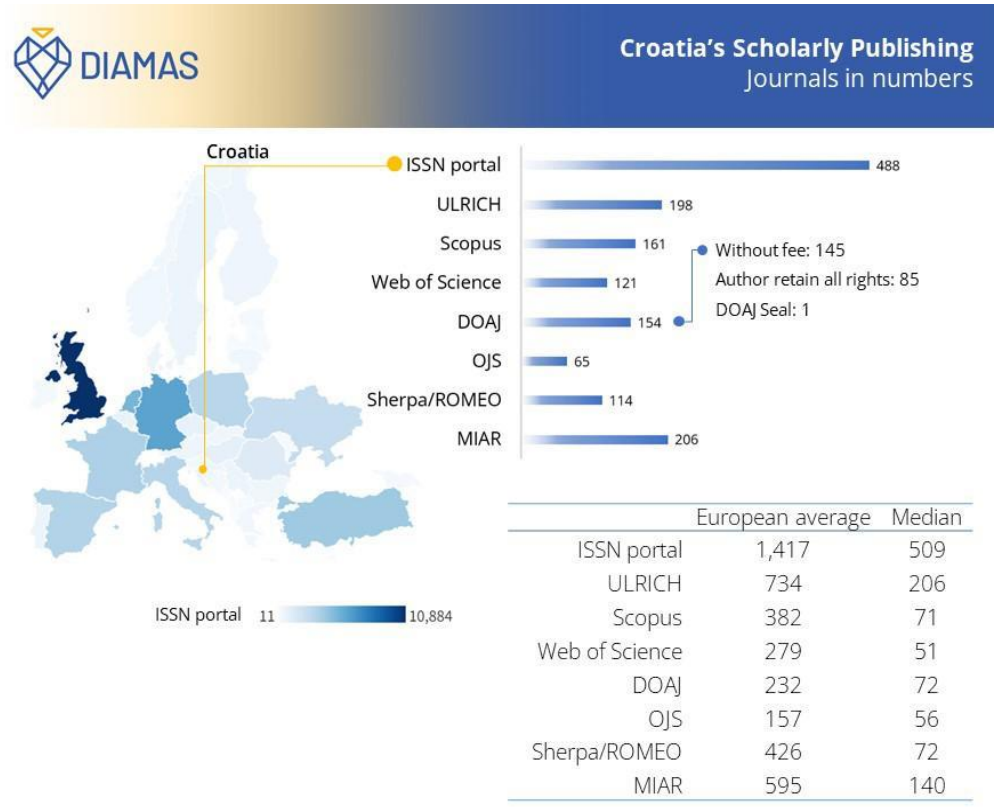

Figure 12. Croatia's scholarly publishing: Journals in numbers

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Compared to journal publishing, Croatian scholarly book publishing shows some distinct features. A larger share of scholarly books is published by small and mid-sized private publishers - around 34% in the years 2018-2021. Open access books are also far less present, and when they are, they are published exclusively by institutional publishers, not private ones (Melinščak Zlodi, 2023).

Funding and sustaining IPSPs

As described in the section on national performance-based funding, the long-existing system of public subsidies that was the main source of funding for most Croatian journals was discontinued from 2023 onwards (however, the same system of subsidies for books is still in place).

Aside from certain shortcomings (such as problems with timelines of allocating subsidies or insufficient funding), such subsidies were enabling most Croatian journals to sustain their diamond business model. Only a fraction of journals (7.6%) were charging APCs in 2023, and among them, most applied low to moderately priced charges (Melinščak Zlodi et al., 2023). Whether the discontinuation of this public funding scheme will have an impact on the business model of the journals will only become clear after a certain period.

The remaining public instruments for funding journals are very scarce and limited in scope and allocated resources (for instance, the public subsidies of the Ministry of Culture and Media, the Croatian Academy of Arts and Sciences or some of the local public bodies), and are not available to all types of institutional publishers.

There are no established funds in academic libraries or library consortia that could be invested in supporting OA publishers and infrastructures, and no Croatian academic libraries have any experience in collective funding of OA.

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

In the past, Croatian publishers were, in their activities, strongly led into collaboration by one main funder, the Ministry of Science and Education, and one key service provider (Hrčak). Although the Ministry was not the only funder nor was Hrčak the only service provider, they were the most important ones, and strongly influenced how Croatian journal publishing has evolved. The relationship of the community of editors and publishers with the Ministry was largely one-directional: journals needed to fulfil the criteria imposed by the Ministry to get funded. The positive outcome of such a situation was twofold. There was a (relatively) stable, although not always fully sufficient source of public funding to secure the sustainability of publishing operations, and OA was one of the criteria for obtaining those public subsidies which resulted in the vast majority of Croatian journals adopting OA as a preferred way of publishing.

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The main service provider, Hrčak, was also a very centralised solution offered to individual journal editors for free. However, it was from the beginning an effort developed in collaboration with the community of journal editors, who had a certain degree of influence on the development of the service. One, perhaps negative, consequence of such state-centralised approaches to both funding and service provision, is the lack of recognition and alignment of publishing efforts within some of the academic institutions, as became evident during the DIAMAS survey (Agnoloni et al., 2024). In several institutions, respondents were having difficulties in recognizing whether they have a "parent organisation" or not, which could imply that the publishing activities across different parts of the same organisation lacked collaboration and concerted development. This will, however, inevitably change now that the central state system of subsidies has been discontinued, and the responsibility to fund publishing activities is transferred to institutions or learned societies through programme funding.

One more organisation has a significant impact on the alignment and collaboration among Croatian editors and publishers, also in representing their interests toward policy-makers, funders and service providers. ZNAK (CROASC), the Croatian Association for Scholarly Communication, was founded in 2019 to advance scholarly communication and scholarly publishing based on the principles of open science. The Association was active and successful in advocating for the interests of small non-commercial publishers, fostering the exchange of knowledge and best practices, organising training and education events, and collaborating with service providers (both Srce as an organisation behind Hrčak, and the National and University Library Zagreb as an institution behind the Croatian national DOI registration agency).

Conclusions

Among the overviewed countries, Croatia is the smallest (in terms of its population, number of higher education or research-performing institutions, or investments in research and education). However, the publishing environment has been beneficial for the development of a substantial number of active journals that are dominantly published as Diamond OA, by non-profit publishing institutions. For decades, their sustainability was enabled by the system of public (state) subsidies and the existence of a central national journal publishing platform - Hrčak. This long-lasting equilibrium will be challenged in the coming period, due to current changes in the country's funding and assessment systems. The most notable change for OA publishing is the discontinuation of the centralised state funding mechanism and the transfer of responsibility for sustaining journals to their parent institutions or learned societies. Although this will present a disruption, especially in a country that has not yet implemented an official open science plan or strategy, the diamond model will likely be preserved as dominant. The benefits of enhanced visibility and equitable access to Diamond OA journals are important in small scholarly communities, especially for publishers of journals that address nationally relevant topics and use the national language.

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Finland

National landscape of scholarly publishing

A thorough study of the peer-reviewed journal landscape in Finland is provided by Linna et al. (2020). The study found that of the 336 peer-reviewed journals identified, 53% were publishing immediate OA, with a further 6% as delayed OA, and 2% of journals offering a hybrid OA option. Diamond OA is the dominant model of OA publishing among journals, with the study only identifying seven journals in the country that ask for an APC. This distinctive characteristic of scholarly publishing in Finland is largely due to learned societies publishing around 70% of all publication channels (journals, book series, conference series), and dominantly so in the fields of humanities and social sciences, with commercial publishers only publishing under 3% of Finnish journals and books (Late et al., 2020). Compared to the development in many other European countries there has not been any significant move towards involving commercial publishers in the activities of scholarly societies, rather, these functions are often managed within the institution itself. From an international perspective, the Finnish landscape of learned societies is highly coordinated with a robust national umbrella organisation, the Federation of Finnish Learned Societies (TSV). This furthers the common interests and practices of learned societies in many ways. TSV not only gives the community of learned societies a strong common voice when it comes to policy making, but it also delivers centralised technical services and distributes public funding to publishing learned societies.

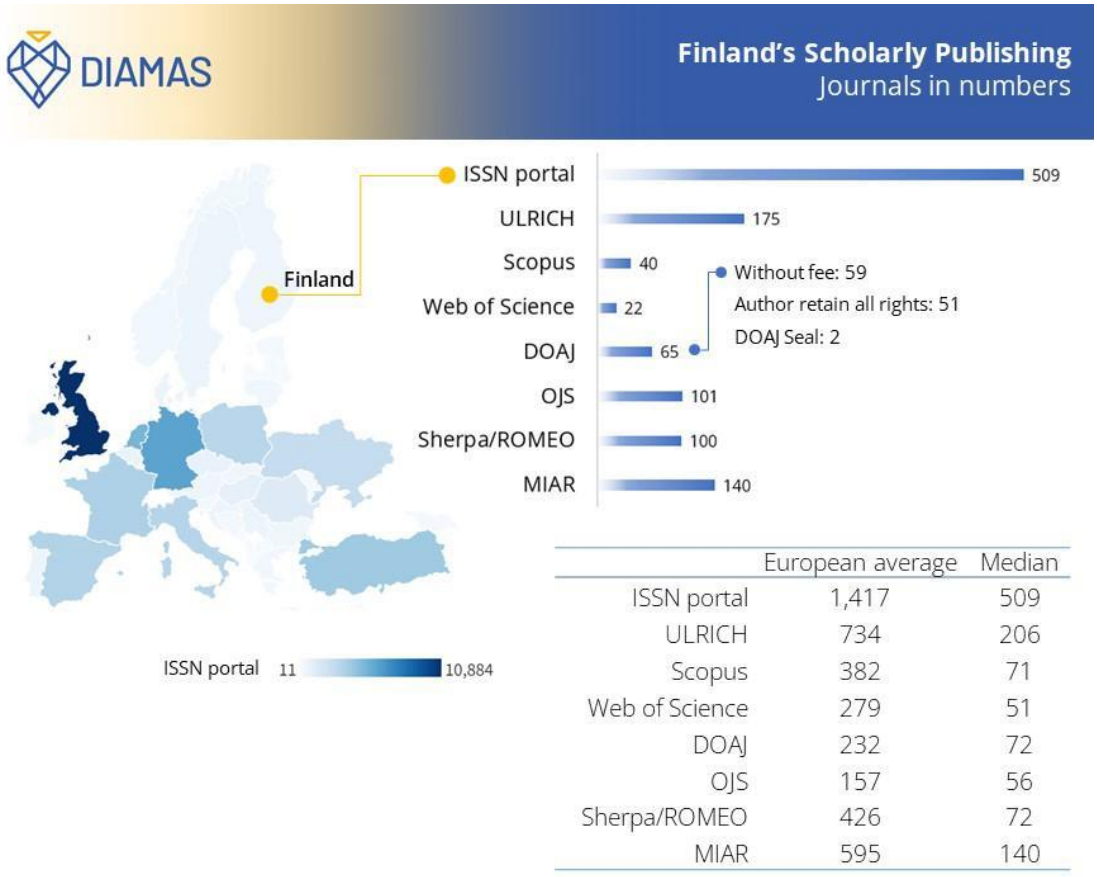
Based on a scan of journal start years for journals included in the Ulrichsweb, a handful of Finnish journals are over 100 years old, and the average age is registered as slightly over 20 years old. While Late et al. (2020) found that learned societies are the main publishers of journals, commercial publishers and university presses are most prevalent when it comes to book publishing. Finland has contributed to the trend of internationally oriented OA university presses, with the two largest universities in the country operating such functions: Helsinki University Press and Tampere University Press.

The national journal platform based on OJS has been hosted by TSV at Journal.fi since 2015 (Pölönen, Syrjämäki et al., 2021). In 2023, 140 journals were published on the platform. It is possible for any peer-reviewed journal published in Finland to make use of the platform, but the journal has to be at least delayed OA to be eligible, thus incentivising journals to adopt that level of openness at a minimum. The platform is free for TSV member societies, and a nominal fee is asked from other publishers. There is also a similar service for the publication of OA books based on OMP, Edition.fi, which launched in 2020 and currently has 16 publishers providing content on the platform.

Concerning funding, Finland has a relatively unique public funding system for supporting non-profit peer reviewed journal publishing, one of the most inclusive in Europe (Laakso & Multas, 2023). Journals can rely on a public funding subsidy that is distributed by TSV and that can be applied for by any peer-reviewed journal. In addition to this governmental

funding, which provides some basic income in case of deficit, there have long been both formal and informal negotiations for developing a new funding model particularly suited to the circumstances of Diamond OA journals where there might be very little other income to support publication activities.

Based on our scan of bibliometric data for journals based in Finland that is provided in Figure 13, we can see that there are 175 active peer-reviewed journals in Finland (based on Ulrichsweb). Checking DOAJ data, we could see that 65 Finnish journals were listed, with over 90% not having any fees required for publishing, suggesting that the majority of journals in the country are open access and adhering to a diamond model of publishing. The number of journals included in selective international indexing services is 22 for WoS and 40 for Scopus, which in particular for Scopus is quite a high number when taken in relation to the total count of journals based on Ulrichsweb data (175).



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 13. Finland's scholarly publishing: Journals in numbers

Zooming in a bit closer on the journals in Finland and their publishers, Figure 14 provides a view of how the 175 Finnish journals indexed in Ulrichsweb, and the 22 in WoS are distributed across publisher types. Considering the wider set of journals included in Ulrichsweb first, the two most common publisher types are Society or University, which is in contrast to the Europe and World distributions which have Professional publishers providing the most journals. Professional publishers have only a miniscule share of journals in Finland, accounting for 3% of journals in Ulrichsweb. Concerning the 22 Finnish journals indexed in WoS, the publisher type distribution is split with 41% shares

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each for professional publishers and society publishers, with the remaining share being university publishers. In comparison to Europe and the World, what is notable is the high share of Finnish society publishers included, which is almost ten times larger than the society publisher share on average for Europe and the World.

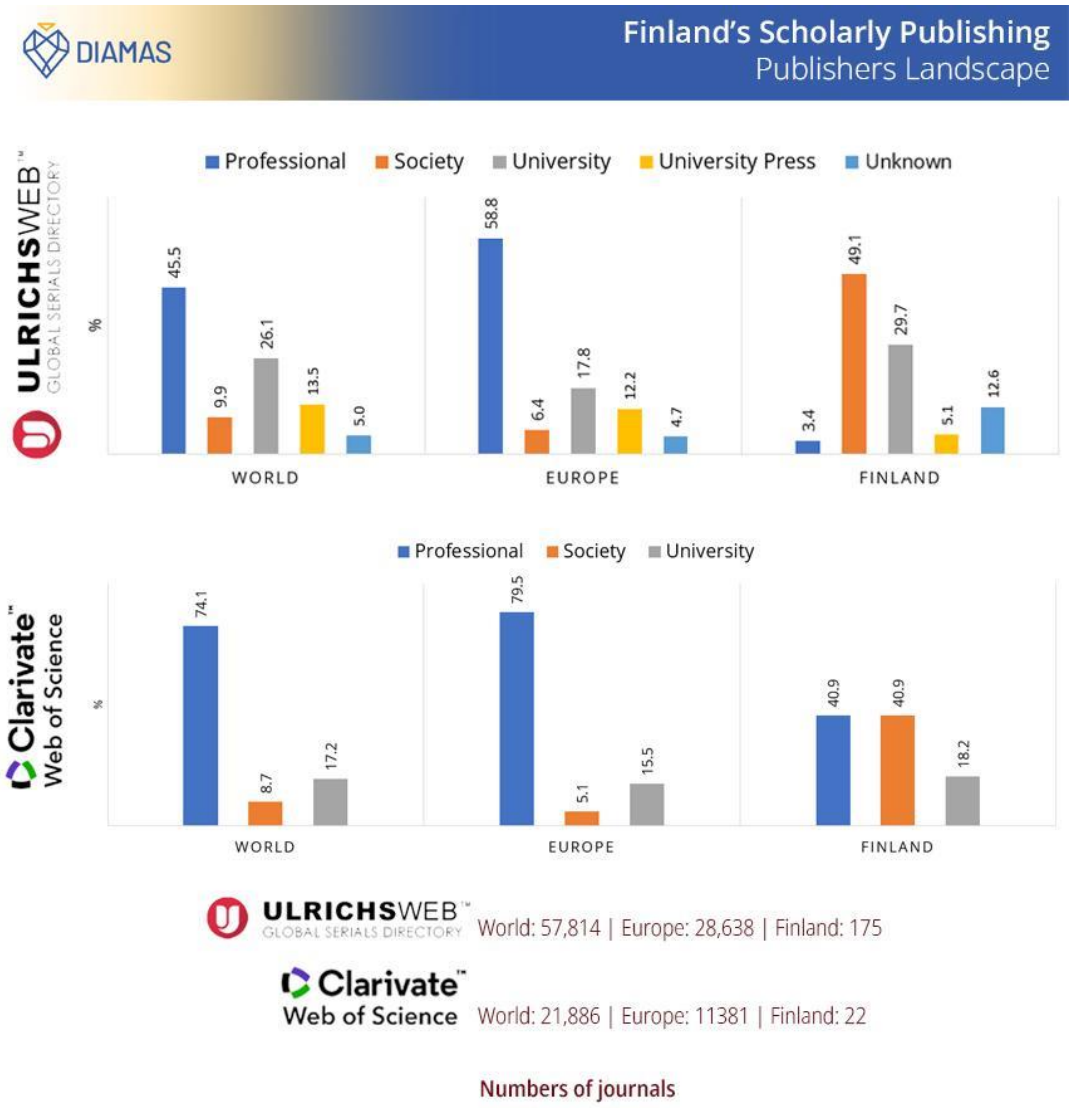

Figure 14. Finland's scholarly publishing: Publishers landscape

Figure 15 presents an alternative view by consulting OASPA member categories for journals by different publishers active in the country. What is notable is that the share of OASPA members in the country is exceptionally low, essentially non-existent when looking at journals included in Ulrichsweb. For the 22 journals included in WoS, there are some individual journals belonging to either a very large professional publisher or small professional publisher, but the share of members overall is still much below the Europe and World averages.

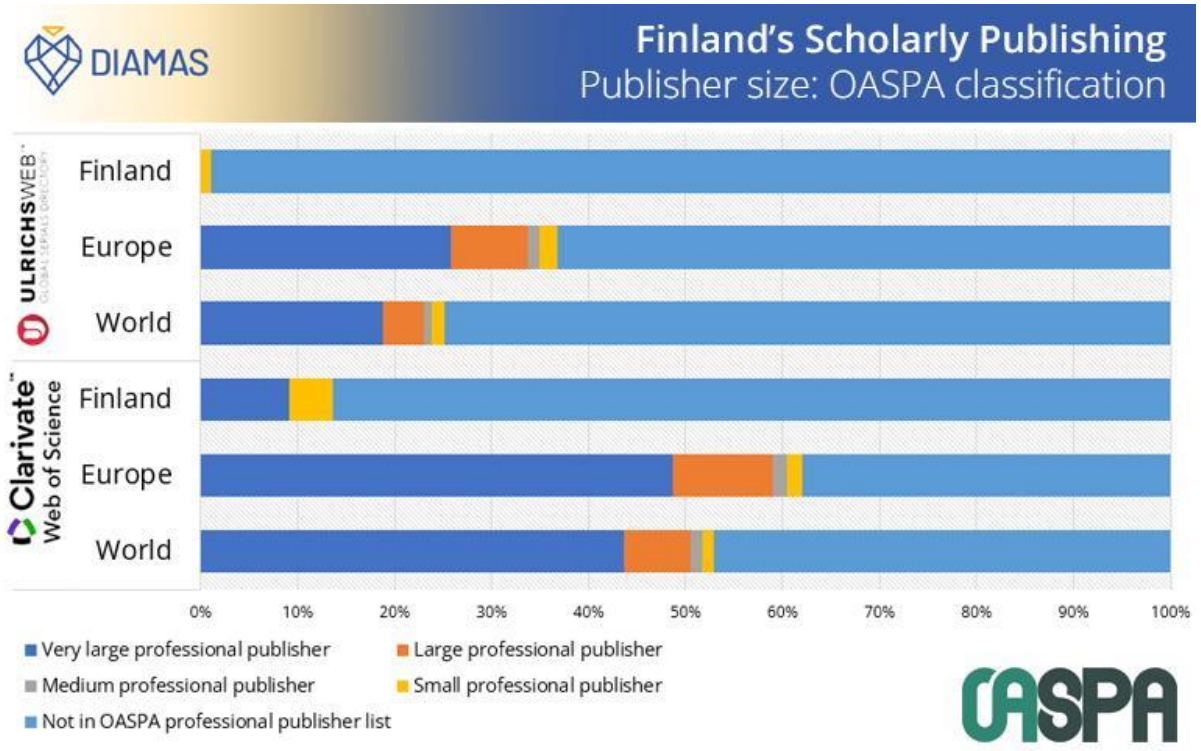

Figure 15. Finland's scholarly publishing: Publisher size OASPA classification

A visualisation of the publication languages of journals published in Finland is provided in Figure 16. Looking at the distribution of language categories for journals included in Ulrichsweb, Finnish journals generally follow the distribution of European journals, with the exception of having a larger share of multilingual journals and a smaller share of English-only journals. Based on this data, one can see that around a third of journals publish in "Other languages", which includes mostly journals publishing in Finnish. For journals in the WoS there is no notable difference in distribution of languages, the general profile is identical to journals in Europe and the World.

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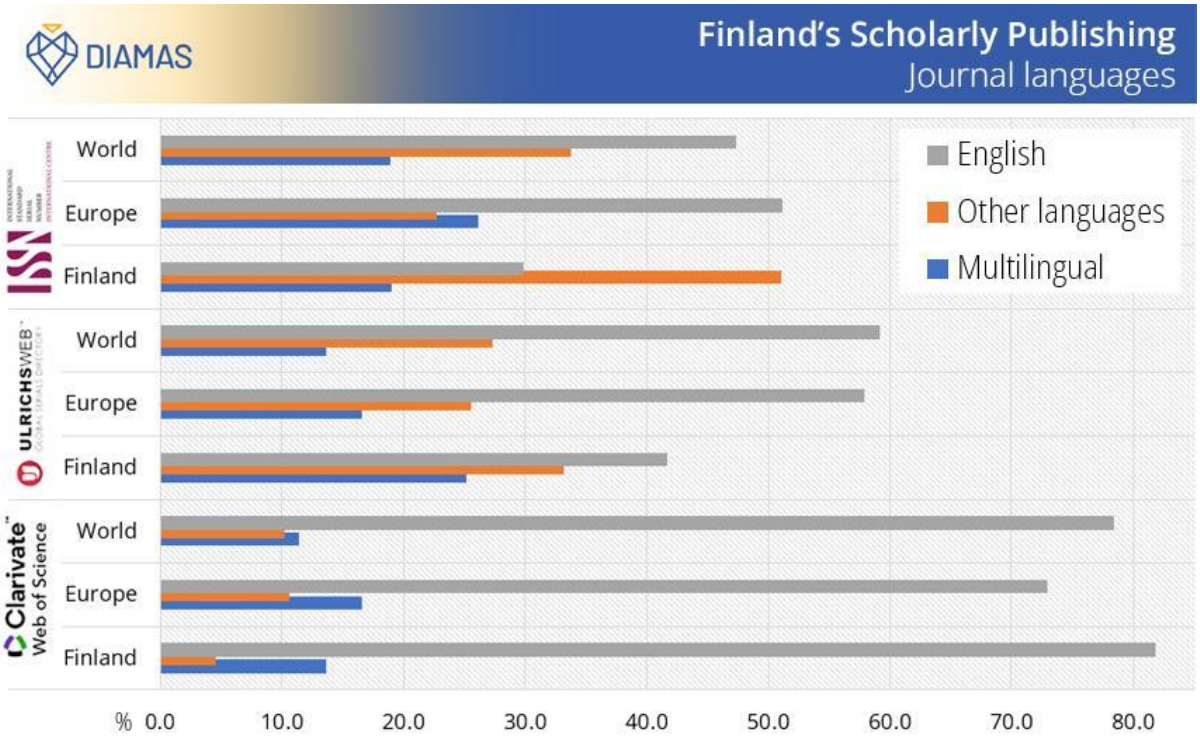

Numbers of journals

	ISSN Finland	ISSN Europe	ISSN World	Ulrichsweb Finland	Ulrichsweb Europe	Ulrichsweb World	Clarivate Web of Science Finland	Clarivate Web of Science Europe	Clarivate Web of Science World
English	152	26,665	77,372	73	16,584	34,172	18	8,298	17,155
Other languages	260	11,866	55,140	58	7,315	15,756	1	1,202	2,231
Multilingual	97	13,629	30,977	44	4,733	7,860	3	1,881	2,500

Figure 16. Finland's scholarly publishing: journal languages

The final bibliometric perspective on journals in Finland is provided in Figure 17 where the subject distribution of journals is displayed. For the broader population of journals included in Ulrichsweb, Finnish journals differ from Europe and world averages by having a larger share of journals in the social sciences, and the humanities and the arts. Finland has lower shares of journals in the medical and health sciences, natural & agricultural sciences, and engineering and technology than both the average for Europe, and the rest of the world. The distribution for Finnish journals included in WoS is markedly different to both Finnish journals in Ulrichsweb and how WoS journals in Europe and the world are distributed. Social science, medical and health sciences, and engineering and technology, and multidisciplinary journals are markedly lower than the international comparison groups. Higher than the international comparison groups are natural & agricultural sciences, and humanities and the arts.

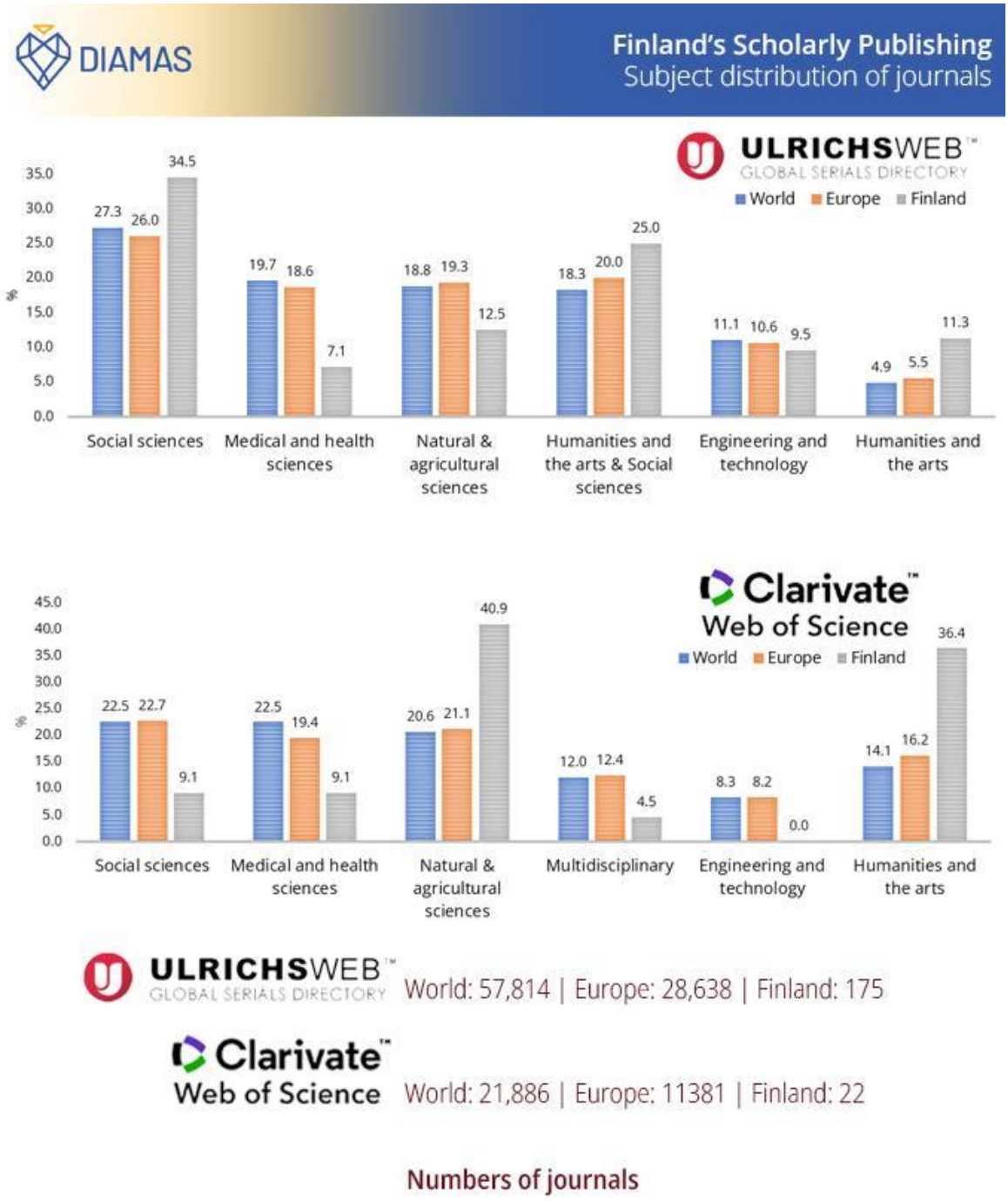

Figure 17. Subject distribution of journals in Finland

Funding and assessment systems

To give a sense of scale for the Finnish higher education sector and overall R&D intensity in the country, Figure 18 provides some key figures extracted from international databases described in the methodology section of this deliverable. Compared to other European countries, Finland is smaller when it comes to the number of higher education institutions, total students, and higher education total costs which are all below the European median. On the other hand, total faculty FTE, researchers in R&D, number of patents, and R&D of GDP are all above the European median.

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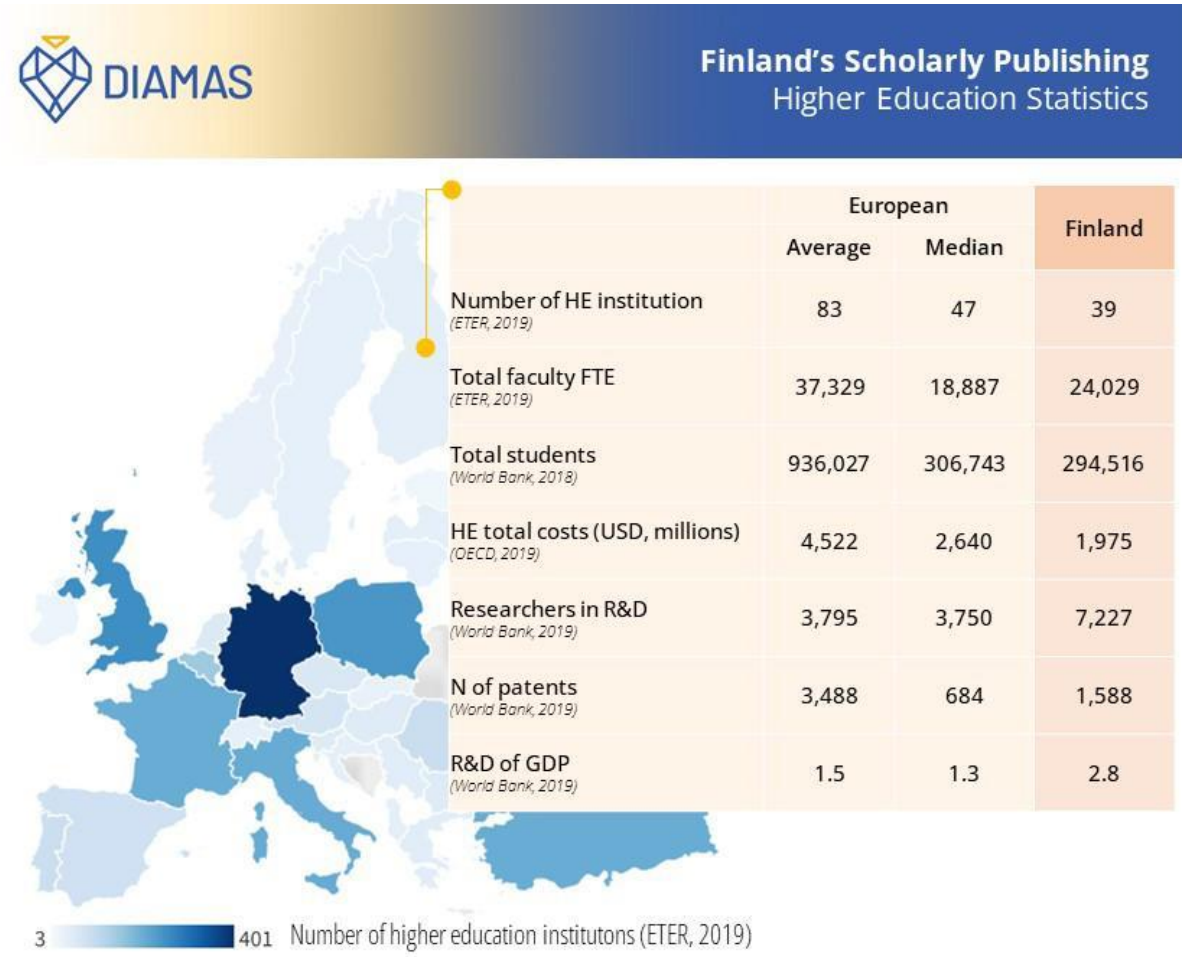

Figure 18. Finland's higher education statistics

All universities in Finland are substantially funded by public funding, there are no tuition fees outside some forms of adult education. The total budget for the higher education sector is confirmed annually by the Finnish parliament as part of the national budget, from which the Ministry of Education and Culture allocates funding to each institution based on a performance-based allocation model.[29]

Zacharewicz et al. (2019) provides a review of the presence and composition of such schemes in Europe, where Finland's model was also included and compared to other similar models. The performance-based allocation model has included a component that takes into account the quantity and quality of individual publications and their open access status (as based on the publication outlets placement in the national publication classification scheme managed by the national Publication Forum (Julkaisufoorumi), thus creating (at least on the institutional level, incentives to publish as much as possible in as highly ranked publication channels as possible, and making sure that the full-texts are available OA through some mechanism.

[29] https://eurydice.eacea.ec.europa.eu/national-education-systems/finland/higher-education-funding

Responsible research assessment has been a prominent topic of science policy discussions in Finland over several years already, with some of the central principles and initiatives listed on a dedicated web page.[30] In addition to these general commitments and principles driving for more diversity in assessment, a detailed new research assessment framework is under development in Finland, going by the name of FIN-CAM[31] for which public feedback was gathered in late 2023.

Open access - requirements, incentives, and barriers

Open science has been a very tangible part of science policy in Finland in the last ten years, and Finland has a distinctively open and participative approach to formulation and update of official science policy documents. From 2014 to 2017 the Ministry of Education and Culture ran a programme called "Open Science and Research Initiative"[32] , which promoted Finnish open science in extensive cooperation between ministries, universities, research institutes and research funders. Since 2019, the National Open Science Coordination in Finland has been funded by the Ministry of Education and Culture and has its secretariat at TSV, which brings the activities close to the other functions of TSV such as managing the national publication platforms journal.fi and edition.fi as well as management of the public funding programme for Finnish non-profit journals. Within the National Open Science Coordination there is a steering group under which working groups are open for anyone in the scholarly community to join, and draft documents are prepared out in the open in addition to frequent fully open consultations being issued to gather feedback broadly before documents are finalised. In 2019, as part of the first work done within the coordination, a National policy and executive plan on OA to scholarly publications was published (Open Science Coordination in Finland, Federation of Finnish Learned Societies 2019). This national policy on open access publishing has been in place since 2020, calling for full open access to journal articles. The issuing of this policy has impacted the environment for scholarly publishers active in the country, as all universities are committed to this policy and strive to ensure as high open access publication shares as possible.

Central stakeholders in the national science policy environment for scholarly publishing and OA in Finland are:

- **Ministry of Education and Culture:** The highest governmental body with responsibility to oversee the higher education sector in the country, the Ministry of Education and Culture,[33] distributes funding to higher education institutions from the governmental budget based on a performance-based funding model. The current funding model for Finnish higher education institutions incentivises research publications (journal articles as well as books) being available open

[30] https://vastuullinentiede.fi/en/responsible-research/responsible-assessment
[31] https://julkaisufoorumi.fi/fi/ajankohtaista/vastuullinen-arviointi-tunnistaa-tutkijantyon-monimuotoisuuden
[32] https://avointiede.fi/en/policies/policies-open-science-and-research-finland/open-science-and-research-initiative
[33] https://okm.fi/en/

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access, giving institutions 20% extra funding for each peer-reviewed publication if it is available OA (including gold, hybrid and green OA).[34]

- **TSV (Tieteellisten Seurain Valtuuskunta, Federation of Finnish Learned Societies):** Founded in 1899, TSV is a co-operative body for 294 learned societies and four academies from all branches of research and arts. TSV supports and develops scholarly communication and publishing, and promotes awareness and usage of research results. TSV maintains the journal.fi and edition.fi national platforms for journals and books, as well as co-ordinates the distribution of public funding support for non-profit scholarly journals in Finland. The National Open Science Coordination as well as the Publication Forum also have their secretariats at TSV, which are described in closer detail in the next bullet points.[35]
- **National Open Science Coordination:** Founded in 2019 on an initiative and through ongoing funding from the Ministry of Education and Culture, the National Open Science Coordination has its secretariat at TSV. There is a steering group overseeing the activities of the coordination, under which open science has been divided into four areas of work (culture of open scholarship, open data, open access, open education) in addition to temporary working groups working on specific tasks (e.g. funding). The four areas of open science all have their own working groups to which anyone is welcome to participate in, as well as there being open consultations organised on any policies that these groups suggest as outputs. The core idea is that aligned policies that are adopted by key stakeholders in the countries are best reached through open and democratic participation, where the whole scholarly community has the possibility to participate.[36]
- **Publication Forum (Julkaisufoorumi):** Publication Forum is a classification of publication channels created by the Finnish scientific community used since 2015 to support the quality assessment of academic research, inspired by the Norwegian Register for Scientific Journals. The evaluation of individual publication channels, both international and domestic, is performed by 23 discipline-specific Expert Panels composed of some 300 distinguished Finnish or Finland-based scholars who place publication channels into one of four levels for which the two highest ones have limited quotas within each discipline-specific category (1 = basic level, 2 = leading level, 3 = highest level, 0 = publication channels that don't meet the criteria for level 1). The ranking of publication channels is integrated into the funding model of universities, so that publications made at the higher levels significantly increase the amount of funding the institution receives per publication compared to 0 and 1 level publications.[37]
- **Research Council of Finland (Suomen Akatemia):** The Research Council of Finland is a government agency within the administrative branch of the Finnish Ministry of Education and Culture, whose largest responsibility is funding high-quality research conducted in Finland. For 2024, the funding of research amounts to some 543 million Euros, contributing to about 3000 FTE's at universities and

[34] https://okm.fi/en/steering-financing-and-agreements
[35] https://tsv.fi/en
[36] https://avointiede.fi/en
[37] https://julkaisufoorumi.fi/en

research institutes in Finland. The Research Council of Finland is a member of cOAlition S and thus follows the commonly agreed central principles for OA for funded research.[38]

- **FinElib:** The FinELib consortium centrally acquires electronic materials for its member organisations. The consortium members are Finnish universities, universities of applied sciences, research institutes and public libraries. The consortium's service unit, the FinELib office, is located at the National Library. The FinELib office negotiates the licensing of e-materials on behalf of the consortium members. For a number of years, FinElib has included OA publishing as a criterion which is also negotiated about in addition to costs, which has led to the signing of transformative agreements with international publishers. FinElib is currently not involved in the funding or procurement of scholarly journals active in Finland.[39]
- **Universities Finland, UNIFI:** Established in 1969, UNIFI promotes cooperation between universities and highlights shared statements on key issues related to research and education policy. All 13 universities and the National Defence University are all part of UNIFI.[40]
- **Finnish Association for Scholarly Publishing:** The Finnish Association for Scholarly Publishing is the main interest organisation for scholarly publishers in Finland, representing around 150 member organisations. Through funds collected through national copyright agreements with the public and higher education sector, the association funds development projects of publishers in the country through competitive funding rounds. In the last two years they also handed out grants that scholarly publishers can use for any purpose they see fit to support their activities (given to any eligible application, worth a couple of thousand euros per grant).[41]

The goal of the initial 2019 national OA policy (Open Science Coordination in Finland, Federation of Finnish Learned Societies, 2019) was that all scholarly journal articles would be immediately available OA at the time of publication by 2025. The policy document also outlined that the Finnish research community should create a jointly funded publishing model that enables immediate OA to journal articles published in Finland, something which has not happened yet. Peer-reviewed non-profit journals can apply for publicly-funded subsidy distributed by TSV, but the funding principles are not fully aligned with the principles of Diamond OA publishing since the funding requires that the journal also has other monetary income, which is hard to generate if subscription fees and APCs are off the table.

In terms of how Finland is dealing with scholarly publishing in the context of international publishers, available data reveals that Finland is among the leading countries when it comes to signing transformative agreements which are collectively negotiated by

[38] https://www.aka.fi/en/about-us/what-we-do/what-we-are/
[39] https://finelib.fi/
[40] https://unifi.fi/en/
[41] https://tiedekustantajat.fi/

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FinElib (a national library consortia described earlier in this overview) on behalf of higher education and research institutions.[42]

Creating a national journal funding model that would work around the principles of Diamond OA has been a long-standing topic, where there have been different initiatives ongoing for close to 10 years without reaching a model that would satisfy all central stakeholders. A consortium of Finnish journals was being built up in 2016 with an associated funding model (kotilava.fi, 2016), however, in the final stages of preparations the negotiations for its adoption were abandoned. After some years of silence following the collapse of this model, in 2022 a working-group associated with the National Open Science Coordination published a document titled "Proposals for New Supplementary Funding Models for Domestic Scientific Periodicals to Enable Immediate Openness: Final Report of the Working Group Appointed by the National Steering Group for Open Science and Research" which presented different alternative models for achieving higher OA for domestic journals (in Finnish).[43] Based on this review of alternative models that could be considered by the scholarly community in Finland, in 2023 a working-group under TSV published a "Proposal for the Funding of Open Domestic Scientific Journals"[44] (in Finnish) that was a refinement of the consortium model presented earlier in 2016 as part of the Kotilava Project. Negotiations around refining the proposal and what an actual model that everyone could agree with are still ongoing at the moment. One challenge with a consortium model that weights billing to consortia members based on publication activity is the low number of universities overall in Finland. Even within that group, the volume of publications produced is heavily skewed towards a few big institutions, creating a substantial change in costs for them (compared to the subscription-based models) unless substantial supplementary funding for the model is added by other actors. How research funders should get financially involved in funding models like this has also been a question mark, with no accepted solution so far.

Concerning the situation of OA support and requirements of Finnish research funders, the situation is highly supportive of OA. As mentioned earlier, The Research Council of Finland, is a member of cOAlition S and thus has well-defined requirements for how grantees should make their research outputs available open access.[45] The second-largest funder, Kone Foundation, recommends making works available OA and does allow for costs of OA publishing (excluding hybrid OA journals) to be included in project budgets.[46] The rest of the private foundations funding research do commonly not have open access requirements but do allow for costs of OA to be included in the project budgets similarly to Kone Foundation.

[42] https://esac-initiative.org/market-watch/#country_shares
[43] https://avointiede.fi/sites/default/files/2022-10/Loppuraportti-rahoitusmalliehdotukset-1022_0.pdf
[44] https://www.tsv.fi/sites/tsv.fi/files/media/ehdotus_avointen_kotimaisten_tiedelehtien_rahoitukseksi.pdf
[45] https://www.aka.fi/en/about-us/what-we-do/what-we-are/
[46] https://koneensaatio.fi/en/grants/forgrantrecipients/acceptance-and-use-of-the-grant/#research-funding

Regarding open licensing of scholarly OA materials, the national policy documents all reference the use of various versions of creative commons licences, which has become the de-facto family of open licences for open science materials also in Finland.

For several years, there have been ongoing discussions about if and how secondary publishing rights could enable universal self-archiving rights for authors in Finland. The most formal of these was a report commissioned by the Ministry of Education and Culture in 2017 which at that point in time concluded that the current legislation does not enable such rights but that through amendments such rights could be achieved (Mansala, 2017).

Open access-related infrastructures

The key OA infrastructure in Finland is the national journal platform journal.fi. Development of the journal.fi platform took place between 2015-2016 via the Kotilava Project (kotilava.fi, 2016), a joint effort by TSV and the National Library of Finland to support Finnish scholarly journals in their transition to immediate Open Access. The two main goals of the Kotilava Project, as outlined in a 2014 report Finnish Scientific Journals and Open Publishing: A Study of Possible Funding Models[47] (in Finnish), were 1) to develop an OJS platform for editing and publishing OA journals, and 2) to create a new consortium-based funding model for Finnish OA journals. While the project resulted in the launch of the Journal.fi platform, a sustainable collective OA funding model has not been established despite continuous effort (which is described in the earlier section of this national overview).

The Journal.fi platform offers interfaces to a wide range of international services, such as Crossref, DOAJ, ORCID, OpenAIRE and Google Scholar (see Figure 19). These platforms also facilitate integration of publication information to national services, and are able to also support the National Research Information Hub. Regarding DOIs, journals using the Journal.fi service for publishing can apply to join the agreement between TSV and CrossRef, through which the journal can obtain DOI identifiers for its articles. This service is currently free for TSV member societies. The contents, OA and linguistic diversity of the platform have been briefly summarised in a 2021 study (Pölönnen, Syrjämäki, Nygård et al., 2021) published in Learned Publishing: "In 2020, Journal.fi platform hosted 98 journals, of which 85% provide immediate open access and 15% have an embargo period. These journals publish in a variety of languages, however the national languages — Finnish and Swedish — and English are most common. The journals represent all scientific fields; however, we estimate that the vast majority (around 85%) specialise in the SSH. Almost all journals on the Journal.fi platform are peer-reviewed."

[47] https://edition.fi/tsv/catalog/book/157/

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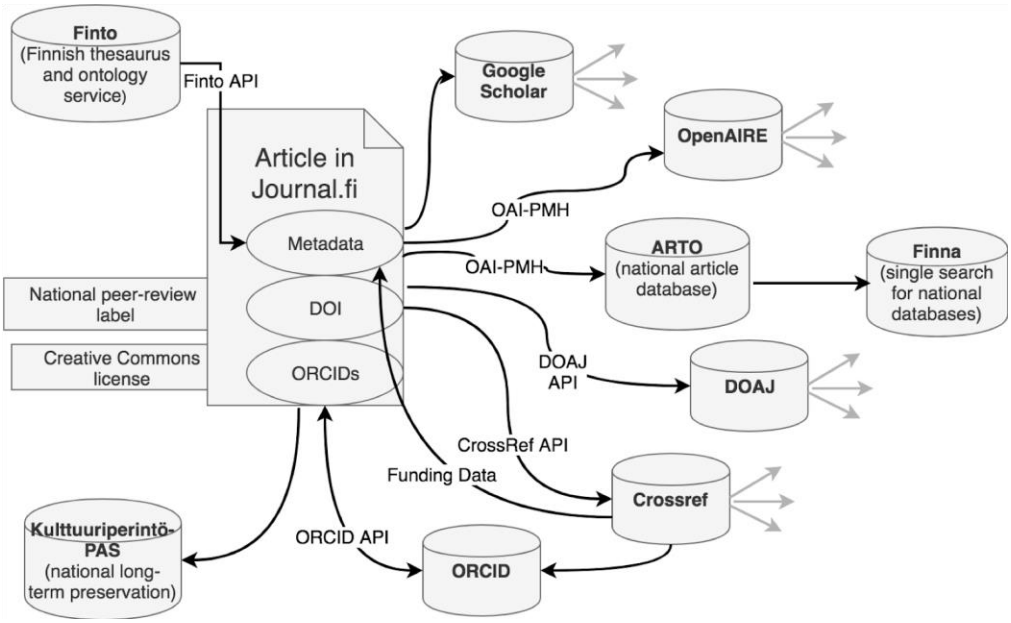

Figure 19. Journal.fi data integration

Certain criteria are applied for accepting journals to the platform, as outlined on the TSV's Journal.fi service website (in Finnish).[48] There are separate criteria that apply to TSV members, and other publishers that want to use the platform:

- TSV member society journals: Articles must be openly available, with a maximum delay of one year from the date of publication.
    - Journals based on subscription models from member societies can also use the service for manuscript reception and editorial work.
    - Journal is not required to be peer-reviewed or have a JUFO classification.[49]
- Other than TSV member society journals:
    - Journal must be immediately and completely open. It must be published regularly, at least once a year.
    - Journal must present scientific research results. This can be demonstrated if the publication series is classified at JUFO levels 1, 2, or 3,[50] or if it uses TSV Label for peer-reviewed scholarly publications.[51]
    - Publisher of the journal/yearbook must be Finnish, or it must be a joint publication with at least one Finnish entity as a publisher.

[48] https://tsv.fi/palvelut/avoimen-julkaisemisen-palvelut/journalfi
[49] https://www.julkaisufoorumi.fi/en
[50] https://julkaisufoorumi.fi/en/evaluations
[51] https://tsv.fi/en/services/label-for-peer-reviewed-scholarly-publications

Edition.fi is the equivalent publication service intended for the publication of OA books.[52] Currently, the platform has 16 publishers enrolled that provide content on the platform, most of which are society publishers or university presses.

In addition to these centralised services, the institutional repository landscape in Finland is very strong, with all universities having their own or shared use of an institutional repository.

Institutional publishing

In the DIAMAS landscape survey on institutional publishing (Armengou, Aschehoug, Ball et al., 2023), 27 responses were received from Finland. This section will focus on the results gathered from these respondents, utilising the publicly available survey data that is available as Kramer & George (2024).

Table 2 provides a breakdown of the number of journals published by each of the responding institutional publishers, showing a high skew towards organisations that only publish one journal. The publication languages reported by the respondents represent a high degree of multilingualism, with eight different languages represented where the most common were English (22), Finnish (19), and Swedish (13). 19 of the respondents were members of COPE, and two of AEUP.

Table 2. Number of academic scholarly journals published by Finnish institutional publishers responding to the DIAMAS survey (Bosman, Kramer, Stojanovski et al., 2024).

Publisher size	Number of responding institutional publishers in Finland	as % share
1	17	63%
2-5	4	15%
6-10	1	4%
More than 100	1	4%
No response to the question	4	15%

Funding and sustaining IPSPs

The type of legal entities of the IPSP or the parent organisation was split between 'Private not-for-profit' (17) and 'Public Organisation' (10).

The budgeting practices seem organised with 20 IPSPs starting each year with an approved annual budget. Responses were collected for all budget bands, but most fell within the 1-10K EUR bracket (7). Table 3 provides a breakdown of the number of paid staffs directly employed or contracted by the IPSP (in FTE), showing that the bulk of respondents are within the "Less than 2" and "2-5" response categories.

[52] https://edition.fi/

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Table 3. Number of paid staffs directly employed or contracted (in FTE) among Finnish institutional publishers responding to the DIAMAS survey (Bosman, Kramer, Stojanovski et al., 2024).

FTE response categories	Number of responses	as % share
None	4	15%
Less than 2	11	41%
2-5	9	33%
6-10	2	7%
11-20	1	4%

Based on the questions related to different types of funding mechanisms, it is apparent that IPSPs responding to the survey used quite different resourcing combinations from each other. Table 4 presents which funding mechanisms the Finnish IPSPs rated as being highly or very highly reliant on during the last three years.

Table 4. Reliance on funding over the last 3 years (number of Finnish responses rating the type of funding "High" or "Very High"), (Bosman, Kramer, Stojanovski et al., 2024).

Type of funding	Number of responses	as % share
Fixed and permanent subsidy from the parent organisation	9	33%
Periodically negotiated subsidy from the parent organisation	7	26%
Time limited grants or subsidies (private or public) from outside own organisation	7	26%
Permanent public government funding	8	30%
Voluntary Author Contributions	1	4%
Content and print sales	3	11%
Author processing charges	3	11%
Any other income	1	4%

Table 5 presents the degree to which the Finnish respondents reported reliance on non-monetary or in-kind support, and Monetary income, where both categories have fairly similar answer distributions. Both received 5 "Very High" with the rest of the reliance categories having 1-2 responses each per type of resource.

Table 5. Reliance on resources of Finnish IPSPs (Non-monetary or in-kind support, and Monetary income), (Bosman, Kramer, Stojanovski et al., 2024).

Reliance	Non-monetary or in-kind support	Monetary income
Very low	2 (7%)	2 (7%)
Low	2 (7%)	2 (7%)
Neither high nor low	2 (7%)	1 (4%)
High	4 (15%)	3 (11%)
Very high	9 (33%)	11 (41%)
Don't know	1 (4%)	1 (4%)
Not applicable	6 (22%)	6 (22%)

Table 6 provides a breakdown of the type of in-kind support provided by the parent organisation of the IPSP, where it is clear that there is a broad spectrum of different types of support provided. On top, with 8 answers is "Salaries of permanent staff", which is followed by 7 answers each to "General IT services" and "Human Resource management. "Facilities and premises" and "Service-specific IT services" were also notable categories of in-kind support provided with 6 answers each.

Table 6. In kind support provided by parent organisation for Finnish IPSPs (respondents could select all that apply), (Bosman, Kramer, Stojanovski et al., 2024).

Type of in-kind support	Responses	as %
Facilities and premises	6	22%
General IT services	7	26%
Human Resource management, general financial and legal services	7	26%
Salaries of permanent staff	8	30%
Salaries of temporary staff	4	15%
Service-specific IT services	6	22%
Don't know	1	4%
Not applicable	1	4%

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

Table 7 displays which categories of external services (if any) the Finnish IPSPs reported to utilise. A high degree of respondents (20) rely on external services for publishing, particularly IT services (16), which is likely explained by the widespread use of the national journal platform journal.fi that many uses as their primary digital workflow and publishing system.

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Table 7. Use of external services

	Editorial services	Production services	IT services	Commun. services	Administ., legal and financial services	Training support and/or advice on publishing policies, and best practice	Other
In-kind	5 (19%)	6 (22%)	4 (15%)	5 (19%)	6 (22%)	5 (19%)	0
Outsourced	3 (11%)	9 (33%)	16 (59%)	2 (7%)	1 (4%)	2 (7%)	1 (4%)
Voluntary	8 (30%)	5 (19%)	1 (4%)	4 (15%)	4 (15%)	4 (15%)	1 (4%)
None-N/A	6 (22%)	6 (22%)	2 (7%)	7 (26%)	6 (22%)	8 (30%)	2 (7%)

In Table 8, the results of what potential areas of future collaboration respondents could consider. Respondents raised interest in a variety of different collaboration areas, the most frequent response (16) was 'training, support and/or advice on publishing policies and best practice'. The responses to the funding-related questions were quite inconclusive, with a high number of responses being 'not applicable' to the different funding mechanisms that were asked about.

Table 8. Areas in which collaboration with other organisations would be considered (respondents could select all that applied).

Collaboration areas	Responses	as %
Administrative, legal and financial services	7	26%
Communication services	8	30%
Editorial services	4	15%
IT services	12	44%
Production services	9	33%
Training, support and/or advice on publishing policies and best practice	16	59%
None	6	22%
Don't know	2	7%
Other	1	4%

Conclusions

Finland has a strong common direction for furthering open science and OA as an integral part of it. It has a very vibrant environment of institutional publishers, which are dominantly scholarly societies publishing a single journal each. These publishers are already to a large degree functioning on the principles of Diamond OA publishing, where an enabling success factor is the centralised technical services and public funding support distribution provided by the umbrella organisation TSV. The current level of public funding available to institutional publishers is relatively low and there has been years of work and negotiation between stakeholders to develop a supplementary funding model, however, that work has not yet garnered tangible results.

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France

National landscape of scholarly publishing

France has a long history of academic publishing. It was in Paris that the world's first scientific journal, Le Journal des Savants, was created and it influenced the development of periodicals throughout Europe at the end of the 17th century (Vittu, 2008). This was a few months before Philosophical Transactions in London. In the nineteenth century, more than a thousand titles considered academic journals were distributed, some ceasing and others emerging decade after decade (Tesnière & Bouquin, 2014). This vitality continued into the twentieth century, still almost exclusively in French, and did not see the emergence of very large academic publishers, whether commercial, university presses or learned societies, at least for journals.

Consequently, with the mergers affecting STEM journal publishing (Larivière et al., 2015), French stakeholders were gradually being bought out or disappearing. Examples include Masson, a publishing house established by booksellers in the 19th century, whose medical journals were bought by Elsevier in 2005, and EDP Sciences, which brought together several physics-learned societies from the 1920s onwards. EDP Sciences lacked capital and was finally bought by China Science Publishing and Media in 2018. In the social sciences and humanities, the widespread distribution of journals during the print era did not lead to buyouts or concentration, resulting in a singular distribution of the journal population in the major European countries as can be observed in Figure 20.

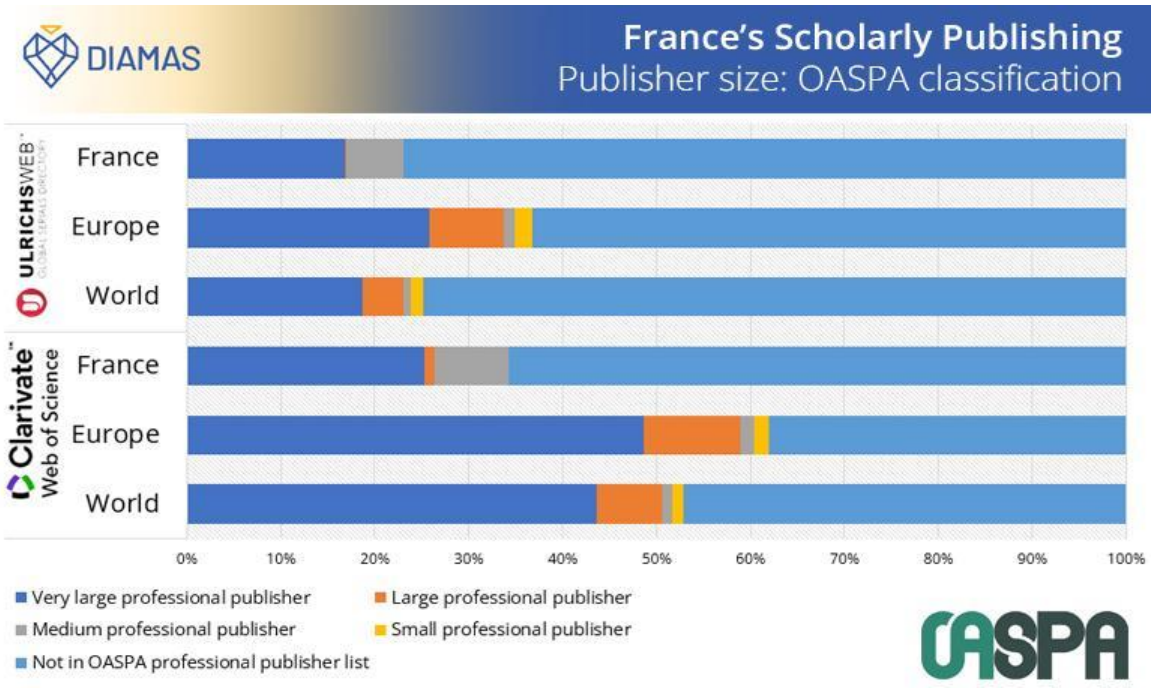

Figure 20. France's scholarly publishing: OASPA Classification

However, the digitalisation of SSH journals, which often occurred late and was complex (Tesnière & Seiler-Juilleret, 2023), has been influenced by the emergence of two very large platforms. On the public side, Revues.org was created in 1999 and renamed OpenEdition Journals[53] in 2017. This is based on open access and the Diamond model. On the side of private publishers, Cairn.info was created in 2005 and is primarily based on the subscription model, older content being free to read. Today, these two platforms have expanded to include books, using the same business models from the early 2010s onwards. OpenEdition Books[54] mostly uses the diamond model, with a partnership for the digitisation of books, mainly for university presses, while the Cairn subscription model is for academic works, reviews, and manuals from private publishers. Over and above their divergent economic and ownership models, these two platforms have several points in common: they are limited to the humanities and the social sciences (SSH), and they are not publishers in the traditional sense, but service providers for journal and book publishers.

Alongside these two platforms, other major publishing infrastructures exist. Firstly, Persée[55] has published a large quantity of the back catalogue of all types of publishers since 2004, recently reaching one million open access documents. The Mersenne centre[56] aims to reproduce the success of OpenEdition Journals for STEM disciplines and also now hosts the journals of the Académie des Sciences previously disseminated by Elsevier. Finally, several universities have set up journal incubators designed to help recent journals grow or to switch them to open access and retro-digitising their content if it is not already on Persée. In addition, French libraries have traditionally not generally been involved in publishing activities. They have rather focused on providing access to paid resources within the Couperin national consortium and on the management of repositories in the HAL national archive. In recent years, however, publication structures have been set up, either as 'incubators' for new journals, or as service providers on a more permanent basis. These are new Diamond publication infrastructures and are organised within the REPERES network.[57]

To complete this initial overview, it should be pointed out that HTML/XML publishing is at the heart of these publishing platforms and that, as a result, platforms based on OJS are virtually non-existent. The major international private publishers are therefore marginal in the overall production system, even if Elsevier France does exist. On the other hand, France is an important market for them as far as subscriptions are concerned, with agreements usually made through the national Couperin consortium. Until very recently, Publish & Read deals were much less widespread than in other major Western European countries, even though Elsevier signed a national licence in 2024, and local agreements have been signed with Wiley, Springer Nature and Cambridge University Press. This has important consequences for open access, which will be discussed below.

[53] https://journals.openedition.org/?lang=en
[54] https://books.openedition.org/?lang=en
[55] https://www.persee.fr/
[56] https://www.centre-mersenne.org/en/about/
[57] https://reseau-reperes.fr/

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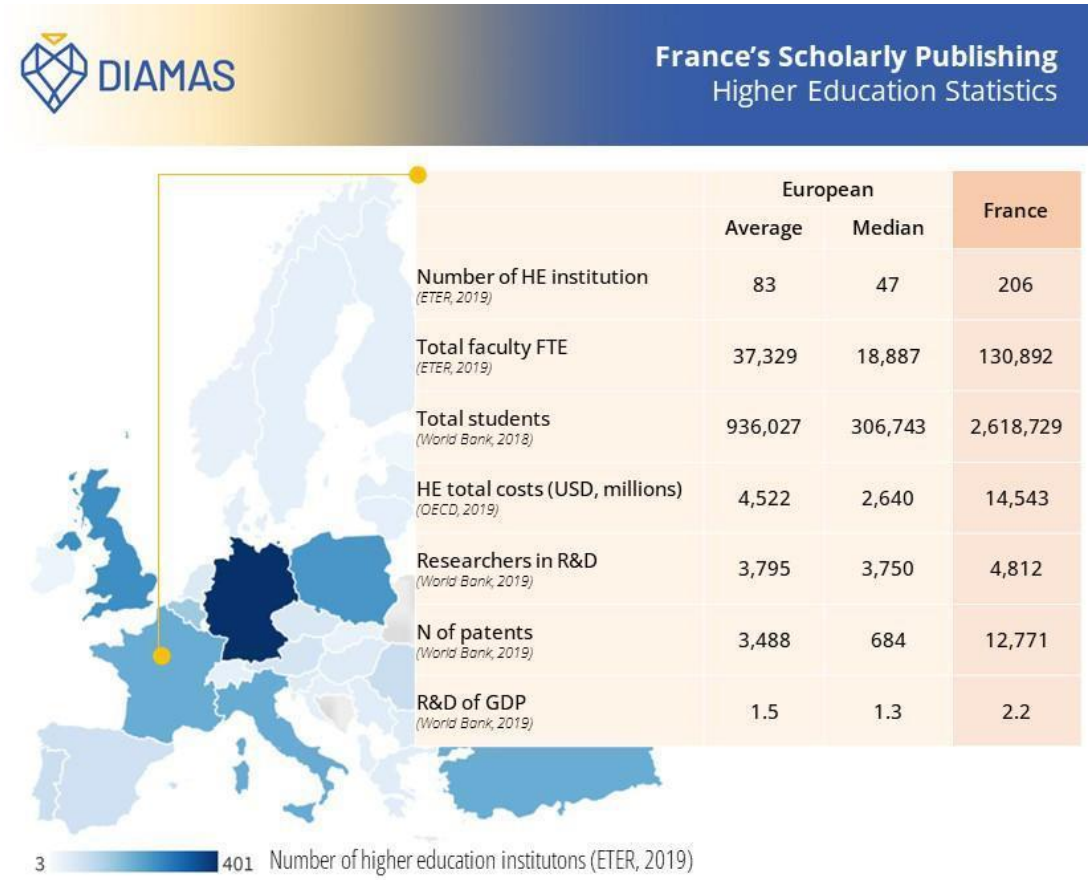
Funding and assessment systems

France has a quantitatively and qualitatively significant higher education sector, as the Figure 21 shows. Almost all the institutions were public until recently.



	European Average	European Median	France
Number of HE institution (ETER, 2019)	83	47	206
Total faculty FTE (ETER, 2019)	37,329	18,887	130,892
Total students (World Bank, 2018)	936,027	306,743	2,618,729
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	14,543
Researchers in R&D (World Bank, 2019)	3,795	3,750	4,812
N of patents (World Bank, 2019)	3,488	684	12,771
R&D of GDP (World Bank, 2019)	1.5	1.3	2.2

Figure 21. France's higher education statistics

To go beyond these aggregated numbers requires us to describe the very complex French institutional landscape, both in terms of the research organisations and universities involved and the funding and evaluation agencies. This landscape has been marked by a series of legal reforms over the last 20 years which, although they have sought to simplify it, undoubtedly make it even more complex from the outside. In this section, we briefly summarise these reforms, leaving aside the many intermediate changes and secondary elements.

The French higher education system is structured by a twofold division. On the higher education side, there are the universities on the one hand and the 'grandes écoles' (big schools) on the other, which, contrary to what their name suggests, are small but cater for the vast majority of the children of the social and economic elite and lead to the supposedly most prestigious diplomas. On the research side, there are universities, similar to those in other European countries, and very large research organisations, such as CNRS, INRAE, INRIA, IRD, INSERM and the like. But these institutional divisions are compounded by the existence of thousands of shared laboratories, most often called mixed research units.

These laboratories bring together up to ten different supervisory bodies, pooling their resources and staff. This makes it very difficult to establish affiliations and, as a result, to represent the output of the various institutions in a uniform manner.

In addition, from 2007 onwards, major institutional reforms have led to the construction of large 'institutions' that also bring together multiple universities and organisations, while generally maintaining their autonomous existence. To take just one example, the Université Paris Science et Lettres (PSL University) brings together 14 organisations, including a single university, three organisations, four big schools and other types of institutions. While the PSL logo is present everywhere, the doctoral schools are grouped and, above all, the signature is unified enough to be recognised in scientific publications (Torny, 2020). These 14 institutions maintain their legal independence with their own administration, budget and students, and teachers and researchers are hired according to their own rules.

Since 2004, the funding and evaluation landscape has also been transformed. The establishment of French National Research Agency (ANR)[58] gradually led to a relative unification of public research funding systems, even though behind a single institution there were many different principles and organisations for funding projects, whether for researchers or institutions (Giry & Schultz, 2022). The creation of AERES, transformed nine years later into the High Council for Evaluation of Research and Higher Education (Hcéres).[59] This followed the same logic by absorbing the evaluation of institutions, training courses and laboratories. Here again, we observe successive transformations in these modes of evaluation: grades, then their disappearance; reports that were initially public, then no longer so or lists of relevant journals that later vanished (Pontille & Torny, 2012).

Firstly, funding is not dependent on the results of these evaluations. Secondly, the Hcères organises evaluation 'waves', so there is no single event every 4 or 5 years like the UK's Research Excellence Framework (REF), but evaluations are carried out in rotation, with each year being geographically determined. This does not mean that there is no competition between universities, on the contrary, as C. Musselin (2017) has shown. This competition is very complex, based on calls for projects with variable and relatively opaque criteria, and not on stable indicators such as publications. Similarly, there are national evaluation structures for academics, the Universities National Council (CNU) sections, in order to be authorised to apply for certain posts, but their criteria vary according to the discipline and over time and are not officially based on metrics.

The language of publications is an important factor, which can be considered in three complementary ways. Firstly, from the point of view of publications by French researchers, in practice, English is almost the only language considered in the STEM as a whole. This is less the case for the social sciences and even less for the arts and humanities (Larivière, 2018). Next, we can consider the language of publications issued in France. Academic works are almost exclusively in French if we consider the Directory of Open Access Books (DOAB) data or those of the major platforms (Open Edition Books,

[58] https://anr.fr/en/
[59] https://www.hceres.fr/en

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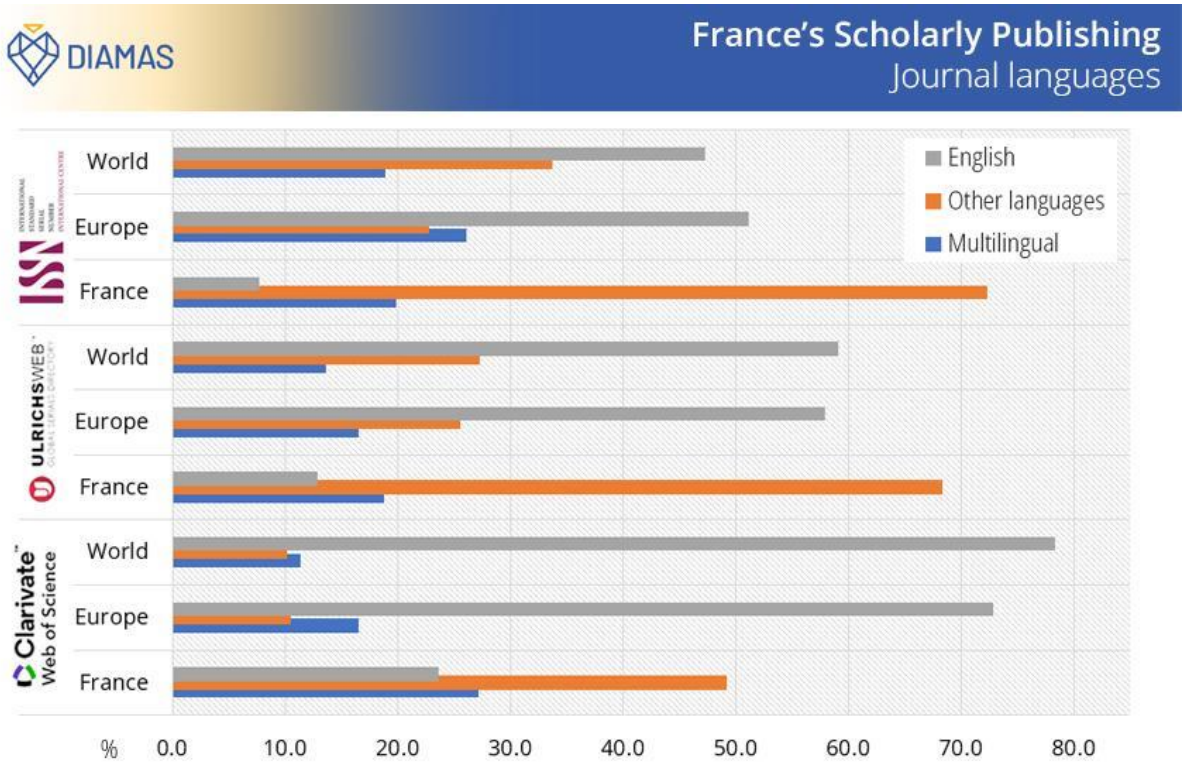
Cairn). For journals, 80% of titles created are still in French, even in the recent past (Larivière, 2018), and aggregate populations show similar ratios.



Numbers of journals

	ISSN France	ISSN Europe	ISSN World	Ulrichsweb France	Ulrichsweb Europe	Ulrichsweb World	Clarivate Web of Science France	Clarivate Web of Science Europe	Clarivate Web of Science World
English	269	26,665	77,372	156	16,584	34,172	87	8,298	17,155
Other languages	2,515	11,866	55,140	830	7,315	15,756	181	1,202	2,231
Multilingual	693	13,629	30,977	228	4,733	7,860	100	1,881	2,500

Figure 22. France's scholarly publishing: Journal languages

Finally, in institutional terms, multilingualism is promoted by the National Open Science Plan, notably through the development of semi-automatic translation tools.

Open access - requirements, incentives, and barriers

French national policy is characterised by the development of large Diamond publishing platforms, and the choice of public and institutional policies in favour of open archives as a key solution to openness, rather than funding gold APC publishing by making funds available to authors. This section details the essential components of these policies.

Firstly, the national policy has been defined in two successive plans, published in French and English, in 2018 and 2021 respectively.[60] Guidelines encompass publications (100% open access), the sharing of data, the opening of codes and all open science practices intended to become a de facto standard. The creation and strengthening of infrastructures accompany this policy, as does the establishment of the French Committee for Open Science (CoSo)[61] with its working groups, the allocation of financial resources for projects by the French National Open Science Fund (FNSO) and the creation of the French Open Science Monitor[62] to measure the results of this public policy. In other words, open access is not treated as a separate objective, but integrated into wider areas.

However, in the French policies, openness includes all versions and locations of publications, including through open archives. Before the plans, in 2016 the law for a digital republic made it possible to render null and void the contractual provisions on article archiving embargoes, enabling authors to deposit their manuscripts in archives after a maximum of 6 months in STEM and 12 months in SSH. This provision followed the recognition of HAL[63] as a national open archive in 2014, 13 years after its creation. As a result, almost all French institutions use HAL as an institutional archive, either voluntarily, with strong incentives or as a quasi-obligation. As an example, CNRS researchers who publish around 20,000 articles per year put at least 95% of these articles on HAL. All this makes HAL one of the largest open archives in the world, with more than 1.3M documents in April 2024.

Open access publication through the most common channels in Europe, hybrid journals, has been very strongly discouraged. As a result, spending by French institutions in this way is marginal (Blanchard et al., 2022). Conversely, even though French institutions have not encouraged them, the APC spending on Full Gold OA journals has risen sharply over the last ten years (Blanchard et al., 2022). This has strengthened the political will to support alternatives, with ANR being one of the signatories of the Action Plan for Diamond Open Access, and the continuous support to publications platforms (OpenEdition, Centre Mersenne) described above.

The impact of these public policies is regularly measured by the French Open Science Monitor (OSM), which includes more than open access information (data, software, clinical trials, etc.). The OSM has been developed by adopting open code and data rather than relying on proprietary data (Bracco et al., 2022). It has shown that, for publications with a Crossref DOI, the open rate has risen from 41% to 65% in 5 years. OSM has highlighted the importance of open archives, particularly HAL, which hosts 50% of open documents published in 2023. The way OSM is built also shows the relative indifference to embargoes or licensing questions that are key to other public policies as far as publications are concerned.

[60] The English language version of the 2021 plan is available here: https://www.ouvrirlascience.fr/wp-content/uploads/2021/10/Second_French_Plan-for-Open-Science_web.pdf
[61] https://www.ouvrirlascience.fr/the-committee-for-open-science/
[62] https://frenchopensciencemonitor.esr.gouv.fr/
[63] https://hal.science/

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The public policies and national infrastructures described also involve the participation of local institutions, which are developing variations of these plans in their institutional policies, participating in platform funding, collaborating with OSM and some of their employees are members of CoSO. Institutional open access policies are thus widely shared across the country, with the only recurring criticism coming from specific private publishers.

Institutional publishing

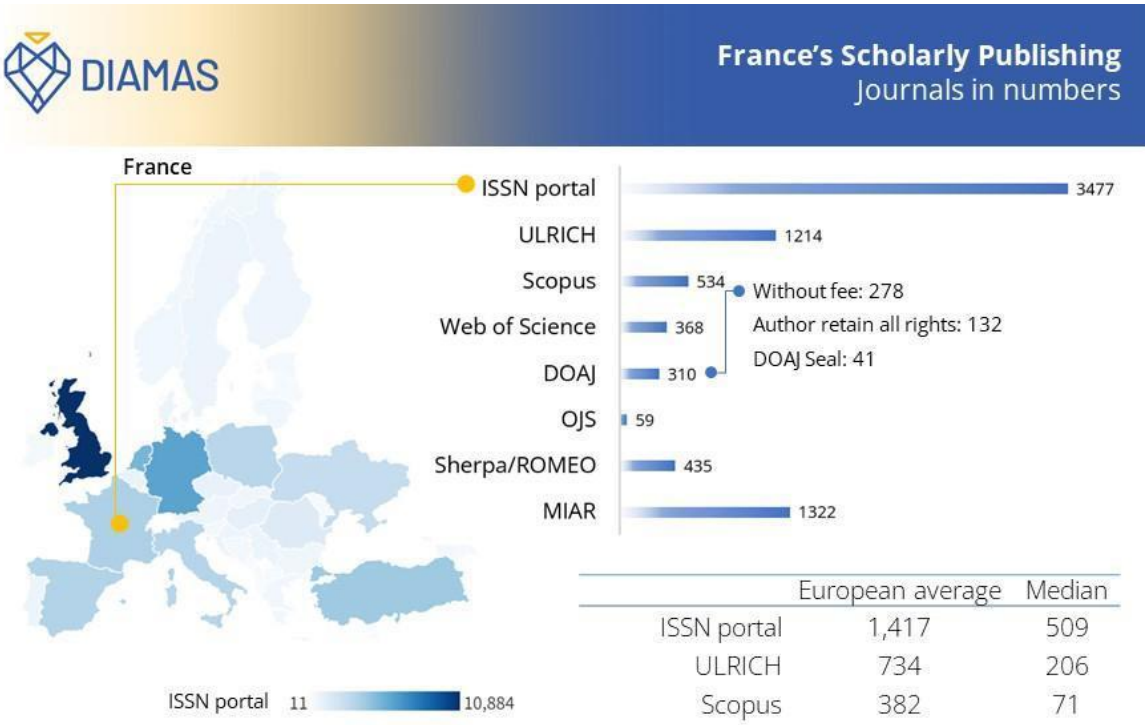
As indicated above, as far as journals are concerned, the French IPSP landscape is very active, with many interactions between IPs and SPs or a combination of them. The same applies to books, with commercial publishers playing a major role in addition to university presses. Another major difference between the two types of support is that public institutions rarely own and publish journals, which is more often the mission of learned societies or other associations but play a key role in setting up and supporting service providers through dissemination platforms and support by making publishing assistants available. At the same time, these institutions have departments or subsidiaries that are book publishers. Given the complexity of the institutional landscape described above, the Higher Education, Research and Innovation Ministry is currently promoting a project for an alliance of French public scientific publishers, bringing together 99 publishing structures, from university presses to research organisations departments. They publish 1,800 books and 430 journals per year, with a total of 51,000 titles in the catalogue and 650 FTE staff.

France funding and sustaining IPSPs landscape is typical of the DIAMAS sustainability report (Brun et al., 2024) with essential support in staff, money and infrastructure from institutions. Three important complementary sources have been cited by the respondents to this same report. Firstly, for SSH journals, funds and staff have long been allocated by CNRS; secondly, various calls for projects have been launched by the FNSO across all disciplines since 2018. It is important to remember that this latter source is accessible not only to French publishing projects but also to foreign ones, with, for example, support for infrastructures such as Scipost. Thirdly, for content on OpenEdition (books and journals), the freemium programme delivers funds coming from domestic and foreign libraries to publishers (Mounier 2011).

Conclusion

In conclusion, the French landscape is marked by a very high level of collaboration, further strengthened by the public policies defined in the national open science plans. The national infrastructures provide archiving, DOI supply and dissemination services, and the supporting institutions provide staff. Nevertheless, it is fair to say that all of these Diamond publication systems are still underfunded compared with the costs of subscriptions (around €90M) and publication by major commercial publishers (around €30M).

Country overview in numbers



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 23. France's scholarly publishing: Journals in numbers

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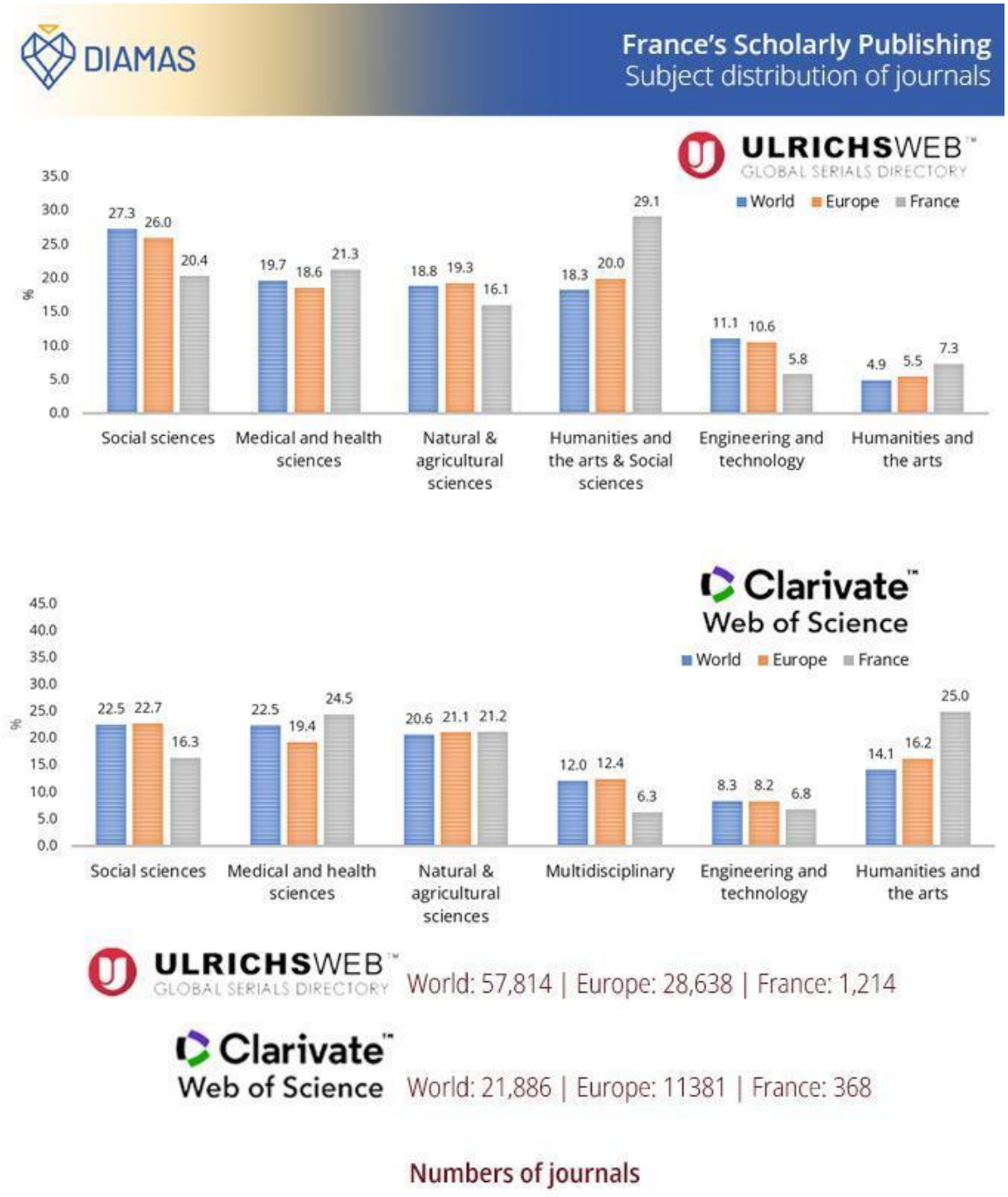

Figure 24. France's scholarly publishing: Subject distribution of journals

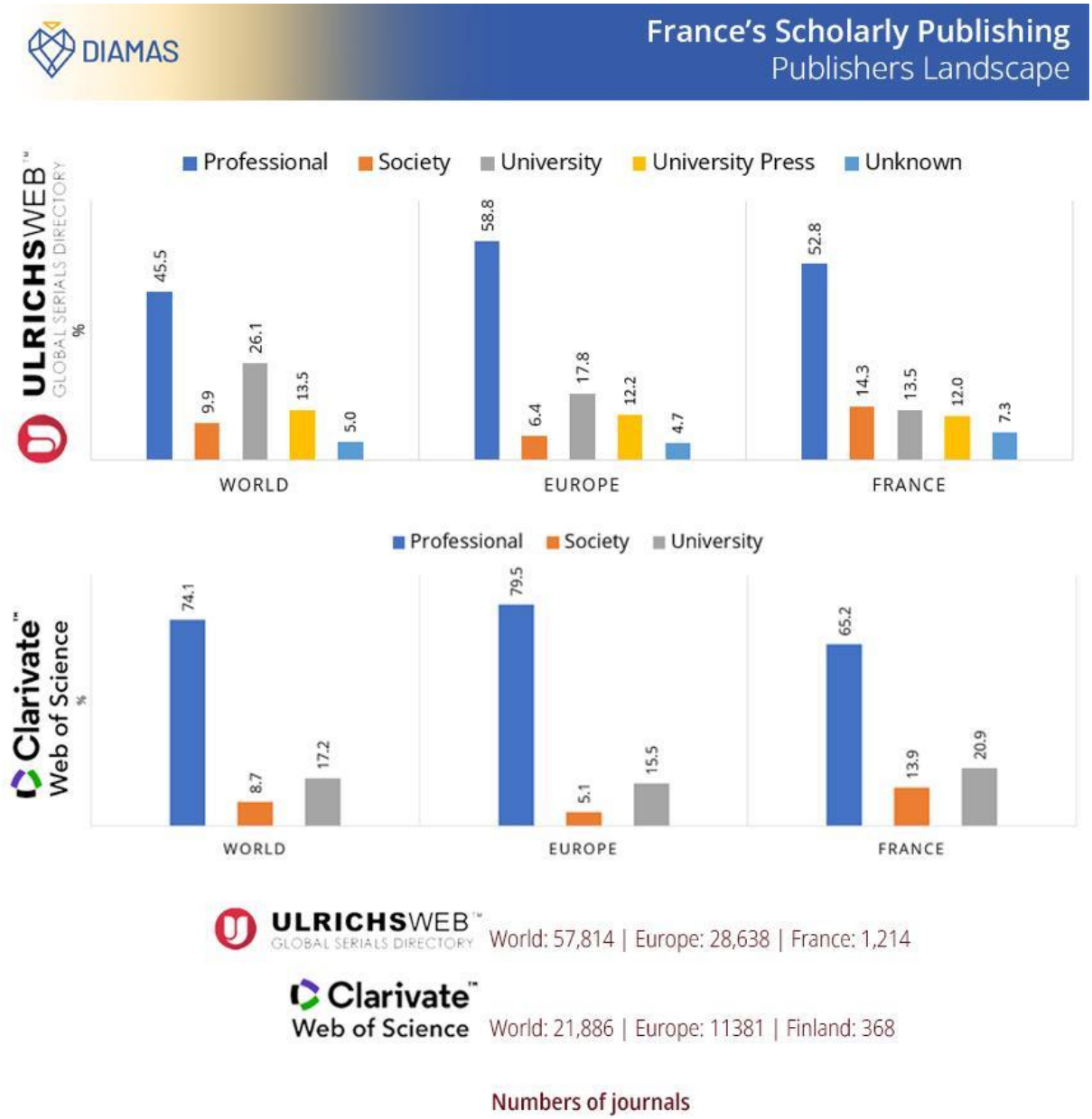

Figure 25. France's scholarly publishing: Publishers landscape

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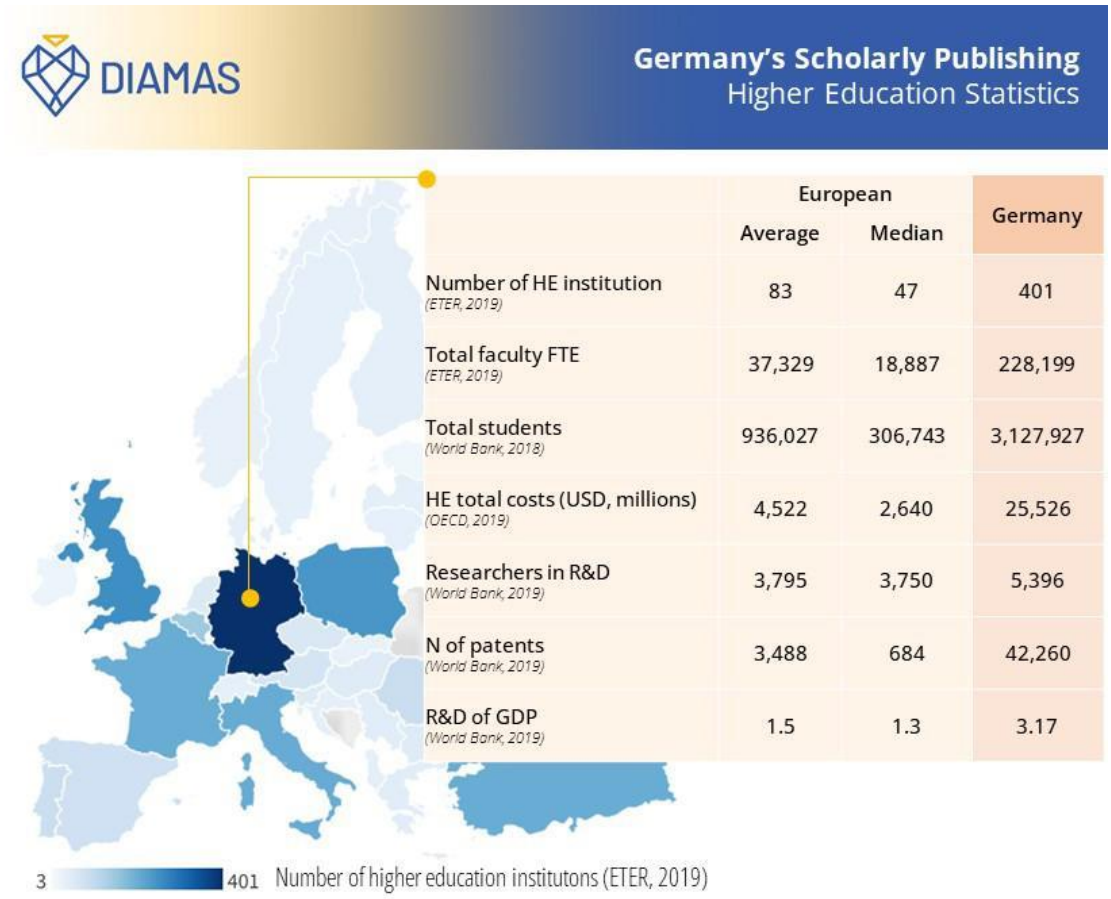
Germany

National landscape of scholarly publishing

The German national landscape of scholarly publishing is characterised by a significant academic infrastructure, with 401 HEIs located in Germany (Figure 26). Notably, Germany (along with the UK, and the Netherlands) stands out within Europe for its high numbers and relative shares of large publisher journals, despite dedicated public funding sources for supporting diamond journals being absent in each of these countries. Commercial publishers have a high penetration rate. Funding initiatives dedicated to scholarly publishing focus on the transformation to OA, with the most notable example being the recent call for a German Diamond Capacity Centre by the German Research Foundation (DFG) launched in February 2024.



	European Average	European Median	Germany
Number of HE institution (ETER, 2019)	83	47	401
Total faculty FTE (ETER, 2019)	37,329	18,887	228,199
Total students (World Bank, 2018)	936,027	306,743	3,127,927
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	25,526
Researchers in R&D (World Bank, 2019)	3,795	3,750	5,396
N of patents (World Bank, 2019)	3,488	684	42,260
R&D of GDP (World Bank, 2019)	1.5	1.3	3.17

Figure 26. Germany's Scholarly Publishing: Higher Education Statistics

Preferences concerning the mode of publication and publication model vary by discipline. While overall most research outputs are published via journals with humanities leaning stronger towards publishing monographs than other disciplines (DFG, 2022b). Interestingly, a substantial number of German Diamond OA journals are located in the social sciences and humanities (Taubert et al., 2024), mirroring earlier findings on an international scale (Bosman et al., 2021; Hahn et al., 2022).

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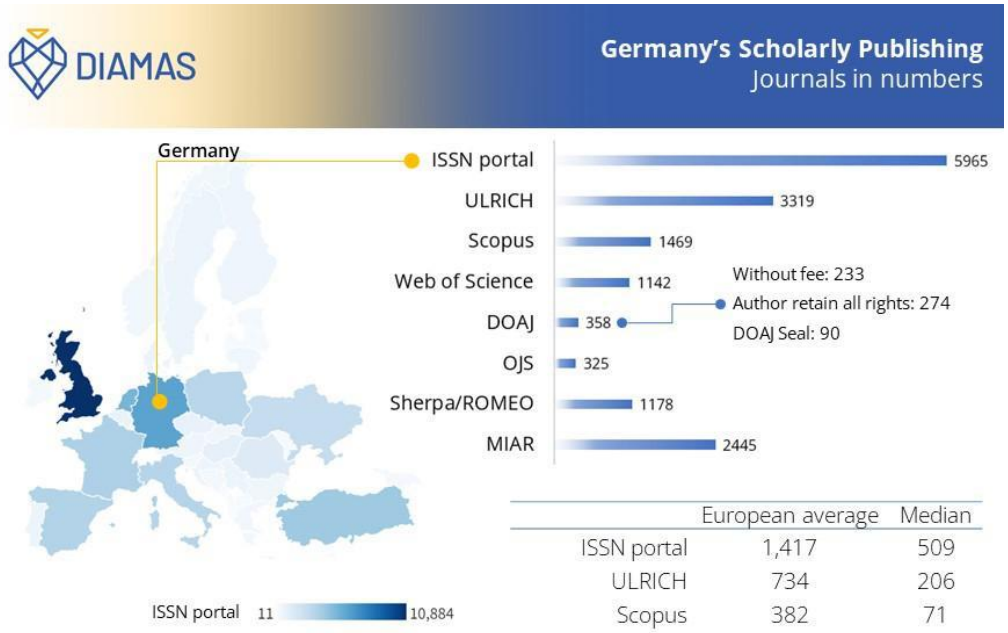
The importance of learned societies in the German scholarly publishing landscape is difficult to assess, mainly, because there is a severe lack of data with the last comprehensive investigation into learned societies in Eastern Germany dated to 1990 (Wissenschaftsrat, 1992). However, a study on learned societies and OA published in 2020 roughly estimates the number of learned societies in Germany at 303. Despite 58% of these German learned societies publishing journals, the study concludes that the OA output produced by learned societies is minor (Pampel & Strecker, 2020). One of the possible explanations for the low OA uptake is that Germany, as of now, has no dedicated infrastructure support for society journals such as TSV in Finland or Hrčakin Croatia. Such central infrastructures would especially help smaller learned societies or those serving smaller disciplinary communities.

In correspondence to the higher education statistics that are very much on the upper level of the European range, the number of German journals being published equally is an outlier, e.g. while the European median for journals according to data from the ISSN portal is 509, the number of journals for Germany is 5965 as is visualised in Figure 27. Accordingly, data from Ulrichsweb gives a European median of 206 and the number of German journals as 3319.



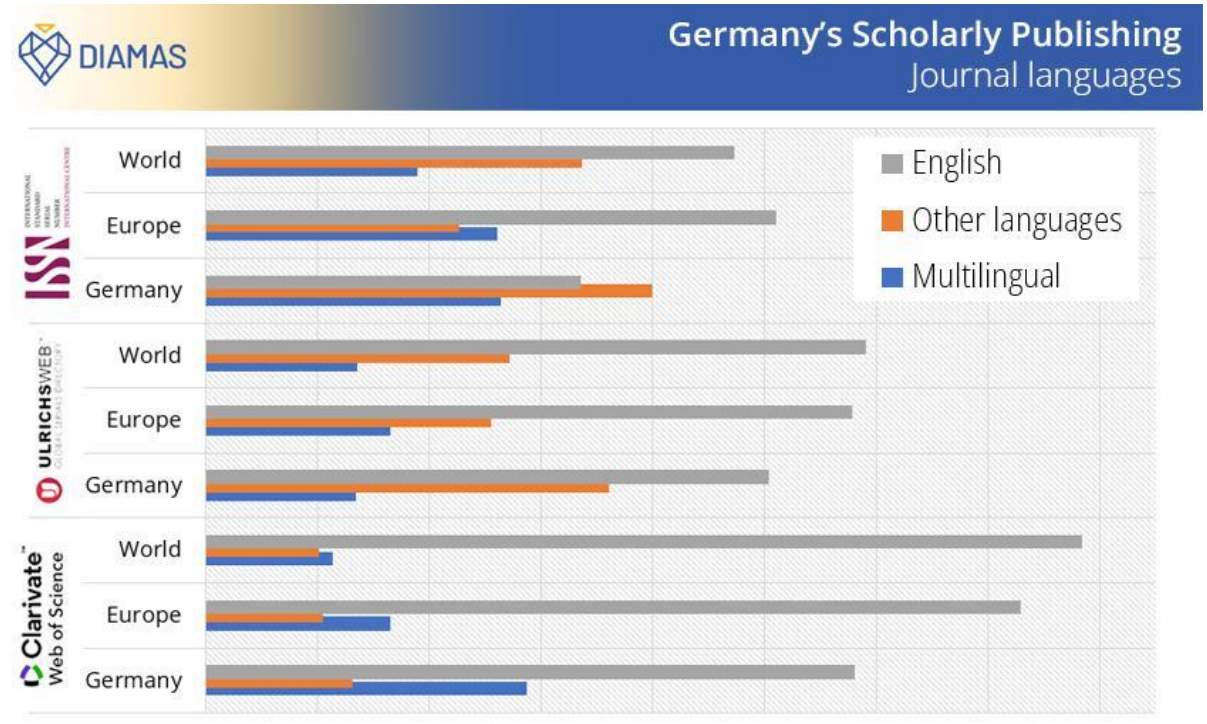
	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 27. Germany's Scholarly Publishing: Journals in numbers

German research publication output is therefore high, with the OA output (of journals) steadily increasing (Hobert et al., 2021; DFG, 2022). This trend is aligned with policy developments in support of OA. In 2016 the first nationwide and most influential German OA policy was published by the BMBF, the Federal Ministry of Education and Research.

Its respective update, an OA policy developed in collaboration with all German federal states, was published in 2023.

Key non-university research organisations (Leibniz Society, Alexander von Humboldt Foundation, Helmholtz Society, Fraunhofer Society, Max Planck Society), along with bodies like the German Rectors' Conference, the German Academic Exchange Service (DAAD), and the German Research Foundation (DFG), collaboratively established the 'Digital Information' Initiative, also referred to as the Alliance Initiative. The initiative, as outlined in its mission statement, strives to provide researchers with optimal information infrastructure essential for their research (Steering Committee for the 'Digital Information' Initiative of the Alliance of Science Organisations in Germany, 2017, p. 2). Additionally, it actively promotes the expansion of open access to academic knowledge. Furthermore, through the Projekt DEAL framework, the Alliance Initiative has inked joint nationwide licensing agreements with three prominent scholarly publishers: Springer Nature in 2020, Wiley in 2019 and Elsevier in 2024. Notably, German journals publish less content in English than their European and global counterparts, as displayed in Figure 28.



Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	Germany	Europe	World	Germany	Europe	World	Germany	Europe	World
English	2,007	26,665	77,372	1,672	16,584	34,172	663	8,298	17,155
Other languages	2,381	11,866	55,140	1,198	7,315	15,756	150	1,202	2,231
Multilingual	1,577	13,629	30,977	449	4,733	7,860	329	1,881	2,500

Figure 28. Germany's Scholarly Publishing: Journal languages

Funded by the European Union

Trend towards OA models & transformative agreements

A notable trend in recent years has been the shift from 'closed access' to a variety of OA models: In 2009, 65.1% of articles published were published via a closed access model, whereas in 2021 closed access publications made up only 33% of German research output. This decrease is notably connected to the rise of hybrid (from 2.7% to 23.4%) and gold open access (from 5.4% to 27%) publications (DFG, 2022, p. 17). This trend is connected to a political push towards open access models (see below).

The ambition to transition to OA has led to several dozens of transformative agreements. Germany has been actively involved in promoting the notion and the creation of transformative agreements, notably through the leading role of the Max Planck Society in the global alliances OA2020, or the involvement of the DFG and RPOs such as the University of Bielefeld in initiatives such as ESAC and OpenAPC.

In Germany itself, the most prominent transformative agreements have been negotiated by the DEAL Konsortium. So far, DEAL has negotiated 3 agreements among German institutions and commercial publishers (Wiley, Elsevier, and Springer Nature) and thereby bears witness to the successful market penetration of commercial publishers. This success can be seen in further numbers: From 2020 to 2022 researchers in Germany published more than 75,000 publications in the journals of DEAL publishers. Despite these numbers, the concept and the associated costs of DEAL contracts do not prove suitable for implementing a sustainable OA transformation. Not only is the access to publications published within the context of DEAL contracts still restricted to members of institutions participating in the respective DEAL contract, the total cost of APCs for an institution depend on its research output and is therefore not predictable with certainty. As of now, all three DEAL contracts only run until 2028, with the contracts with Elsevier and Springer Nature even including articles that allow for an annual increase of the Publish and Read Fee (Springer Nature) and APCs (Elsevier). Further evidence that transformative agreements such as DEAL are an inefficient tool to transform the scholarly publishing system towards OA is given in a review on transitional agreements in the UK published by JISC in March 2024. Based on the journal flipping rates observed between 2018-2022 the authors conclude it would take "at least 70 years for the big five publishers [Elsevier, Sage, Springer Nature, Taylor & Francis, and Wiley] to flip their TA titles to OA" (Jisc, Brayman et al. 2024, p.40).

As pointed out by Kramer (2024), in terms of transformative agreements Germany is indeed one of the leading actors in the European Research Area with 54 active transformative agreements in place. It is noteworthy that only two out of the 54 transformative agreements Kramer lists in her study have been negotiated on a national

level (by the DEAL Konsortium) with the others being agreed on a state level or at the level of the larger research performing organisations (Kramer, 2024, p. 41-47).[64]

Indeed, Germany has one of the highest expenses for APCs worldwide. According to a study published by Butler et al. in 2023, Germany is only passed in APC costs by the United States, China and the United Kingdom, thereby effectively spending the second-largest amount of funds towards covering APCs within Europe (Figure 29).

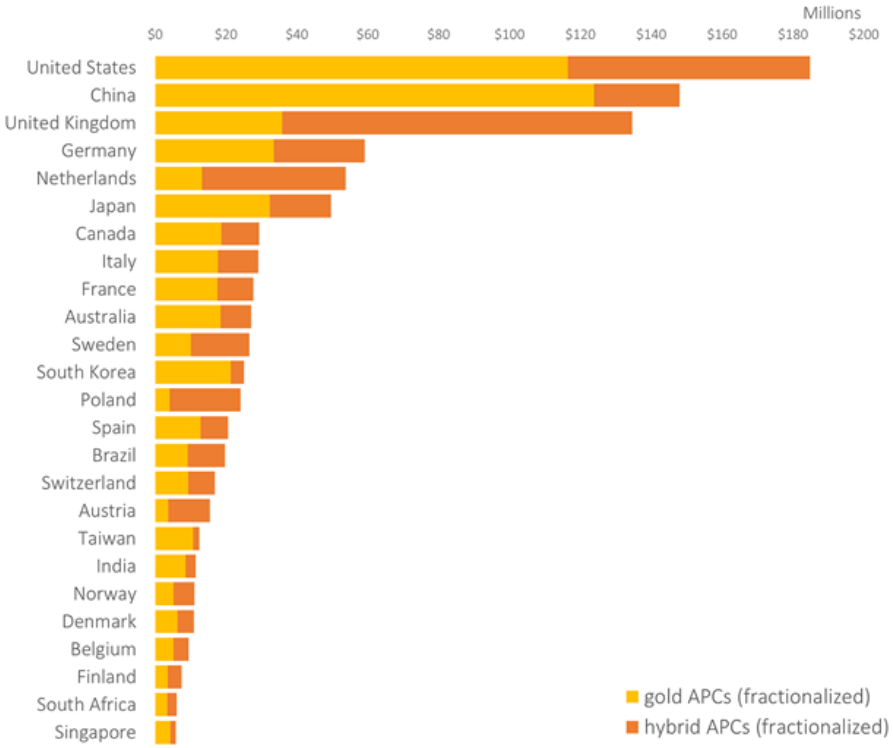


Figure 29. Top 25 countries by total amount of APCs expenditures 2015-2018 based on fractionalized publications (From: Butler et al., 2023, p. 791)

The sheer amount of money spent on APCs in itself indicates the heavy involvement of commercial publishers in the German landscape of scholarly publications. This observation is further supported by the number of very large and large professional publishers being active in Germany. As indicated by statistics from Web of Science and Ulrichsweb that are displayed in Figure 30, Germany has an above-average share of very large, large and medium professional publishers, hinting at an above-average degree of commercialisation within the scholarly publishing landscape.

[64] The agreement with Elsevier negotiated by the DEAL consortium has been announced in September 2023 and while mentioned by Kramer, it does not count into the total number of 54.

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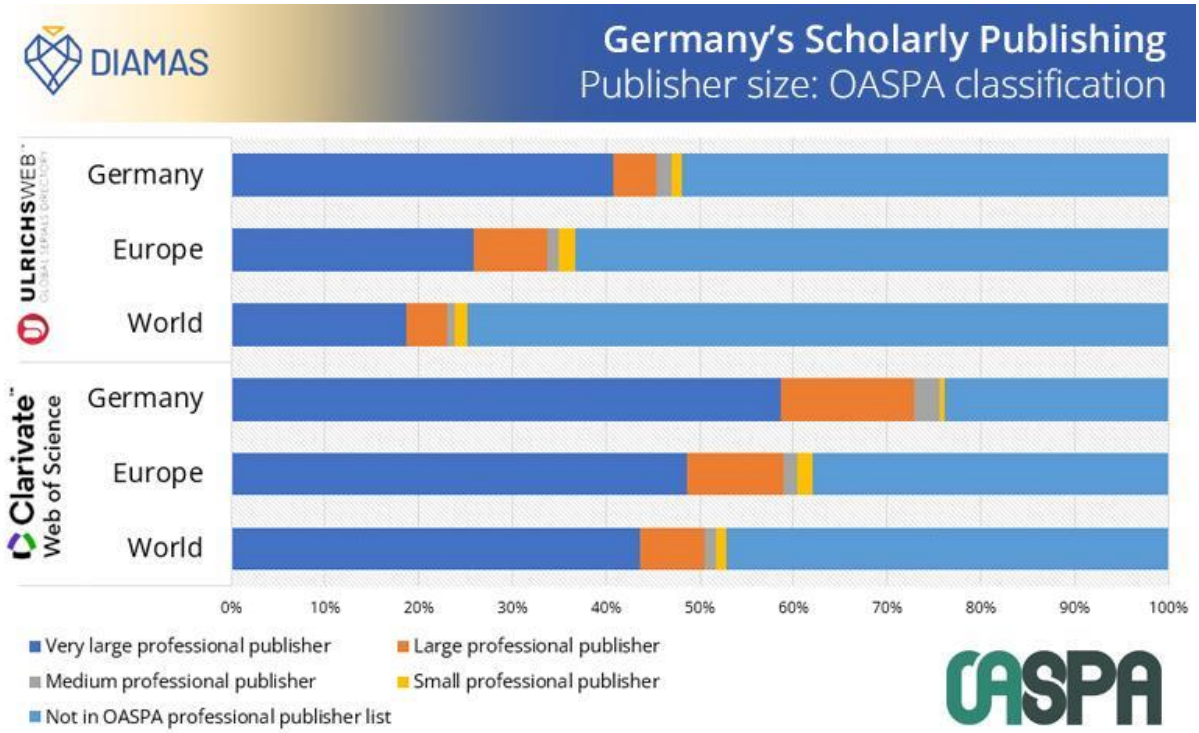

Figure 30. Germany's Scholarly Publishing: OASPA classification

This conclusion is supported by further data drawn from Ulrichsweb and WoS, with the percentage of professional publishers exceeding the European average by 26.7% (Ulrichsweb) or, respectively, 15.8% (WoS) while the numbers of University Presses, Universities and Societies acting as publishers is considerably lower (Figure 31). This specific context of the German scholarly publishing system is the result of several historic developments, one of them being that scholarly publishing has been outsourced to commercial publishers as early as the 18th century (Fyfe, 2020).

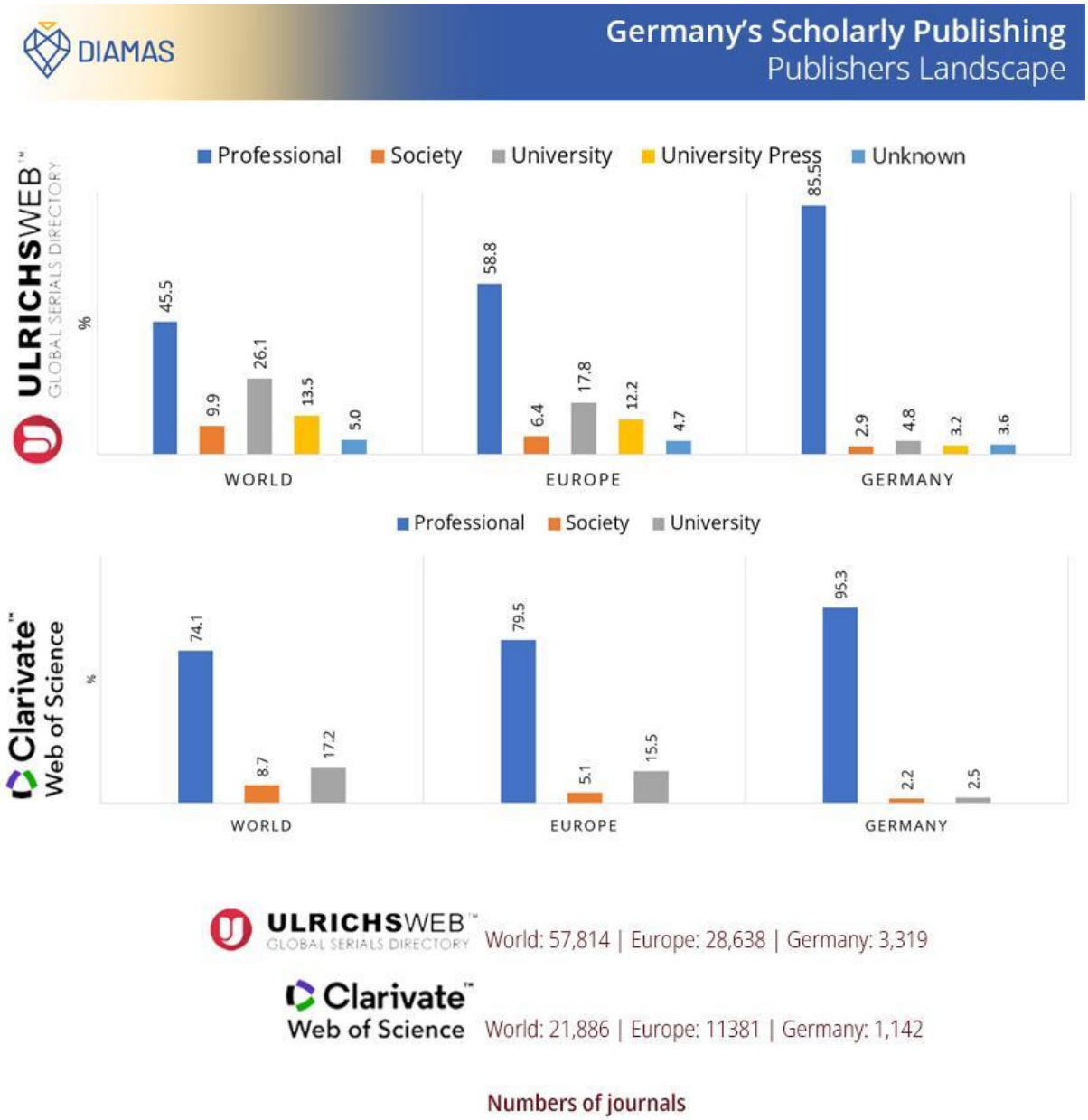

Figure 31. Germany's Scholarly Publishing: Publishers Landscape

Funding and assessment systems

As of now, Germany lacks a dedicated public funding source or funding schemes and approved funder recommendations for supporting the routine operation and maintenance that is necessary for the day-to-day functioning of Diamond OA journals. Germany has conducted competitive funding rounds via organisations such as the national research sponsor, the German Research Foundation (DFG) as well as regional and national ministries (e.g. BMBF). However, this funding is not designed for long-term sustainability and is unsuitable for journals already operating on an OA model. Rather, it targets journals in the process of transitioning to OA publishing (Laakso & Multas, 2023, p. 453).

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Open access - requirements, incentives, and barriers

Within the last few years, the national landscape for scholarly publishing in Germany has been shaped by OA initiatives more and more. Particularly Diamond OA publishing has been the focus of politicians, research institutions and scientists alike, with the recently launched call for a German national Diamond Capacity Centre by the DFG (German Research Foundation) being the latest culmination of this trend (2024). The BMBF published the first OA strategy on a national level in 2016, thereby establishing a common framework for the OA scholarly publishing movement in Germany above the level of federal states (BMBF, 2018). The strategy announced measures such as the creation of an Open Access Monitor for Germany to keep track of current developments and analyse further (financial) needs and measures. As an addendum, the BMBF, released a guideline for OA in collaboration with the German federal states in 2023 aiming to align the efforts for OA. Furthermore, the DFG released a position paper called "Open Science as a part of research culture" in 2022 (DFG, 2022a).

Since the launch of the BMBF OA policy in 2016, several projects have been launched to progress OA in Germany and establish an infrastructure enabling the OA landscape to coordinate and grow. Most notably, the project CODRIA (from 2021 to 2023) analysed the performance, efficiency, and functionality of the German OA landscape in the absence of dedicated funding for institutional publishing.[65] Simultaneously, the KOALA project worked on developing consortial solutions for financing OA.[66]

Diamond OA

Concerning Diamond OA in Germany, the findings of the CODRIA project are particularly insightful: According to the Diamond OA List Germany (DOAG) (Bruns et al., 2022), 298 Diamond OA journals are based in Germany. Furthermore, CODRIA has provided a landscape study on Diamond OA publishing in Germany, that concludes sustainability of small and medium-sized Diamond OA journals is one of the major issues for Diamond OA journals in Germany (Taubert et al., 2023). Furthermore, the authors conclude that within the German publishing landscape, Diamond OA is by no means challenging the established publishing industry (Taubert et al., 2023, p. 25).

To put the numbers listed in the paragraph above in perspective: DOAJ lists 370 OA journals in Germany, 90 of which have the DOAJ seal. 286 of the journals let the authors retain all rights, and 236 are Diamond OA journals. Furthermore, Germany has 98 institutional publishers (via GOA8) in DOAJ, 90 of which publish diamond journals. Regarding the software in use as of August 2023, 34 institutions in German-speaking countries offer OJS hosting for local and regional researchers.[67] Diamond OA journals can therefore only be considered to make up a small fraction of scholarly publishing in

[65] https://open-access.network/vernetzen/open-access-projekte/codria
[66] https://www.tib.eu/en/services/koala
[67] https://ojs-de.net

Germany. This claim is further consolidated by only 2.4% of scientific articles in German research being published via Diamond OA in 2021 (DFG 2022, p. 17). Similarly, the Open Access Monitor[68] displays a percentage of 2.7% for Diamond OA content published from 2020 to 2024. This hints at an on-average small article output of German Diamond OA publishers, which is, in turn, consistent with the findings of the DIAMAS Report Institutional Publishing in the ERA: Results from the DIAMAS survey. The low percentage of Diamond OA content is particularly noteworthy when taking into account that 13.4% of OA journals follow a diamond business model (Figure 32).

Figure 32. Distribution of OA journals business models. The graph shows the current distribution of journals (43,639) across journal business models (2024); based on the Crossref title list, and the journal lists used in the OAM (DOAJ, DOAG, transformative agreements) [69]

The overall progress in OA publishing in Germany since the release of the BMBF strategy on OA in 2016 has led to tools and platforms being developed to monitor and enhance the overall landscape for OA publishing and OA infrastructure in Germany. Most notably, the platform Open Access Network[70] serves as a central node for all OA-related information and networking. The affiliated service OA Atlas[71] (linked website, available in German only) is a service assembling and displaying information on OA-related infrastructure. The data shows an overall tendency toward the implementation of OA: Out of 660 institutions listed (e.g. universities, learned societies, RPOs), 437 have an OA policy, but only 26.8% of them (117) have a specific position dedicated to the implementation of OA. The above-mentioned OA Monitor, operated by the Forschungszentrum Jülich (FZJ) records the publication output of German academic institutions in scientific journals.

[68] https://open-access-monitor.de/
[69] https://open-access-monitor.de/
[70] https://open-access.network/en/
[71] https://open-access.network/services/oaatlas

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German research performing and funding organisations

Major research performing and funding organisations in Germany are the BMBF, the DFG, the Max Planck Society, the Fraunhofer Society, the Leibniz Association, the Humboldt Foundation and the Helmholtz Society with the first two being the most important funders in the German landscape. Furthermore, the most important institutions in research and science in Germany came together in the Alliance of Science Organisations in Germany. Members of this alliance are the aforementioned foundations and societies (except for the BMBF) as well as the learned society German National Academy for Science Leopoldina, the German Academic Exchange Service, the German Rectors Conference and the German Science and Humanities Council. While most of these institutions and organisations have issued an OA policy themselves, through them being members of the Alliance of Science Organisations in Germany, all of them have at least expressed support of national strategy for OA published by the BMBF in 2016 (Allianz der Wissenschaftsorganisationen, 2016).

In terms of publishing, the non-profit AG Universitätsverlage assembles 30 university presses. It represents the central interest representation of numerous university presses in Germany, Austria and South Tyrol/Alto Adige, primarily publishing scientific publications, monographs and journals, from their own institutions.

The funding schemes and OA policies that followed the publication of the first national OA strategy by the BMBF in 2016, mostly fund OA by requiring and/or requesting research results be published via Green or Gold OA. (e.g. Fraunhofer Society, Max Planck Society) The Open Science policy issued by the Helmholtz Society in 2022 is generally more detailed than its counterparts from other RFOs. Not only does it call for a CC BY licence, quality assurance, and compliance with the FAIR principles, but it also spells out licence requirements for metadata (CC0) as well as requirements for Open Research Data and Open Research Software.

The Open Access Publication Funding, a funding programme run by the DFG is only available to research institutions, with an additional requirement for OA books: Only OA monographs connected to a DFG project may be funded through this funding line while the same does not hold for articles. From 2024 on, when the second phase of the programme is launching, another restrictive criterion applies as funding needs can only be calculated based on publications arising from DFG research funding - effectively deeming institutions not creating publications in the context of DFG projects ineligible for the programme.

The funding programme primarily targets research institutions, necessitating it due to the shift towards publication-centred accounting. Furthermore, its objective is to foster the establishment and enhancement of suitable structures within recipient institutions, thereby enabling the automated and standardised identification of publication costs to the greatest extent possible. In 2023, 96.1% (7.8 million €) of funds spent on this funding programme were received by universities (DFG, 2024, p. 14).

Open access-related infrastructures

While there is no national publishing platform/repository (technical) infrastructure to support OA in Germany, several initiatives, tools and services such as the OA Network and the OA Monitor have been established. These are services, tools and platforms dedicated to monitoring and supporting the progress of OA within the German publishing landscape. Furthermore, a dedicated OJS network for Germany[72] provides information and support for OJS users.

Further progress in terms of national alignment, the development of capacities and infrastructures related to Diamond OA is to be expected in the next few years as the call for a German Diamond Capacity Centre has just been released in February 2024.

Institutional publishing

The DIAMAS survey conducted among European IPSPs garnered responses from 43 participants in Germany. Among them, 79.1% identified themselves as IPs (Institutional Publishers), while 20.9% identified as SPs (Service Providers), aligning closely with the overall survey demographics. Furthermore, in comparison to the overall survey results institutional publishing in Germany is often linked more often to the library of the parent organisation (44.8% compared to 19.6%) with the perceived dependency from the parent organisation also in higher percentages (67.4%) than the survey average (56.2%) as displayed in table 9.

Table 9. Relationship to parent organisation

	n	%
Part of a library in the parent organisation	13	44.8
Part of the department of the parent organisation	7	24.1
Operating independently but owned or governed by the parent organisation	6	20.7
Other	2	6.9
Department of the parent organisation	1	3.4

** N = 29 of 43; single answer question; source: DIAMAS survey - Q5.3 (Germany, all)*

Comparatively, German IPSPs exhibit a slightly higher affiliation with parent organisations than the overall survey respondents (67.4% compared to 56.2%). Their service offerings encompass a wide spectrum, with a notable emphasis on IT support, (81.4%) production support (90.7%), and training services (65.1%).

Table 10. Has a parent organisation?

	n	%
Yes	29	67.4
No	13	30.2
Don't know	1	2.3

** N = 43 of 43; single answer question; source: DIAMAS survey - Q5 (Germany, all)*

[72] https://ojs-de.net/netzwerk

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Within the DIAMAS survey sample, English emerges as the predominant language for publications in Germany (97.7%), followed by German (74.4%) and several other languages such as Spanish, French, and Italian. While the participation in international organisations and associations among German IPSPs remains limited, there is some engagement with bodies such as the Open Access Scholarly Publishers Association (OASPA) and the Association of European University Presses (AEUP) with 7 German survey participants indicating they are members of OASPA. However, 12.5% of the German survey participants answered being members of the AEUP (6.1% for the survey total).

In terms of the quantity of publishing output, 80% of IPSPs publish less than 100 articles a year, indicating a strong presence of small- and medium-sized publishers. Correspondingly, a 2024 landscape study identified German diamond publishers as mostly small- to medium-sized (Taubert et al., 2024).

Adherence to Open Access/Open Science policies is, within the survey sample, widespread among German IPSPs. 51.3% of respondents follow a self-issued policy, 43.6% follow the policy of their parent organisation and 28.2% follow the national open access/open science policy. Editorial management, peer review procedures, and technical services are commonly offered, with more than half of the respondents (53.7%) indicating that they are involved in the editorial management of articles published. Challenges encountered include issues related to content indexation, resource constraints, and interoperability.

Efforts toward Equity, Diversity, Inclusion, and Belonging (EDIB) are evident among German IPSPs, with respondents indicating measures having been implemented across various dimensions such as age (38.5%), disability (35.1%), ethnicity (40.5%), gender (41%), and language multilingualism (40.5%).

Funding and sustaining IPSPs

Recapping the results of the DIAMAS survey further, the financial circumstances and obstacles encountered by German IPSPs closely resemble those indicated in the broader survey results. However, fewer German IPSPs have an approved annual budget compared to the overall respondents. Out of 43 German IPSPs surveyed, only 12 have a confirmed budget, indicating a notable reliance on funding from parent organisations, which aligns with the general trends observed in the survey. The lack of comprehensive insight into annual budgets complicates the evaluation of available resources.

Germany lacks a dedicated public funding source for journals. Funding lines and programmes developed to support OA publishing target research institutions, not IPSPs themselves, thereby adding to their dependency on parental organisations.

The overall financial pressure is apparent, with nearly half of all respondents reporting annual budgets falling into lower categories. In-kind support from parent organisations is

also under scrutiny, revealing similar tendencies for collaborative efforts with other IPSPs. This trend is mirrored by the findings of the German Diamond OA landscape study conducted by Taubert et al. which identifies (financial) sustainability for small and medium-sized diamond journals as the major challenge. Ultimately, the authors declare two 'sustainable' Diamond OA models: community-driven journals and well-funded professional journals, in which not only "infrastructural or service-oriented tasks are paid for but also the more scientifically tasks in editorial offices, like the organisation of the peer review process, are supported with monetary resources" (2024, p. 26). In addition, the authors identify a connection between a larger publication output and the need for collaboration with publishing professionals (Taubert et al., 2024, p. 25). Consequently, the community-driven model identified as one of two viable options for sustainable Diamond OA seems to be a model suited for journals with smaller article outputs.

The support of service providers is indeed fairly common among German IPSPs. For example, with 65.1% a majority of German IPSPs responding to the DIAMAS survey indicate they do use external services.

Table 11. Use of external services

	n	%
Yes	28	65.1
No	14	32.6
Don't know	1	2.3

** N = 43 of 43; single answer question; source: DIAMAS survey - Q14 (Germany, all)*

While collaboration is valued across the board, German respondents show a particular inclination towards cooperation within production services (50%), and IT services (42.9%) indicating differing priorities compared to the broader survey responses.

Table 12. Areas in which collaboration with other organisations would be considered

	n	%
Administrative, legal and financial services	7	16.7
Communication services	10	23.8
Editorial services	11	26.2
IT services	18	42.9
Production services	21	50.0
Training, support and/or advice on publishing policies and best practice	11	26.2
None	7	16.7
Don't know	4	9.5
Other	3	7.1

** N = 42 of 43; multiple answer question; source: DIAMAS survey - Q15 (Germany, all)*

Conclusions

Overall, Germany's scholarly publishing landscape is characterised by a significant academic infrastructure and a high penetration rate by commercial publishers. Funding initiatives targeting scholarly publishing focus on the transformation to OA. Most notably

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in this regard, Germany has one of the highest numbers of transformative agreements in the European Research Area, with 55 transformative agreements currently in place.[73] The three most prominent ones are the agreements negotiated by the DEAL Konsortium on a national level with publishers Springer, Wiley and Elsevier. Accordingly, Germany has some of the highest expenses for APCs worldwide, only being surpassed by the United States, China and the United Kingdom. While the German national ministry for education and research, the BMBF, has published an OA strategy in 2016, Germany lacks a national OA policy. Still, the OA strategy paved the way for projects mapping the OA landscape in Germany. As of now, the German funding landscape also lacks a dedicated funding source for Diamond OA journals. However, the call for a German Diamond Capacity Centre launched by the DFG in February 2024 indicates that a stronger commitment to Diamond OA on a national level is to be expected in the coming years.

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Italy

National landscape of scholarly publishing

Scientific publishing in Italy is characterised by a fragmented editorial system and represented by a significant and intricate market. Italy invests over 80 million Euros per year (Mangiaracina & Morroni, 2018) in subscriptions to scientific journals. This market is predominantly controlled by five major publishers, including Elsevier and Wiley, which collectively publish about 80% of scientific articles (De Simone, Giannini, Maggi & Secinaro, 2023). Many of these publishers operate through local or national branches, which cater to the specific needs and preferences of the Italian market. Additionally, international publishers often establish partnerships or co-publishing agreements with local publishers to enhance their reach and distribution channels within Italy. Of course, the degree of penetration of large international publishers varies across different sectors and disciplines. In some fields, such as STEM and Economics international publishers have established a strong foothold, with their publications being widely circulated and recognized, emphasising rapid publication and quantitative metrics. This is often facilitated by collaborations with Italian research institutions, universities, and scholarly societies. In contrast, in other sectors such as SSH and in particular, law, literature, arts, and humanities, there may be a greater presence of local/national publishers who focus on promoting Italian culture and heritage. SSH boasts a diverse landscape with a certain level of university press involvement and a larger role for Italian language, alongside English. However, even in these areas, a selection of international publishers may still play a significant role through partnerships or distribution agreements.

Of course, over the past few years, as in other European countries, the Italian scholarly publishing landscape is undergoing a transition towards OA. As authors increasingly seek to publish their scholarly outputs through OA venues, publishers have adopted the Hybrid OA model alongside their traditional subscription-based paywall systems. This strategic shift caters to the rising demand for OA publication options while also aiming to augment publishers' revenue streams. Notably, this has led to a significant increase in the publication of OA journals. This trend is evident as fully OA platforms emerge and mature. Numerous university presses have developed platforms, offering OA journals and, on occasion, scholarly monographs, along with educational manuals.[74] Moreover, centralised OA platforms have emerged, consolidating publications from various universities, such as Share Press. Within the framework of the Universities SHARE convention (Scholarly Heritage and Access to Research),[75] eleven universities in southern Italy disseminate open access content under their respective editorial imprints or through Share Press. Currently, Italy has 100 publishers indexed in DOAJ, along with 516 journals listed in the Directory, 53 of which bear the DOAJ seal. Moreover, a

[74] Some examples are: Milano, University Press: https://milanoup.unimi.it/; Roma TRE-PRESS: https://romatrepress.uniroma3.it/; Firenze University Press: https://www.fupress.com

[75] https://www.sharecampus.unina.it/

substantial number of journals (421) allow authors to retain all rights, while 456 are classified as Diamond journals. Additionally, 15 university presses in Italy adhere to the Diamond OA model, particularly for authors affiliated with the respective institutions.

Many universities and research organisations support scholarly communication via their institutional or disciplinary repositories. Overall, 146 Italian repositories are listed in OpenDOAR, while 50 are registered on re3data. According to a survey[76] managed in 2021, at least 57 Italian universities run an institutional repository, 18 have a repository for data and/or linked open data, and 8 manage a disciplinary repository.[77] A wide variety of situations can be observed, with some universities opting to establish their own university press for OA publishing. Others have chosen hybrid solutions, sometimes relying on external services for journal publication.

Transformative agreements also mark a clear departure from the status quo of the subscription system with the intention to move scholarly journals, as well as institutions, forward on a realistic pathway toward a fully open access landscape.

According to data from the ESAC Transformative Agreement Registry,[78] estimated based on affiliation in Italy of the corresponding author of articles, 37.1% of articles are published immediately OA through transformative agreements, 21% in fully OA journals and 4.9% in hybrid or closed journals. Publishers with the largest share of articles made available through transformative agreements are Elsevier BV (16.7%), Springer Nature (7%), Wiley (4.9%), IEEE (2.4%), American Chemical Society (1.3%), IOP Publishing (0.9%), Cambridge University Press (0.7%), Wolters Kluwer Health (0.6%), Royal Society of Chemistry (0.5%) and other (2%).

In this direction, the Conference of Italian University Rectors (CRUI)[79] represents and coordinates the activities of Italian universities at the national and international levels and plays a significant role in shaping policies related to higher education and research in Italy. Together with Public Research Entities (EPRs), they have endorsed transformative agreements as a means to effect these changes. In particular the role of CRUI-Care[80] (Gruppo di Coordinamento per l'Accesso alle Risorse Elettroniche) in negotiating managing and finalising the negotiations with major publishers for digital publishing contracts in the name and on behalf of Italian Universities and some public research bodies is crucial, allowing Italian institutions to publish in hybrid journals at reduced costs. Based on ESAC records, there exist 17 transformative agreements with Italian counterparts, of which 13 are overseen by CRUI-CARE. It is noted that certain contracts are undergoing renewal (Wiley, ACS) or are slated for expiration by the conclusion of 2024 (Emerald, IEEE, RSC, Springer, and Kluwer). The monitoring of TA is carried out by "Open Science Observatory - Libraries Commission" within the CRUI[81] which is in charge of

[76] https://osa.crui.it/scheda-rilevazione-iniziative-open-science-negli-atenei-italiani/
[77] https://agenda.infn.it/event/32982/contributions/182265/attachments/101612/141630/07.12-06_delledonne.pdf
[78] https://esac-initiative.org/market-watch/#country_shares
[79] https://www.crui.it/the-conference-of-italian-university-rectors.html
[80] https://www.crui-risorselettroniche.it/
[81] https://osa.crui.it/

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collecting information about the changes going on in the market of scientific communication, supporting the roles of libraries in the Open Science environment, collecting data on European and worldwide initiatives that promote Open Science and the present Open Science practices in Italian Universities and research bodies. In conjunction with the CARE Group, the Observatory also collects information on the cost of contract, APCs and other printing costs of both Italian Universities and single researchers.

Specific studies conducted by the National Research Council of Italy (CNR) have captured the share pertaining to its own trends in certain years.[82] From 2020 to 2022, APCs were approved by CNR for a total of 607 articles, at a total cost of approximately €1,850,000. The highest number of articles was published in disciplinary journals, with publishers such as the American Institute of Physics (AIP), the Royal Society of Chemistry (RSC), and the American Chemical Society (ACS) being prominent. Worth mentioning is the OpenAPC project managed by the University Library of Bielefeld, aimed at monitoring the APC market by collecting and sharing data on expenses incurred by institutions for publishing in OA, within the framework of transformative and non-transformative agreements. Currently, four institutions in Italy are participating: CNR, Free University of Bozen-Bolzano, University of Milan, and Veneto Institute of Oncology (IOV IRCCS).

In line with the global movement for OA scholarly publishing, Italy fosters a growing network of scholars such as the Italian Association for the Advancement of Open Science (AISA).[83] The Association promotes best practices and advocates for OA across disciplines. It has garnered support from researchers, academics, librarians, universities, and institutions. In addition, several research support organisations play crucial roles in facilitating research activities towards open science in general and infrastructure development in Italy:[84]

- **GARR** (Gestione Ampliamento Rete Ricerca) is a network[85] dedicated to the Italian research and education community. Its main objective is to provide high-performance connectivity and to develop innovative services for the daily activities of researchers, professors and students as well as for international collaboration. It is designed and managed by Consortium GARR, a non-profit association founded under the auspices of the Ministry of Education, University and Research. The members are Consiglio Nazionale delle Ricerche Consiglio Nazionale delle Ricerche (CNR),[86] Agenzia Nazionale per le Nuove Tecnologie, l'energia e lo Sviluppo Economico Sostenibile (ENEA),[87] Istituto Nazionale Di Astrofisica (INAF),[88] Istituto Nazionale Fisica Nucleare (INFN),[89] Istituto Nazionale

[82] https://www.openaccessrepository.it/record/76973
[83] https://aisa.sp.unipi.it/chi-siamo/
[84] https://www.openaire.eu/os-italy
[85] https://www.garr.it/en/
[86] https://www.cnr.it/en
[87] http://www.enea.it/en
[88] http://www.inaf.it/it
[89] http://home.infn.it/en/

di Geofisica e Vulcanologia (INGV)[90] and CRUI Foundation,[91] representing all Italian universities. GARR also serves as the mandated organisation in the European Open Science Cloud (EOSC).

- **The Competence Centre ICDI - Italian Computing and Data Infrastructure**[92] is the technical forum bringing together research infrastructures operating in Italy, public research institutions, universities, and other institutional members to support synergies in Italian contributions to the construction of the EOSC. ICDI, in collaboration with the service www.Open-Science.it, provides information and reference tools on Open Science aimed at the scientific community.
- **Cineca**[93] is a non-profit consortium formed by 117 institutions, among Italian universities and public institutions, providing support for scientific community activities through supercomputing services, management systems for university administrations, and information systems for public administration, healthcare, and businesses. Cineca has been collaborating on OA initiatives since the inception of the OA movement for scientific research results. Cineca has established an infrastructure for the collection, management, and dissemination of data related to research activity called Institutional Research Information System (IRIS). IRIS facilitates the management of research data and enhances the transparency and visibility of academic activities both within and outside the institution, also for evaluation purposes.
- **APRE** (Agency for the Promotion of European Research)[94] aims to support and facilitate Italian participation in the European Union's Research and Innovation funding programs by offering information, training, and assistance services.

Despite this scenario and considering that initiatives such as OA2020 and Plan S have received limited endorsement in Italy (with OA2020 being endorsed by only Istituto Nazionale di Fisica Nucleare - INFN, The Conference of Italian University Rectors - CRUI, and Fondazione Telethon, and Plan S by INFN and Fondazione Compagnia di San Paolo), , several key challenges impede progress in advancing OA publishing in Italy. There is a notable absence of dedicated funding, a model successfully employed in other countries. Additionally, Italy lacks common tools for collecting publications and data, further hindering the advancement of open science. Furthermore, Italy faces a critical lack of policy reform concerning research evaluation criteria which are often centred around bibliometric indicators like the renowned Impact Factor. Efforts are underway to broaden the scope of research evaluation criteria beyond traditional metrics. The National Agency for the Evaluation of Universities and Research Institutes (ANVUR) is positioned to play a pivotal role in incentivizing researchers to publish in OA journals by integrating OA publication criteria into research assessments. However, recent developments, such as ANVUR's reluctance to recognize Open Research Europe (ORE) as a scientific publishing venue despite previous commitments made in CoARA, underscore a perceived gap between Italy and Europe in embracing open science practices.

[90] http://www.ingv.it/
[91] http://www.fondazionecrui.it/
[92] https://zenodo.org/records/5071055
[93] https://www.cineca.it/en
[94] https://apre.it/

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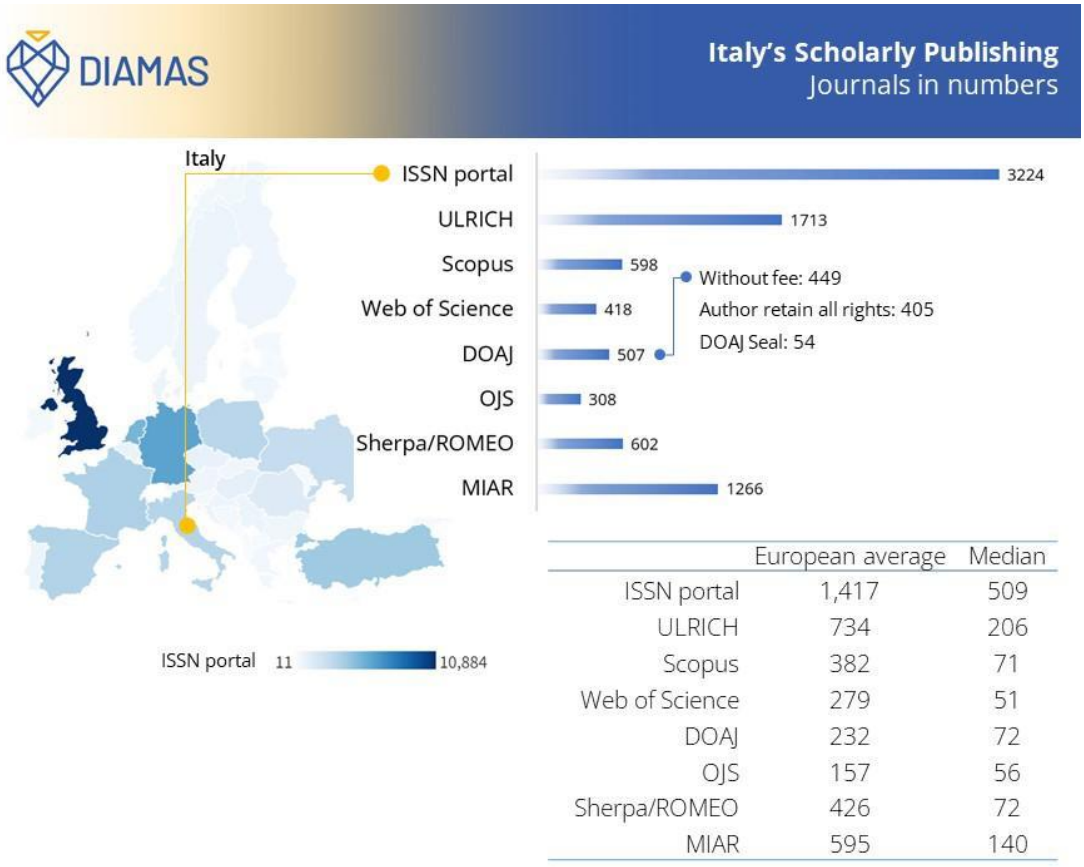
Another key challenge is represented by the absence of a "secondary publication right" which inhibits the right to republish in open access. Moreover, in many institutions there is a concerning lack of awareness regarding the management of authors rights, creative commons licences and copyrights issues in general.[95]

Based on a bibliometric analysis of journals based in Italy, the following key insights are highlighted. As shown in Figure 33, there are 1,713 active peer-reviewed journals in Italy according to Ulrichsweb. Examining DOAJ data reveals that 507 Italian journals are listed, with over 88% not requiring any fees for publishing and just 10% obtained DOAJ Seal.

The number of Italian journals included in selective international indexing services is relatively low: 418 for WoS and 598 for Scopus.



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 33. Italy's scholarly publishing: Journals in numbers

Figure 34 provides a detailed view of how Italian journals indexed in Ulrichsweb and WoS are distributed across different publisher types. This analysis offers valuable insights into the landscape of academic publishing in Italy, allowing for a comparison with broader European and global trends. Looking at the broader set of journals included in Ulrichsweb, the most common publisher types in Italy are Professional and University publishers. This pattern aligns with the distribution observed across Europe and

[95] Survey on the Attitudes and Awareness of the CNR Scientific Community on Secondary Publishing Right and Authors' Rights Retention. Presentation of Results, 2024. https://zenodo.org/records/10732325

globally, where Professional publishers dominate. Society publishers have a minimal presence in Italy, accounting for only 9.8% of the journals indexed in Ulrichsweb.

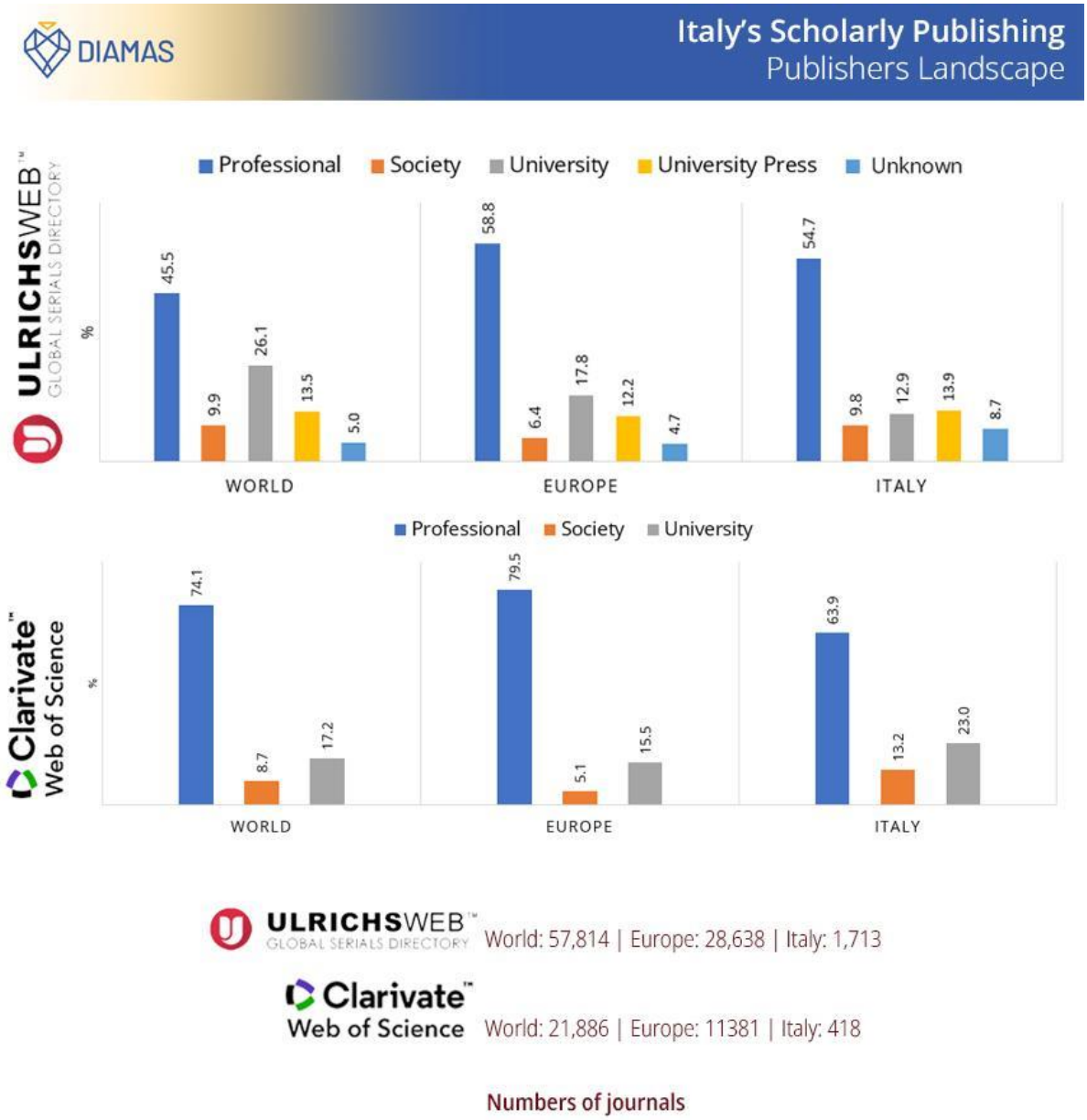


Figure 34. Italy's scholarly publishing: Publishers landscape

The distribution of publisher types for the 418 Italian journals indexed in WoS is similar. Professional publishers are the most prevalent, comprising 63% of the journals. University publishers account for 23%, while Society publishers make up the remainder. When comparing these findings to the European and global contexts, Italy's distribution of publisher types is broadly similar. However, there is a slight difference in the proportion of Society publishers since, in Italy, there is a higher percentage of this type of publisher than that observed in Europe and worldwide.

Figure 35 presents an alternative perspective by examining OASPA member categories for journals published by various entities active in the country. Notably, the proportion

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of OASPA members in the country is remarkably low. It is particularly noteworthy that small professional publishers, despite their low percentage, are present when reviewing journals included in Ulrichsweb. For the 418 journals included in Web of Science, there are individual journals affiliated with both very large professional publishers and small publishers. However, the overall proportion of OASPA members remains significantly below the averages for Europe and the world.

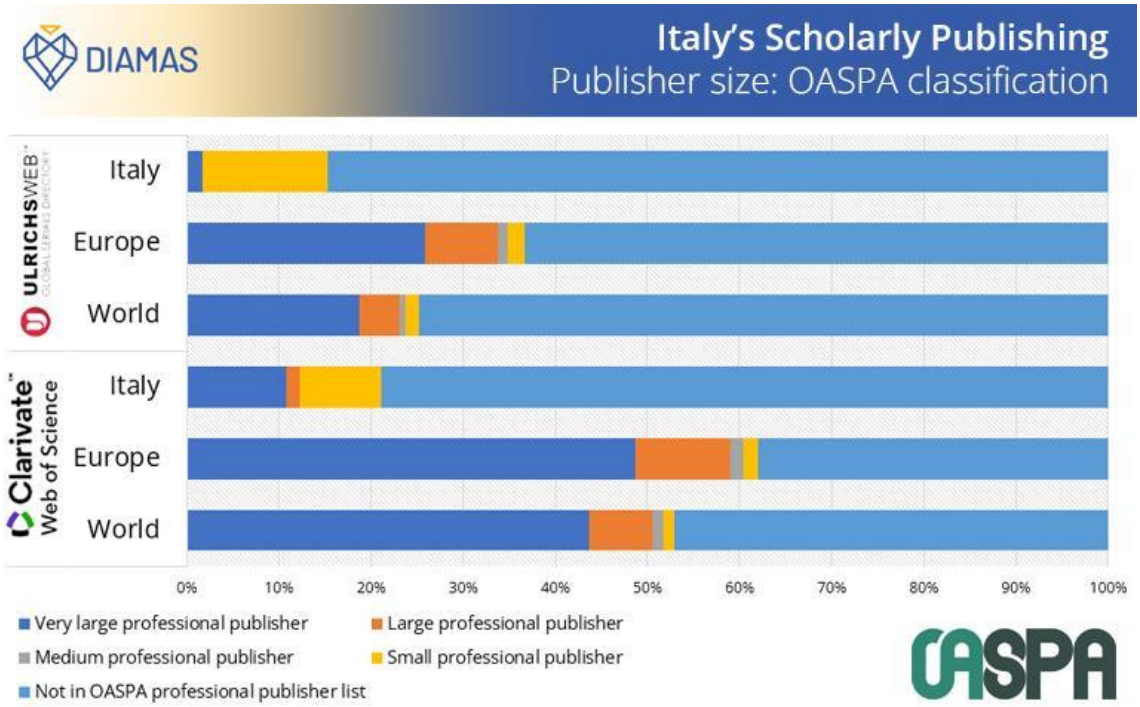
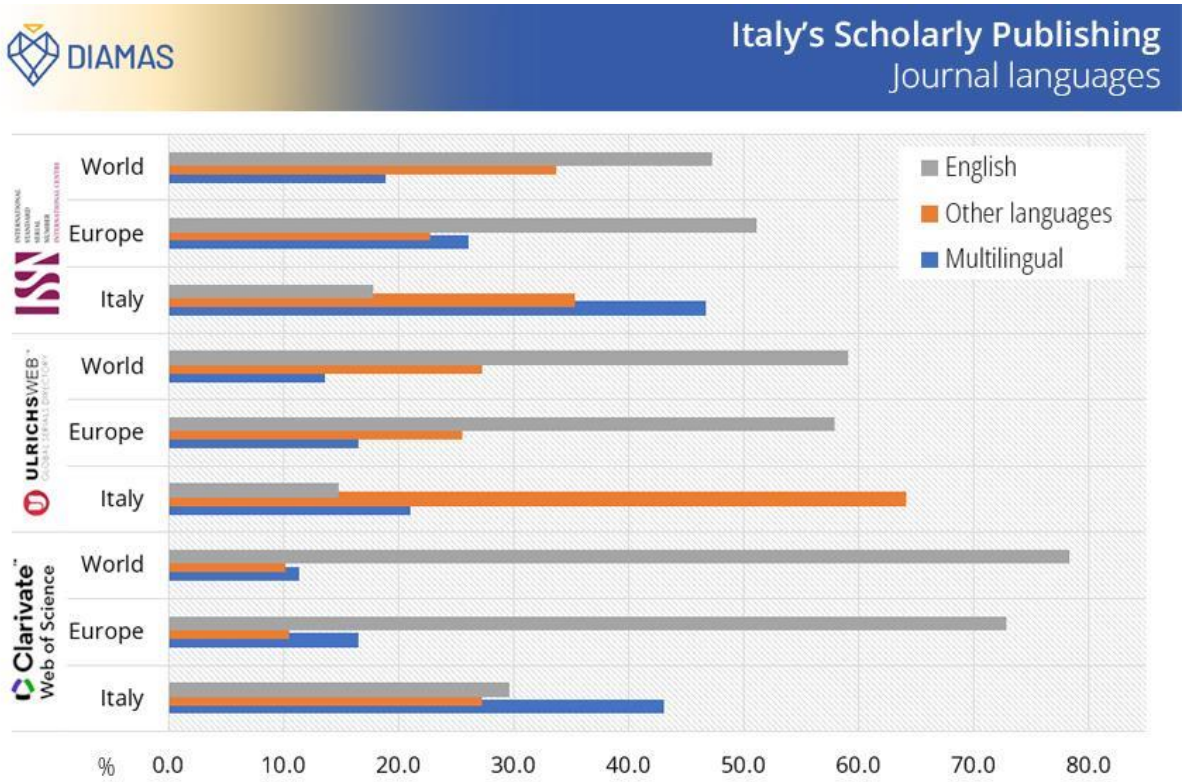


Figure 35. Italy's scholarly publishing: Publisher size OASPA classification

An analysis of the publication languages of journals based in Italy is presented in Figure 36. Upon examination of the distribution of language categories for journals included in Ulrichsweb, it becomes apparent that Italian journals diverge from the language distribution seen in European journals, with a smaller share being exclusively in English. Notably, around 63% of journals in Italy publish in "Other languages," primarily comprising Italian, while 22% of journals publish multilingual content.

In contrast, an analysis of journals indexed in WoS reveals a significant difference. Here, a similar percentage of journals publish in languages other than English and in English; the majority publish multilingual contents. This suggests that Italy maintains a relatively balanced approach to language usage in academic publishing, differing from the predominant focus on English observed in the rest of the world and Europe.



Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	Italy	Europe	World	Italy	Europe	World	Italy	Europe	World
English	576	26,665	77,372	254	16,584	34,172	124	8,298	17,155
Other languages	1,141	11,866	55,140	1,099	7,315	15,756	114	1,202	2,231
Multilingual	1,507	13,629	30,977	360	4,733	7,860	180	1,881	2,500

Figure 36. Italy's scholarly publishing: journal languages

The subject distribution of journals in Italy is illustrated in Figure 37, providing valuable insights into the publishing landscape. When considering the broader population of journals included in Ulrichsweb, Italian journals diverge from the averages observed in Europe and the world. Notably, Italy shows a higher proportion of journals in the Humanities and Arts & Social Sciences categories, while exhibiting lower shares in Engineering and Technology, as well as Natural & Agricultural Sciences, compared to both European and global averages.

The subject distribution for Italian journals included in Web of Science displays some differences compared to those in Ulrichsweb. Remarkably, Medical and Health Sciences, particularly Humanities and the Arts, are notably higher in Italy compared to Europe and the rest of the world. Conversely, Engineering and Technology, as well as Multidisciplinary journals, are markedly lower in Italy compared to the international averages.

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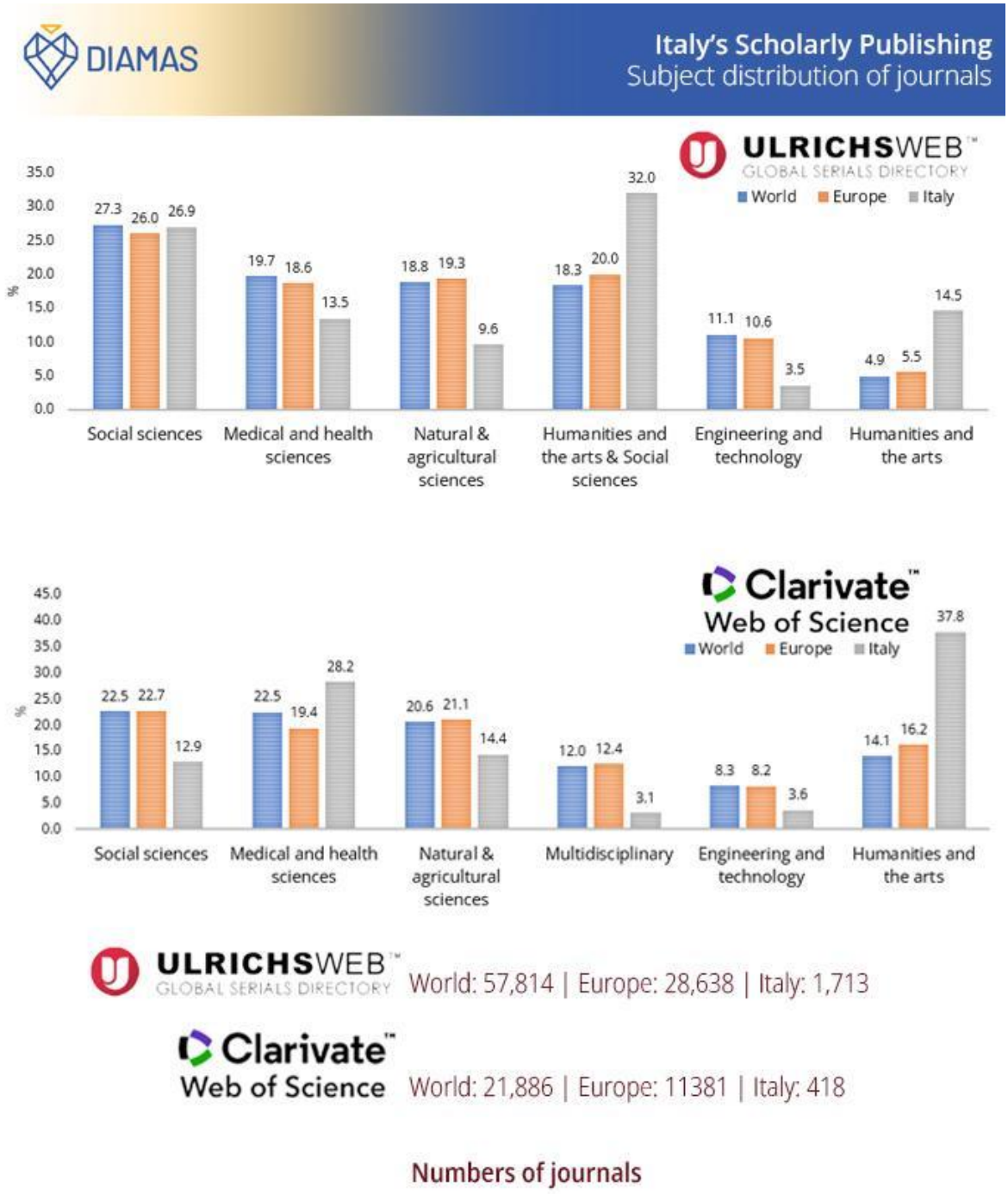


Figure 37. Subject distribution of journals in Italy

Funding and assessment systems

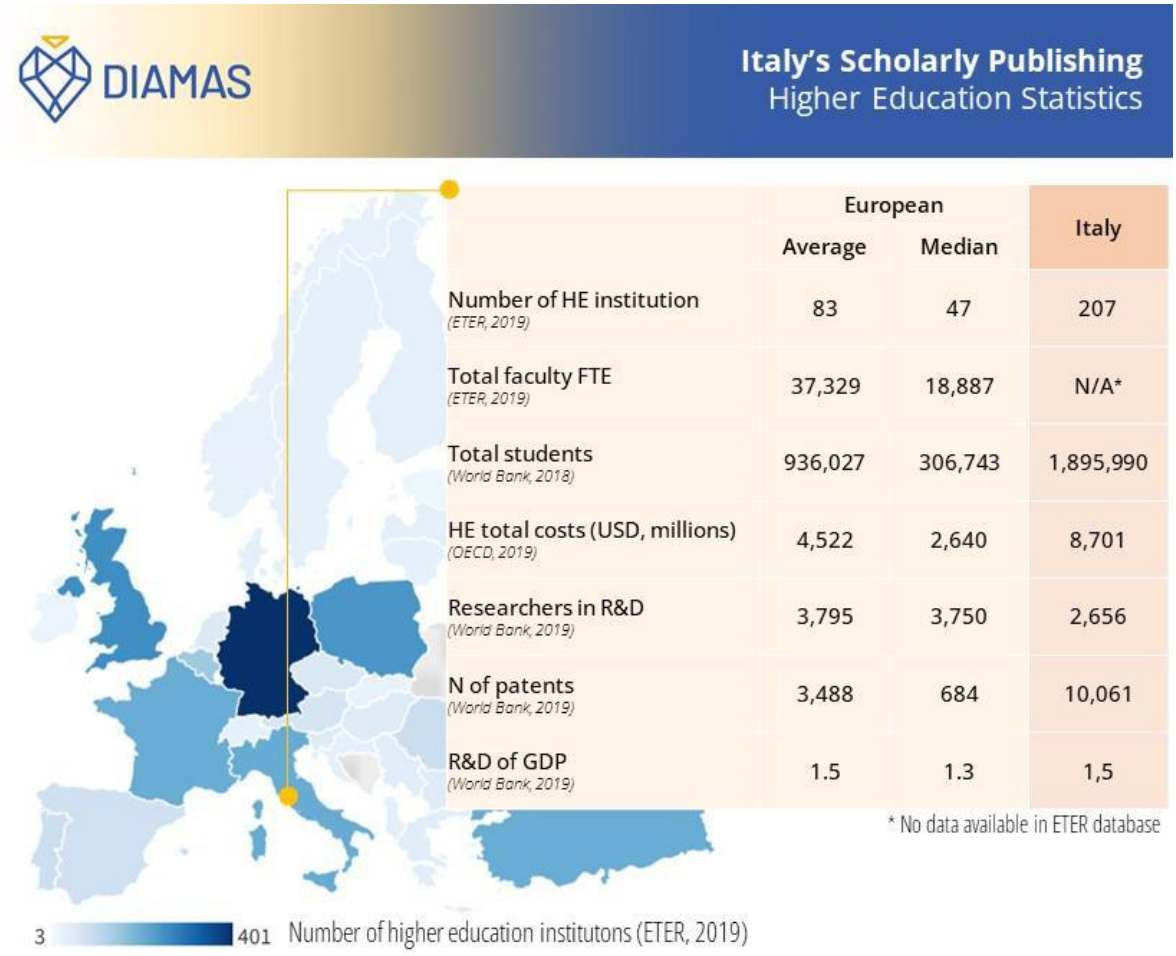
In Italy, the research system comprises a diverse range of HEIs, including both public and private universities, polytechnics, research centres, and various types of public institutions. The country is home to:

- 97 University institutions, of which 67 are State Universities
- 19 legally recognized non-State Universities
- 11 legally recognized non-State online Universities

Additionally, there are 20 research organisations and institutions, overseen by bodies such as MUR or other ministries.

Figure 38 presents statistical indicators extracted from international databases. It provides a quantitative assessment of the scale of the Italian higher education sector and the overall intensity of research and development (R&D) activities within the country.

In comparison to other European countries, Italy exhibits notable characteristics: it surpasses by far the European median in terms of the number of higher education institutions, total student enrolment, total costs for higher education and number of patents. Conversely, the number of researchers engaged in R&D is relatively low despite the percentage of GDP for R&D in line with the European average.



	European Average	European Median	Italy
Number of HE institution (ETER, 2019)	83	47	207
Total faculty FTE (ETER, 2019)	37,329	18,887	N/A*
Total students (World Bank, 2018)	936,027	306,743	1,895,990
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	8,701
Researchers in R&D (World Bank, 2019)	3,795	3,750	2,656
N of patents (World Bank, 2019)	3,488	684	10,061
R&D of GDP (World Bank, 2019)	1.5	1.3	1,5

Figure 38. Italy's higher education statistics

Italy has a national performance-based funding model based on peer assessment of RPOs. The Performance-based Research Funding System covers 20% of institutional funding for research. That 20% is distributed: 65% on general evaluation; 20% on results from

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researchers hired or promoted in the period; 15% on teaching quality.[96] In this context, it is pertinent to refer to the Valutazione della qualità della ricerca (VQR), a procedure aimed at evaluating the research of RPOs, conducted by ANVUR. The VQR procedure holds significance for RPOs as the outcomes contribute to determining the allocation of the incentive portion of the Ordinary Financing Fund (OFF) and enable access to ministerial funding procedures such as the "Departments of Excellence".[97] The role of the latter is regulated by the Law no. 232 of December 11, 2016; the provision establishes a fund to incentivize excellence in research and organisational planning within state university departments. ANVUR evaluates departments based on standardised performance indicators. The top 350 departments compete for funding, with a maximum of 15 per university. A commission assesses project proposals and ranks the top 180 departments, considering maximum funding limits per academic area. No reference is made to OA publications during the selection phases and in the assessment process.

Concerning the most recent VQR 2020-2024 call,[98] Article 8 addresses the evaluation criteria for submissions. It requests open access to publications supported by funding, with a prerequisite of at least 50% accessibility through public funds. However, temporary embargoes are permitted in compliance with existing regulations. For research funded with less than 50% public funds or embargoes surpassing set limits, only reference metadata presentation is required. Consequently, this provision does not impose a stringent requirement on researchers to publish in OA, thus failing to provide a clear directive in that regard.

Both in VQR and ASN (Abilitazione Scientifica Nazionale), which is the national recruitment and promotion procedure, the peer review assessment is heavily based on a mix of peer review, bibliometrics and informed peer review. The differences among fields present a major challenge for Italian research assessment: there is no use of bibliometrics in the humanities; whereas in the social sciences, the use of bibliometrics is restricted to economics and statistics. In STEM, peers validate judgements on individual articles, based on citations and Journal Impact Factor (JIF).

In practice for bibliometric areas, Italy uses the JIF explicitly as an indicator of journal performance, not of individual performance. The indicator is thereby not replacing indicators of performance at the article level, but supplementing them with extended information. In such a context, Italy's research culture exerts significant pressure on researchers to publish frequently, especially in high-JIF journals. This pressure is driven by the reliance on publication count and JIF metrics in the Italian research evaluation system. Consequently, researchers prioritise publishing in high-JIF journals to advance their academic careers, often at the expense of other considerations like open access or research quality. This trend is reinforced by the competitive nature of research

[96] https://projects.research-and-innovation.ec.europa.eu/sites/default/files/rio/report/MLE%2520on%2520PRFS_T1_PRFS%2520Design_Policies%2520and%2520Ambitions.pdf

[97] https://www.mur.gov.it/it/aree-tematiche/universita/programmazione-e-finanziamenti/dipartimenti-di-eccellenza

[98] https://www.anvur.it/wp-content/uploads/2023/10/Bando-VQR-2020-2024_31ottobre.pdf

funding in Italy, where publications in high-JIF journals enhance researchers' chances of securing funding, thereby intensifying the pressure to publish in such journals. For all these reasons in the Italian research landscape, journals indexed in WoS or Scopus, or those with a high JIF, are commonly prioritised due to their perceived indicators of scholarly excellence. Moreover, Italy emphasises internationalisation in its research endeavours, with many researchers striving to publish in international journals to enhance visibility, impact, and collaboration opportunities on a global scale. Concerning the balance between Italian and English in research policy and practices, there is a shift towards prioritising English as the primary language for scholarly communication. While Italian remains important for communicating research within the national context, proficiency in English and publication in English-language journals are increasingly emphasised in order to reach broader audiences and participate in international research networks. However, it's worth noting that efforts are made to preserve and promote research conducted in Italian, particularly in fields where the national language holds significant cultural or disciplinary relevance (SSH in general).

ASN is supported by a classification of lists of journals: two distinct lists are in consideration. The first comprises journals meeting specific criteria to be classified as Scientific Journals. A subset of these journals meeting more stringent requirements are designated as Class A Journal. In both cases, being an OA journal is not a necessary requirement for inclusion in the lists.[99]

Open access - requirements, incentives, and barriers

In 2022, the Ministry of University and Research (Ministero dell'Università e della Ricerca, MUR) introduced the National Plan for Open Science (Piano Nazionale per la Scienza Aperta - PNSA)[100] through ministerial decree 28-02-2022 n. 268. It aims to stimulate efforts across various stakeholders towards developing an institutional publishing infrastructure for open science results and to align stakeholders towards clear and measurable objectives in advancing open science in Italy. This comprehensive plan addresses multiple facets of open science, including scientific publications, research data, research evaluation, and models for open science and open data in public health. Aligned with the National Research Programme (NRP) 2021-2027, the PNSA serves as a strategic roadmap for implementing open science principles in Italy. Just over a year after the publication of the National Open Science Plan 2021-2027 (PNSA), the General Directorate for Internationalisation and Communication of the MUR has established in March 2023 a working group[101] with the aim of drafting an operational document for the implementation of the plan. The working group consists of seven experts covering complementary issues involved in the implementation of the PNSA, including infrastructural and legal aspects, as well as activities such as training, reform of

[99] https://www.anvur.it/wp-content/uploads/2024/01/Regolamento-classificazione-riviste.pdf
[100] https://www.mur.gov.it/sites/default/files/2023-01/PNSA_2021-27_ENG.pdf
[101] https://www.mur.gov.it/sites/default/files/2023-04/Decreto%20Direttoriale%20n.%2042%20del%2014-03-2023.pdf

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research evaluation processes, and relationships with European initiatives. These experts represent various organisations, universities, and research institutions.

In Italy, there are a minimum of 51 RPOs with established Open Science policies.[102] The predominant focus of these policies pertains to publications. They define the policies to be implemented for the dissemination of scientific publications and open access to them, as well as policies for the long-term preservation of scientific publications. The majority of the policies start with definitions in order to provide clarity on terminology and concepts used throughout the policy. Policies aim at: a) addressing the organisation and accessibility of research outputs within the institutional repository; b) outlining procedures for researchers to contribute their work to the institutional repository, c) detailing how research outputs are made available to the public through the institutional repository. Some of the policies also refer to the promotion of Open Access to publications and to the monitoring of their implementation, ensuring that the policy is effectively implemented and identifying areas for improvement.

Specifically, CNR has adopted in 2022 the institutional policy and the management policy on open access to CNR scientific literature outputs.[103] In April 2023, the "Roadmap for CNR's Open Science"[104] was approved in alignment with the PNSA.

Public funding for research primarily originates from the national government through various ministries and can be categorised into 4 main sources:

1. National funding, which is provided by central government entities such as MUR, the Ministry of Health, the Ministry of Environment, and the Ministry of Economic Development.
2. Regional funding, allocated by regional governments to foster collaboration among universities and small/medium-sized enterprises at the regional level.
3. Private Foundations (i.e. Telethon and Cariplo Foundations)
4. Funding from the European Commission.

As concerns MUR, the 2022 Call for Proposals for the Prin - Progetti di Rilevante Interesse Nazionale (Projects of Major National Interest) stipulates in Article 14 that each unit leader is accountable for ensuring that research outcomes and content, scientific publications subject to peer-review within the project, are made freely accessible online, at a minimum, through Green open access. As an exception, unit leaders are exempted from ensuring open access to specific parts of their research data if open access to such data would compromise the achievement of the main objective of the research itself.

[102] https://open-science.it/catalogue
[103] CNR Deliberation n. 35 of 08/02/2022 https://www.cnr.it/it/trasparenza/delibere-cda/documento/111563/20220208-deliberacda-035.pdf
[104] https://zenodo.org/records/7983538

Among private funders, Telethon Foundation's open access policy[105] promotes open access to research results funded by them, requiring that all publications supported by their grants be made publicly available. They have selected Europe PubMed Central (Europe PMC) as the repository for these publications. Authors must choose journals allowing free submission or consider paid Open Access. Compliance with Creative Commons CC-BY licence is requested. If unable to cover Open Access fees, authors must select options with shorter embargo periods or consider alternative journals. Telethon Foundation holds researchers responsible for policy compliance and compatibility with Europe PMC publication requirements.

The Cariplo Foundation also adheres to an open access policy[106] within its funding framework, covering the costs for open access publication. It routinely monitors the number of open access publications resulting from its funded projects. This policy, along with Cariplo's intellectual property protection policy, aligns with the foundation's strategy to enhance the accessibility of research results and data it supports. While it does not mandate authors, it encourages them to opt for immediate publication in fully free open access journals. Alternatively, if the publisher offers an author-pays option, the Foundation deems it appropriate to support these costs for open access publication. Regarding the deposit in digital repositories, the Foundation recognizes disciplinary repositories as highly valuable information infrastructure for disseminating research outcomes within scientific communities. Institutional repositories, aimed at collecting and preserving an institution's scientific output, are also deemed significant. The Foundation encourages beneficiaries to utilise open access digital archives, whether disciplinary or institutional, capable of ensuring the quality, visibility, persistence, and long-term preservation of the materials. If researchers opt for publication in closed-access journals, they must make the post-peer-reviewed manuscript version (postprint) or, where possible, the final published version available in open access through self-archiving within three months of the publisher's embargo period.

From the legal point of view, it is worth mentioning the legislative mandate outlined in Law 112/2013,[107] specifically art. 4. This Law Article was converted with modifications to Legislative Decree 91/2013 'Urgent provisions for the protection, enhancement, and revitalization of cultural and tourism assets and activities. It stipulates that public funding bodies must facilitate open access to research results financed with a minimum of 50% public resources, specifically scholarly journal articles. Open access can be achieved either through immediate publication by the publisher or through non-profit republication in repositories, subject to embargoes of 18 to 24 months. The law does not specify which version of the work should be deposited, but it is commonly understood to align with publishers' self-archiving policies. Additionally, efforts are required to unify research output databases managed by the Ministry of Cultural Heritage and Tourism and the Ministry of University and Research. It is emphasised that the implementation of the law should not entail new financial burdens on Italian public finances, and support should be provided using existing human, instrumental, and financial resources.

[105] https://back.telethon.it/uploads/2022/04/Policy-OA_v3_en_2022.pdf
[106] https://www.fondazionecariplo.it/portal/upload/ent3/1/policy_5.pdf
[107] https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2013-10-07;112

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Although the law partially aligns with EU Recommendation 2012/417 on the reuse of publicly funded outputs, its embargo periods exceed those recommended.

Furthermore, an effort to align policy with other European countries was the draft bill (known as the Gallo bill DDL 1146)[108] on open access to scientific publication aimed to introduce the right of republication in open access into copyright law. Unfortunately, after passing through the Chamber of Deputies the bill has halted in the Senate in 2019.

At a practical level, when researchers deposit their outputs in their institutional repository they need to indicate the type of attached version (VoR, AAM, preprint version, or other type of attachment). They must also declare the access setting (open access, embargo, or access restricted to repository managers, therefore unavailable to the public). The last mandatory item relates to the usage licence, with the following options: a) All rights reserved, b) Creative Commons, c) Public domain, d) Other. The correct choice is dictated by the publisher's policy and agreements made at the time of publication.

Despite this interest in the openness of scientific publications, so far there is neither a centralised institutional monitoring for open access to publications nor a national plan for funding institutional publishing. Of course, to guarantee the sustainability of the entire open scientific communication system, the PNSA recommends monitoring open access to publications as well as non-commercial forms of publication, copyright legislation framework, and open educational resources. Nonetheless, to date, there is no institutional monitoring in place.

As a matter of fact, there are some initiatives, both unofficial and based on bottom-up actions. Among them is the Open Science working group of Committee of Presidents of Public Research Organisations (CoPER),[109] established in December 2021 to foster coordination among research institutions and between research institutions and universities, represented by the CRUI. According to the already mentioned CRUI's Observatory on Open Science survey in 2021 to assess open science practices in Italian universities, CoPER conducted its own investigation in 2022[110] to provide an updated overview of various open access initiatives undertaken by public research institutions. Universities and research institutions exhibit both similarities and profound differences, primarily related to their organisational structure. For instance, while all universities are supervised by the same Ministry, research institutions operate differently. This organisational contrast is reflected in the management of open access initiatives, with universities displaying a more elaborate structure compared to research institutions. According to the CoPER survey, 70% of research institutions have established or are in the process of approving open access policies. They make between 20% and 70% of their research outputs openly accessible, with 40-50% having internal structures for open access publishing (such as university presses or editorial services). Additionally,

[108] https://www.senato.it/leg/18/BGT/Schede/Ddliter/51466.htm
[109] https://home.infn.it/coper/openscience.html
[110] Survey Results: Policies and Infrastructures for Open Access to Publications and Grey Literatures: https://doi.org/10.15161/OAR.IT/77023

70% of research institution archives support the Green road, and 10-20% utilise Diamond OA in their journals. However, only 2% of research institutions do actively monitor open access publication costs. Common platforms used include Dspace, Iris, Zenodo/Invenio, People/Explora, and Dataverse.

Furthermore, studies conducted by CNR[111] focused on journal publications from 2015 to 2020, analyse the trend worldwide, and particularly within CNR. They reveal a percentage increase in publications in Gold OA journals, especially from 2018 onwards. It is notable that this increase is greater in Italy compared to the rest of the world, and even more so within CNR. There is also a rise in the percentage of publications in Hybrid OA journals since 2018, with a sharp increase from 2019 in Italy and within CNR. Conversely, there is a decrease in the percentage of non-OA publications, which decline more significantly within CNR compared to Italy and the rest of the world. The increase in open access publications in recent years, especially in Italy and within CNR, can be attributed to: a) the need to comply with mandates from projects funded by the European community, requiring that all outputs be published in open access; b) the signing of the first transformative agreements.

Another initiative worth mentioning is the new OS Observatory.[112] This involves a consortium of twelve universities and nine research centres that aimed to develop a template for tracking open science activities to be shared at the national level.[113] One aim is to monitor the 8 pillars of the European Commission on open science. A Virtual Research Environment has been developed where a data collection tool has been implemented, and data collection has begun. Some institutions have acted as testers and collected data. The data collection tool is available to all institutions upon request and is active.[114]

Open access-related infrastructures

Each Italian university maintains its own institutional repository, using in the majority of cases the research information system IRIS, provided by Cineca. The platform not only collects and manages information related to research outputs, but also represents a tool for research analysis and evaluation. Data on managed entities are imported from both administration databases and external bibliographic/bibliometric sources (particularly WoS, Scopus, and Journal Citation Reports for citations and JIF).

While not all higher education institutions engage directly in OA publishing, many university libraries and university presses do publish OA content. There is a consortium of University Presses (Coordinamento UPI)[115] which consists of 17 university presses that collaborate to support publishing initiatives. This collaboration involves the study and deepening of topics related to the positioning, function, and promotion of university

[111] https://www.openaccessrepository.it/record/76973
[112] https://open-science.it/documents/20123/0/Galimberti_Unimi.pdf/05a25389-de0d-7357-96e4-703270e2a959?t=1686229159542
[113] Gruppo di lavoro italiano Monitoraggio attività di Open science. (2023, dicembre 15). Schema di monitoraggio attività di Open Science. Zenodo. https://doi.org/10.5281/zenodo.10389874
[114] https://services.d4science.org/web/osobservatory_it
[115] https://www.universitypressitaliane.it/

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publishing and high-level scientific dissemination and participation in various cooperative projects focused on dissemination, metadata, business models, and marketing. The Consortium is not specifically involved in OA publishing, but many of the university presses included publish open access journals. The Consortium has activated the National Peer Review Register,[116] which collects the names of professors who, within their respective reference universities, have made themselves available as evaluators.

All Italian IPSPs who responded to the DIAMAS survey on the landscape of institutional publishing provide at least one type of technical service: metadata and quality control, user interfaces, and software and hosting are the most common services they provide.

As for externally-provided technical infrastructures for open journal publishing, OJS is by far the most often used publishing system. Open Monograph Press is used by some of the university presses that publish open access books.

Italy does not have a national platform for diamond journals, however there are some journal platforms that maintain, develop and promote centralised e-publishing platforms dedicated to University-owned open access journals. Good examples are within big Universities (Piattaforma riviste Unimi,[117] Rosa,[118] AlmaDL Journals,[119] and Sirio@Unito[120]).

Institutional publishing

Funding and sustaining IPSPs

We were not able to identify any national public funding instrument that IPSPs can apply for to sustain their activities. In recent years, IPSPs have started to move funding previously allocated to journal subscriptions, to finance read & publish (transformative) agreements with big publishers. It is common practice that Gold OA expenses are funded directly from the authors' own research funding (e.g. acquired from competitive research project calls).

In general, University presses in Italy are financially supported through various means, including:

- **Sales of publications:** University presses generate revenue through the sale of books, journals, and other academic publications. This encompasses both direct sales to readers and distribution through bookstores and online sales channels.

[116] https://www.universitypressitaliane.it/albo-nazionale-peer-review
[117] https://riviste.unimi.it
[118] https://rosa.uniroma1.it
[119] https://journals.unibo.it/riviste
[120] http://www.ojs.unito.it

- **Institutional support:** Some university presses receive direct financial support from universities or academic institutions with which they are affiliated. This may include direct funding, provision of operational space free of charge, or other forms of institutional assistance.
- **Foundations and donations:** University presses may benefit from donations from foundations, research institutes, non-profit organisations, or patrons interested in supporting academic production and dissemination of knowledge.
- **Research projects and collaborations:** University presses sometimes participate in research projects or collaborate with other academic institutions or organisations for publication production. These projects may be funded through research funds or other dedicated funding sources.

University presses in Italy that (claim to) adhere to the Diamond OA model typically prioritise authors affiliated with the institution, suggesting a focus on internal stakeholders rather than broader national community accessibility. This observation highlights a nuanced approach within the academic publishing landscape, where open access to scholarly resources may be primarily directed towards local academic communities rather than being universally inclusive. Such a practice reflects the complexities inherent in balancing institutional interests (and financial sustainability) with broader dissemination goals within the framework of open access initiatives.

The PNSA, already mentioned, has not yet allocated specific funding, infrastructure, or centralised governance for its implementation. There is no mention of an Open Science fund or budget for Diamond OA publishing in Italy in the current plan.

The plan vaguely mentions monitoring in connection with open access, aiming to establish a monitoring system for the implementation of open access to scientific publications. In response to the lack of centralised support, spontaneous working groups have emerged, comprising universities and research entities interested in developing a data collection model for open science activities.

Results from the DIAMAS WP2 survey on the landscape of institutional publishing (Bosman et al., 2024) showed that Italian IPSPs are in the vast majority small-scale and independent, mostly running on a budget volume in Euros in the range 11-50K Euros or less. We received a total of 52 responses from Italian IPSPs targeted by the survey. The majority of IPSPs (61.5%) are a part or a department of a Parent Organisation, mainly operating independently but owned or governed by Italian universities or public research institutions.

When asked about reliance on different forms of funding over the last 3 years, 40.4% IPSPs reported reliance on fixed and permanent subsidies from a parent organisation, in most cases with high (6) or very high (12) reliance.

Periodically negotiated subsidy from a parent organisation is relied upon by 15 IPSPs, but only 6 declare high (3) or very high (3) reliance.

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Time limited grants or subsidies (private or public) from outside their own organisation are a source of funding for 16 respondents but mostly without high reliance (10).

Permanent public government funding is a highly reliable source for 5 IPSPs. Collective funding and Voluntary Author Contributions were reported as a source of funding by 6 IPSPs, but with low or very low reliance. 18 IPSPs reported Content and print sales as a source of funding, highly reliable in 5 cases. 14 IPSPs considered Author Processing Charges at least with low reliance, high in 6 cases. 10 IPSPs reported low or very low and 2 high or very high reliance over the last 3 years on other incomes like event organisation, commercial revenue, loans.

As regards the stability of these funds over the last three years, the option "Fixed and permanent subsidy from parent organisation" is the one considered the most stable, at least by a majority (22) of respondents.

Periodically negotiated subsidy from parent organisation is a form of funding where responses were rather evenly spread in the range from very unstable to very stable.

Responses on the stability of other forms of funding, namely time-limited grants or subsidies from outside the own organisation, permanent public government funding, collective funding, Voluntary Author Contributions, share a pattern leaning towards low stability, neither stable or unstable at best.

In a non-negligible number of responses, funding coming from content and print sales (9) and Author Processing Charges (8) are considered either stable or very stable.

IPSPs were asked to list up to five external funders who have granted cash grants or subsidies over the last three years (largest contributors ranked first).

Major funders mentioned were: Ministero della Cultura, Ministero dell'Università e della Ricerca, Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP3), Stiftung Südtiroler Sparkasse, United Nations, Istituto Confucio Università Sapienza Roma, European Commission (H2020 project), Regione Lazio, Trinity College, Dublin, Comune di Milano, Bologna University, Konica-Minolta.

None of the organisations listed above were the parent organisation of the IPSP.

Despite a majority of Italian and institutional funders, a wide variety of funders typology (private foundations, private companies, museums and cultural institutes, international organisations) could be observed.

When asked to what extent the IPSP relies on non-monetary or in-kind support, most IPSP that expressed a preference had a high (7) or very high (17) reliance. Similarly, for

monetary income, where more IPSPs had a high (7) or very high (8) reliance than low (4) or very low (5).

For those IPSPs that have a parent organisation, the most common in-kind support offered by the parent organisation consists in Facilities and premises (81.2%), General IT services (78.1%), Salaries of permanent staff (68.8%), Human Resource management, general financial and legal services (56.2%), Service-specific IT services (50%). Other services mentioned are printing and shipping.

The financial sustainability of Italian IPSPs presents a multifaceted challenge, encompassing issues related to funding sources, operational efficiency, and the changing landscape of scholarly communication. Key challenges and potential solutions, as articulated by respondents, are summarised below:

1. **Publication Variability:** A significant challenge is the fluctuating number of publications. This variability can impact budget planning and resource allocation. Potential solutions may involve better forecasting methods and diversifying publication types
2. **IT Service Outsourcing:** Reliance on outsourced IT services exposes the operation to market fluctuations. Addressing this challenge entails exploring long-term contracts or strategies to mitigate price increases from service providers.
3. **Unsustainable No-Cost Model:** Not requesting contributions from external journals and books raises sustainability concerns.
4. **Peer-Review Service Support:** Economically supporting peer-review services is essential. This can be achieved through dedicated funding mechanisms or collaborations with institutions specialising in peer-review support.
5. **Dependence on Membership Fees:** Relying solely on unpredictable membership fees poses risks. Strategies to enhance financial stability involve reinstating live events to attract and retain members.
6. **Investing in Staff:** Investing in qualified staff is crucial for maintaining service quality and efficiency. Volunteers can complement paid staff to alleviate some resource constraints.
7. **Open Access and Technological Update:** Embracing open access and staying technologically updated are essential for staying relevant in the evolving publishing landscape.
8. **Logistics Costs:** Reducing reliance on physical distribution can lead to cost savings. This includes considering digital-only distribution and reducing the number of printed copies.
9. **Continuity in Funding:** Ensuring consistent funding is vital for stability and growth. Seeking funding from foreign private foundations through donations can provide much-needed continuity.
10. **Time and Energy Savings for Researchers:** Researchers' time and energy can be saved by increasing technical support staff availability.
11. **Centralised Funding:** Increasing centralised funding options tied to project activities can provide a more secure financial base.

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12. **Author Awareness of Costs:** Authors should be made aware of the minimal costs associated with open access publishing, encouraging voluntary contributions.
13. **Competition with Large Corporations:** Small university presses face competition from international publishing corporations. Strategies include securing public funding and creating international distribution networks to promote editorial independence.
14. **Open Access vs. Sales:** Balancing the demand for open access publications with the need to sustain sales revenue is a challenge. Support from research-promoting institutions can help navigate this tension.
15. **Creating a Sustainable Business Model:** Establishing a sustainable business model while maintaining open access and quality requires collaboration with university consortia and institutional sponsors.
16. **Voluntary Editors and Cost Management:** Services relying on voluntary editors need to manage costs effectively. Future cost increases should be assessed, and the possibility of digital-only publishing explored.
17. **Promotion and Distribution Network:** A robust promotional and distribution network can help finance academic publications resulting from research.
18. **Shortage of Staff:** Staff shortages hinder operations. Collaboration with other organisations can provide shared tools and services, reducing resource constraints.
19. **High Costs and Restricted Markets:** High costs and limited markets pose challenges. Strategies include emphasising open access initiatives and publications for educational purposes.

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

Most IPSPs reported that they rely on external services (76.9%). Those IPSPs that declared to use external editorial services (23/52) receive them on a voluntary basis (17) and/or outsource them (5) and/or as in-kind contribution (6). External production services are used by 32/52 IPSPs, provided on a voluntary basis (17) and/or as in-kind contribution (6) and/or outsourced (5). IT services are reported to be externalised for 28/52 IPSPs, mostly outsourced (17) and/or received as in-kind contribution (8) and/or on a voluntary basis (5). Communication services are external for less IPSPs (17/52), mostly voluntary (10) and/or received as in-kind contribution (8) and/or outsourced (1).

External services are not typically used for administrative, legal and financial services (19/52 IPSPs), mostly received in-kind (10) and/or on a voluntary basis (7) and/or outsourced (3). 18/52 IPSPs declared to rely on external services for training support and or advice on publishing policies and best practice mostly on a voluntary (7) and/or in-kind (7) basis, and/or outsourced (5). Other external services mentioned by 3 IPSPs are Printing services (1), e-Certificate release (1), Bibliographic services and legal deposit (1). IPSPs provide one or more technical services, with prevalence of full editorial workflow management (36), metadata and quality control (28) and hosting (25).

Other services provided, or specification of services in the broader categories proposed, include access to DOI and ISBN codes, graphic and layout design, video Production of presentations of published articles, marketing and promotion, preparation and sending of indexing requests, metadata transmission to libraries and distribution catalogues, antiplagiarism, management of OAI-PMH API. Maintenance and update of the services provided is often reported to be managed in house by a dedicated publishing department or by an IT department (65.8%). However, the share of outsourcing, either full, or partial is significant in the responses (29.5%). A similar pattern of distribution among the options emerged when asking about the maintenance and update of the technical infrastructure.

Conclusions

Italy's scholarly publishing landscape shows a complex interplay between the growing emphasis on OA and the strong interests of commercial publishers which dominate the market, offering Gold and Hybrid OA models that require financial contributions from authors or their institutions. On the other hand, university presses, the primary institutional publishers, favour the Diamond OA model, making content freely available but often limiting authorship to their affiliated scholars. The lack of dedicated public funding for Diamond OA institutional publishers further restricts their reach, despite ongoing discussions about alternative funding models. Despite years of work and negotiation between stakeholders to develop a supplementary funding model, tangible results haven't materialised. While Diamond-centred initiatives and service providers have flourished in recent years, they remain a minority model in the national landscape.

National initiatives like the 2022 National Open Science Plan promote OA, but the absence of official institutional monitoring data makes it difficult to gauge their true impact. Additionally, the lack of OA incentives in national research evaluations and funding allocations further discourages its adoption.

To navigate these challenges and create a more balanced scholarly publishing landscape, Italy could consider the following strategies:

- Implement a national funding mechanism for institutional Diamond OA publishers. This would provide them with the resources they need to operate and expand their reach.
- Establish a centralised technical infrastructure to support Diamond OA publishing. This would facilitate the management and dissemination of OA content by institutional publishers.
- Integrate OA publication metrics into national research evaluations and funding allocation processes. This would incentivize scholars to publish openly, promoting a culture of open access to knowledge.

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- Develop a centralised institutional data collection system to monitor the progress of Open Science initiatives in Italy. This would provide valuable insights for evaluating their effectiveness and guiding future actions.

Addressing these challenges and implementing these solutions would help Italy foster a more balanced scholarly publishing landscape that promotes OA while acknowledging the needs of its research institutions and scholars.

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The Netherlands

National landscape of scholarly publishing

Prior to the establishment of the Regieorgaan Open Science NL (OSNL) in 2023, the National Plan Open Science launched in 2017, ambitiously setting 2020 as the date by which 100% of scholarly journal articles from researchers at publicly-funded knowledge institutions will be published under an open licence without an embargo period (van Wezenbeek et al., 2017). In 2022, the National Plan became the National Programme Open Science (NPOS) and pushed that date to 2030 (NPOS, 2022). The work plan of the OSNL indicates even stronger interest in Diamond OA than the NPOS had outlined one year prior (OSNL, 2023).

There has been a strong push for Open Access in the Netherlands since 2015, with a national target of 100% Open Access for scholarly journal articles having been set by the Dutch government at that time (OCW, 2013; Bosman et al., 2021; Bosman & Kramer, 2024). The transition to Open Science in the Netherlands is now financed with 20M EUR per year for ten years between 2022 and 2031 by the Ministry of Education, Culture and Science (Onderwijs, Cultuur en Wetenschap, OCW). Divided across the four pillars of Open Scholarly Communication (with OA), FAIR data, Open Research Software and Societal Engagement/Citizen Science, these funds come from the fund for research and science (Fonds voor onderzoek en wetenschap) (Tweede Kamer, 2022). The stated goal of this investment is to make open science "the norm" for Dutch scholarly communication and higher education by 2031; the measure of success will be that open science has been completely adopted in the workings of Dutch universities and other research institutions by that date (Tweede Kamer, 2022).

Policies for the Dutch transition to OA are mainly driven by the Universities of the Netherlands, The University Medical Centres and the Dutch Research Council (NWO). Costs of OA at this time are covered by the budgets of diverse stakeholders in this transition; for example, read-and-publish agreements are funded by institutional libraries' budgets while support for Diamond OA comes from library, funder and institutional budgets together. NWO as a research council has dedicated funds to stimulate and support Open Science and Open Access. For example, it initially funded the Netherlands' national platform for OA publication, Openjournals.nl, and from 2023-2027 this cost is covered by NPOS / OSNL (Convenant regieorgaan, 2023). Starting in 2025, the OCW budget will allocate an initial 0.3m EUR of the 20m EUR total towards enabling and strengthening institutional open publishing (Open Science NL, 2023).

The percentage of scholarly outputs that are published OA is measured annually in the Netherlands. While 42% of journal articles published in 2016 were available OA, by 2022 that number had risen to 89% (Bosman & Kramer, 2024). The number of scholarly publications produced through research that was funded by NWO has been consistently

higher than the national total, at 72% in 2015 and 90% in 2021 (Waltman & Lamers, 2022). Most recently, in 2023 an estimated 95% of total scholarly journal publications were available OA (NWO, 2023). An important finding of the OA Diamond Journals Study for the Netherlands was that scaling up Diamond publishing is necessary to achieving the 100% goal; however, the Diamond route needs to be improved financial and infrastructural support in order for the remaining percentage of scholarly outputs to be openly accessible too (Bosman et al., 2021).

The need for increased support for Diamond OA reflects a publishing environment in the Netherlands that has historically favoured other routes to OA. Since 2015, the Dutch government has facilitated the organisation of numerous read-and-publish agreements on behalf of all universities to accelerate the transition to OA through the Gold route (Sondervan et al., 2021). A robust repository ecosystem has also enabled a tradition of Green OA in the Netherlands: all universities have repositories (Bosman & Kramer, 2024). Furthermore, all researchers at Dutch universities have the right to publish via the Green OA route through deposit in their institutional repositories according to Article 25fa of the Dutch Copyright Law, known as the Taverne Amendment (Tweede Kamer, 2015). This legal measure permits researchers to override contracts with commercial publishers if necessary in order to deposit journal articles and shorter scholarly publications, like book chapters. If any legal fees are incurred in spite of the secondary publishing rights that the Taverne Amendment grants, the Dutch universities collectively bear those costs thanks to a collaborative initiative called "You Share, We Take Care" that launched in 2020.

A combination of national investment in read-and-publish agreements and the fact that national funders factor in APCs as an essential research-related expense that grants can cover has led to a sharp increase in OA journal publications by Dutch researchers. Both librarians and the negotiators who represent Dutch institutions in agreeing read-and-publish agreements have expressed intent to avoid paying exorbitant fees to the commercial sector for Gold OA publication, and instead to put the costs of OA towards developing and enabling open science practices (Heijne & van Wezenbeek, 2018).

Commercial scholarly publishing in the Netherlands has hitherto not been held back by these measures to achieve open access to Dutch scholarship. Institutional publishing by Dutch organisations has had to compete with international commercial publishers ever since the large-scale commercial sell-out of national journals in the 1990s and 2000s (Bosman & Kramer, 2024). Of the many journals published in the Netherlands, the majority is still owned by a large commercial publisher (Laakso & Multas, 2023). As Figure 39 shows, journals with read-and-publish agreements account for more than double the number of fully OA journals and hybrid/closed journals together. Moreover, most publications by Dutch researchers are released by large commercial scholarly publishers. Large commercial presses in the Netherlands that publish many of those journals are Elsevier, Wolters Kluwer and Brill (acquired by De Gruyter in 2024). Figure 40 points to a similar picture of the Dutch publishing landscape in consultation with OASPA member categories for journals by different publishers active in the country. It shows a large share of OASPA members in the Netherlands, but that membership is almost completely constituted by large and very large publishers.

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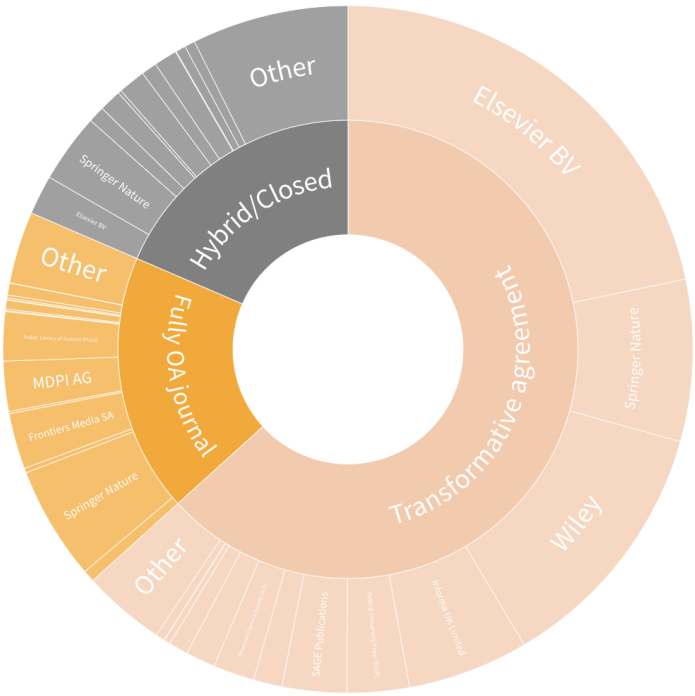


Figure 39. Estimated ratios of articles published immediately OA through transformative agreements, in fully OA journals, and behind subscription paywalls in the Netherlands[121]

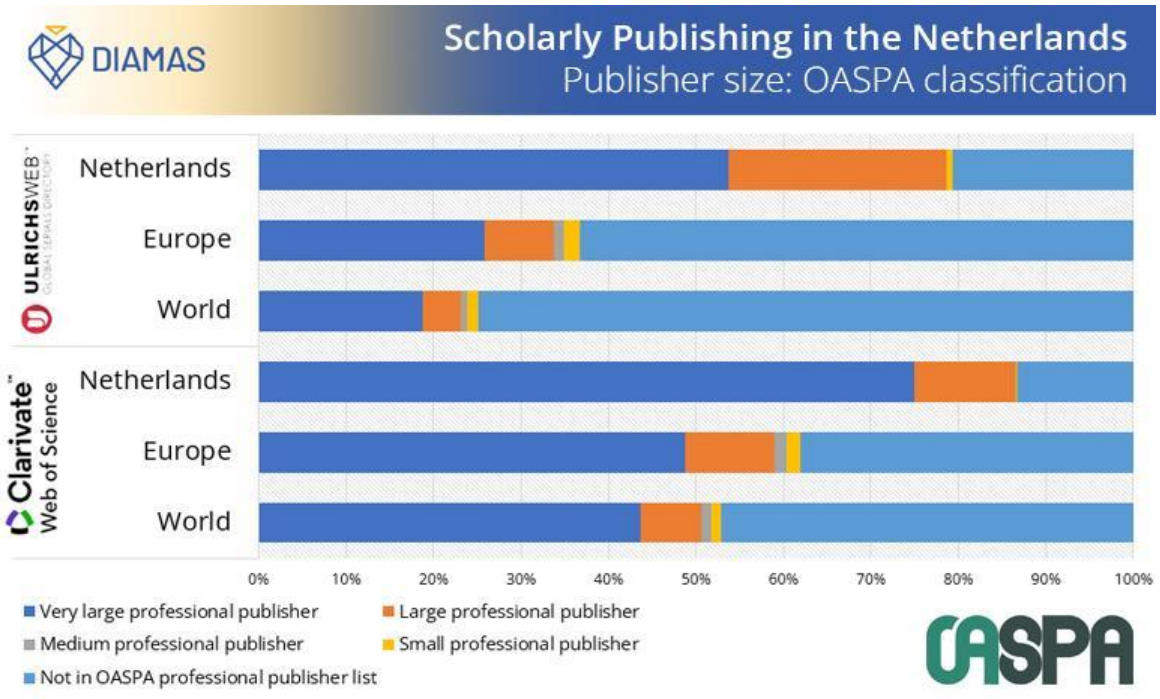
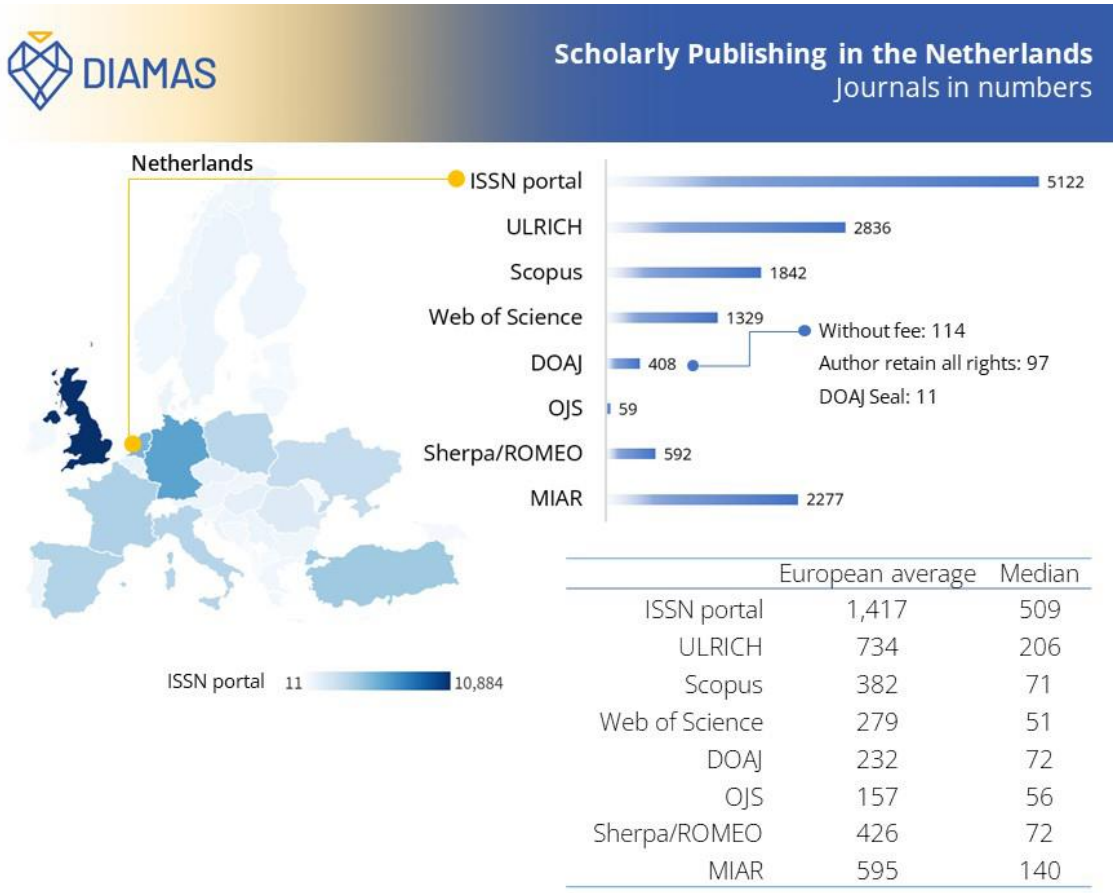


Figure 40. Scholarly Publishing in the Netherlands: Publisher size: OASPA classification

Our scan of bibliometric data for journals based in the Netherlands in Figure 41, shows 2836 active peer-reviewed journals in the Netherlands based on Ulrichsweb. According

[121] https://esac-initiative.org/market-watch/#country_shares

to DOAJ data, 408 Dutch journals are listed, with only 28% of those charging no fee to publish, indicating that uptake of the Diamond OA model is still relatively limited. The number of journals included in selective international indexing services is 1329 for WoS and 1842 for Scopus.



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 41. Scholarly publishing in the Netherlands: Journals in numbers

Of the journals active in the Netherlands, distribution across publisher types of the 2836 Dutch journals indexed in Ulrichsweb and the 1329 in WoS are shown in Figure 42. In both these indexes, so-called "professional publishers" dominate. The proportion of professional publishers of journals relative to society and university publishers in the Netherlands is significantly higher than in Europe and the World, constituting almost double the ratio of professional publishers in Europe and the World, according to Ulrichsweb. We also observe that 98.3% of these journals are indexed in WoS, higher than the European average of 79.5%.

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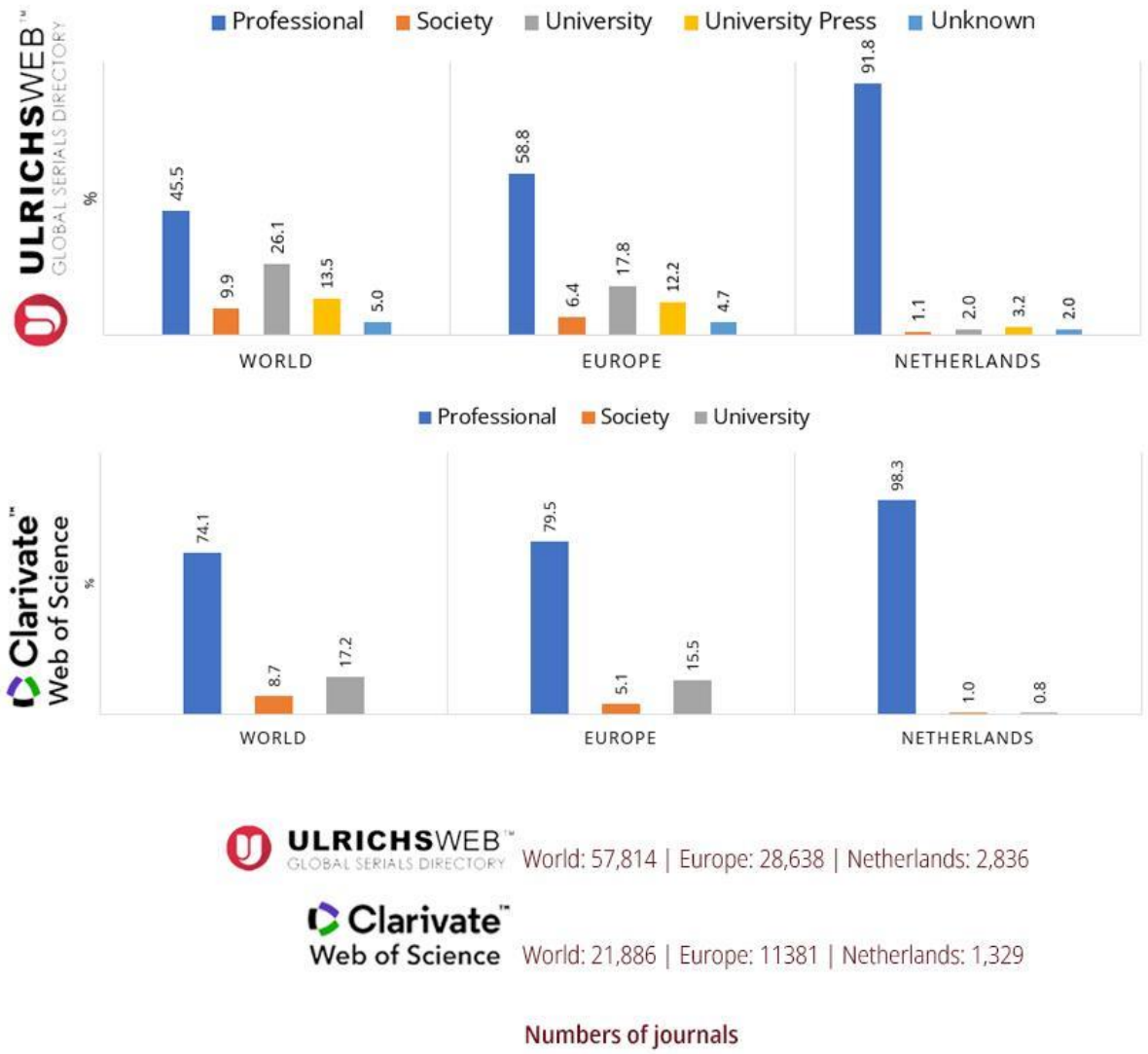
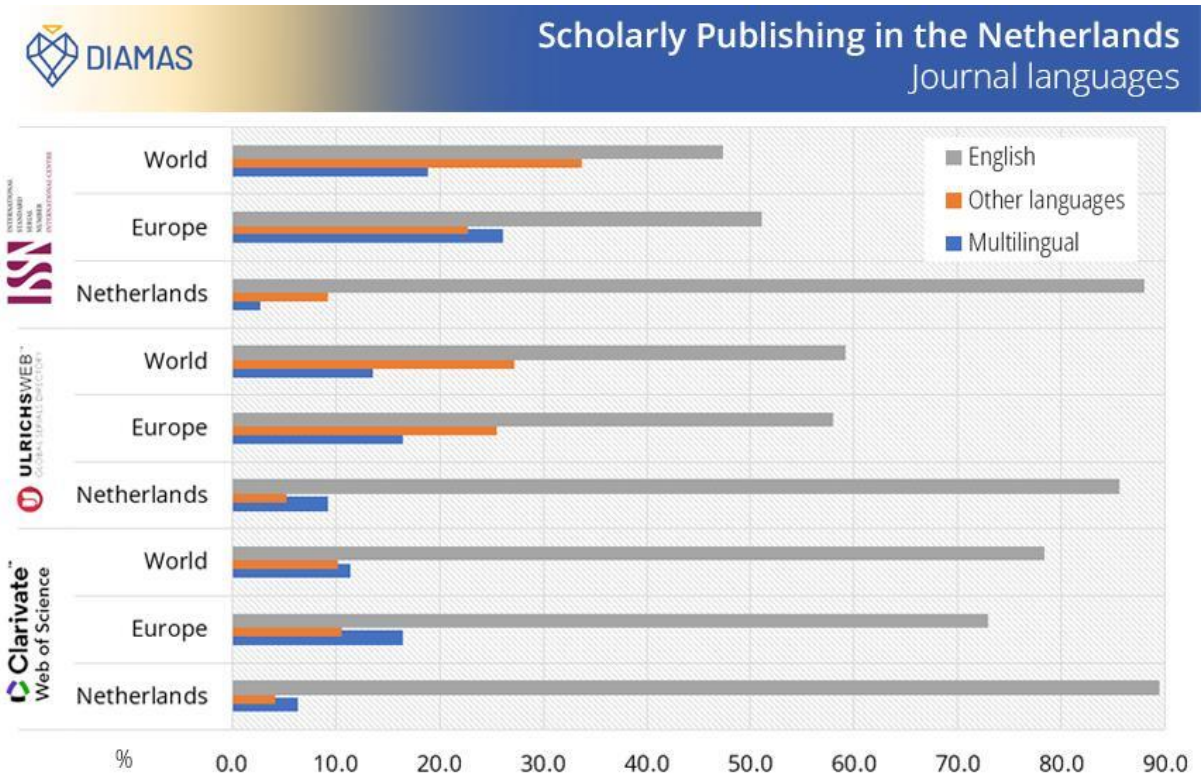


Figure 42. Scholarly Publishing in the Netherlands: Publishers landscape

The publication languages of journals in the Netherlands is visualised in Figure 43. Here, Dutch journals generally follow European and worldwide trends, except for in the distribution of language categories for journals included in the ISSN Portal, where the English language is nearly twice as predominant as across Europe and the World. The outstanding English-language outputs of Dutch journals have as a consequence even smaller proportions of other-language and multilingual journals than ISSN finds in European and worldwide measurements. In these statistics, the number of multilingual journals from the Netherlands is more negligible than that of other-language journals. This is consistent with the distribution of languages that WoS finds in journal publications across Europe and the World. Contrastingly, included in Ulrichsweb, the languages of Dutch journals do not mirror Europe and the World insofar as multilingual publications outpace other-language publications in the Netherlands, whereas in

Europe and worldwide multilingual publications are fewer. Most journal articles by researchers at Dutch institutions are published in English-language journals or conference proceedings; English-language publications constitute 95.6% of peer-reviewed journals issued by publishing houses (Bosman & Kramer, 2024). The Dutch language is still valued alongside English in scholarly outputs of some fields in the social sciences and humanities (Bosman & Kramer, 2024). Significantly, SSH is also the domain in which journal articles are not the only important scholarly publication form: books are also valued. However, OA for non-journal scholarly publications has received less attention in the Netherlands, although some institutions have created funds for publishing books and book chapters OA.



Numbers of journals

	ISSN NL	ISSN Europe	ISSN World	Ulrichsweb NL	Ulrichsweb Europe	Ulrichsweb World	Clarivate Web of Science NL	Clarivate Web of Science Europe	Clarivate Web of Science World
English	4,509	26,665	77,372	2,427	16,584	34,172	1,188	8,298	17,155
Other languages	473	11,866	55,140	148	7,315	15,756	56	1,202	2,231
Multilingual	140	13,629	30,977	261	4,733	7,860	85	1,881	2,500

Figure 43. Scholarly Publishing in the Netherlands: Journal languages

Finally, Figure 44 displays the subject distribution of journals in the Netherlands. For the broader population of journals included in Ulrichsweb, Dutch journals differ from European and world averages by having a significantly larger share of journals in natural and agricultural studies and a slightly larger share in engineering and technology. The

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Netherlands has a significantly lower share of journals in the arts and humanities than both the average for Europe and the rest of the world, while social sciences and medical and health sciences journals are somewhat lower. The distribution of Dutch journals included in Web of Science shows similar trends, although in multidisciplinary journals, the Netherlands publishes double the world average and almost double the European average.

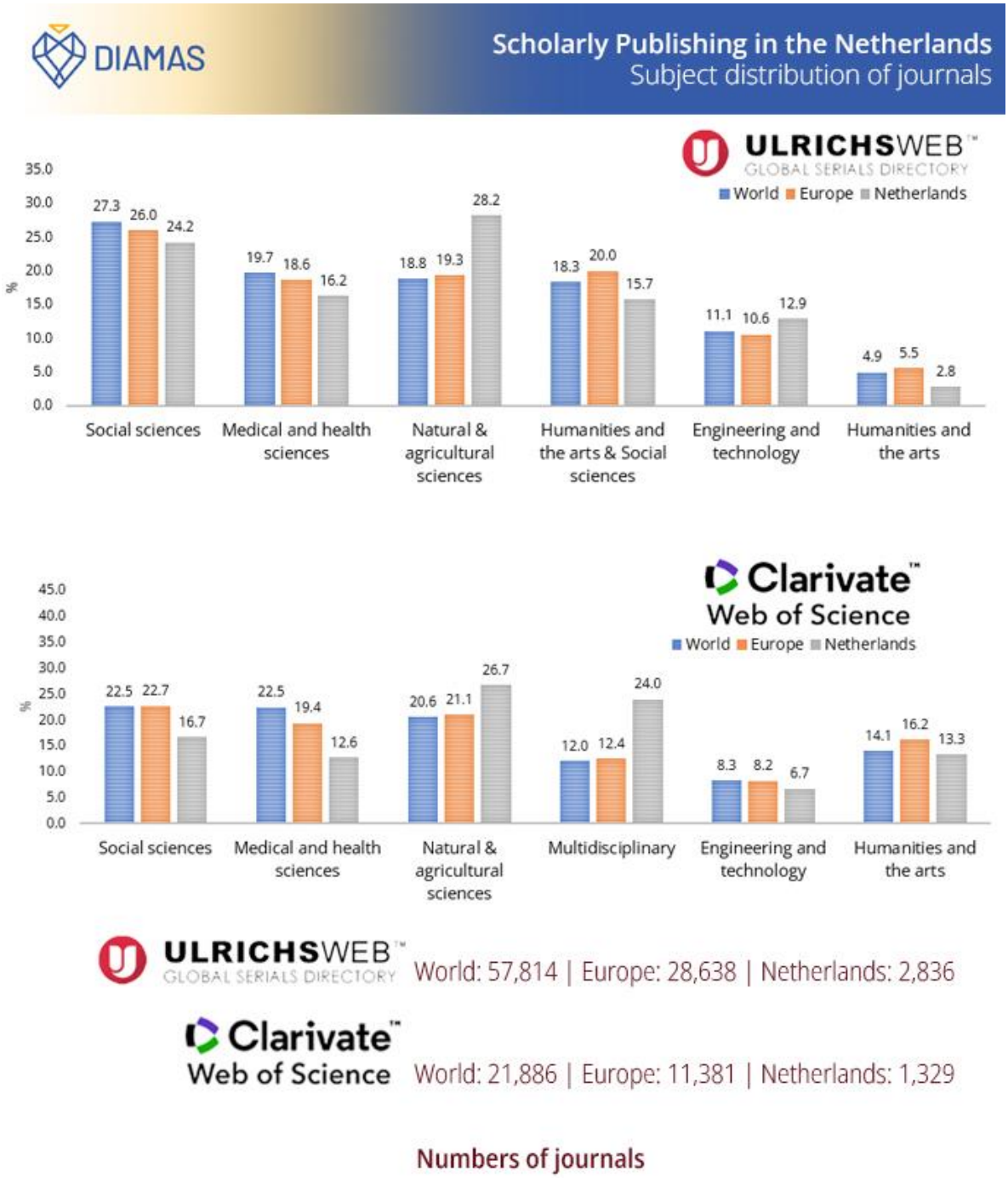
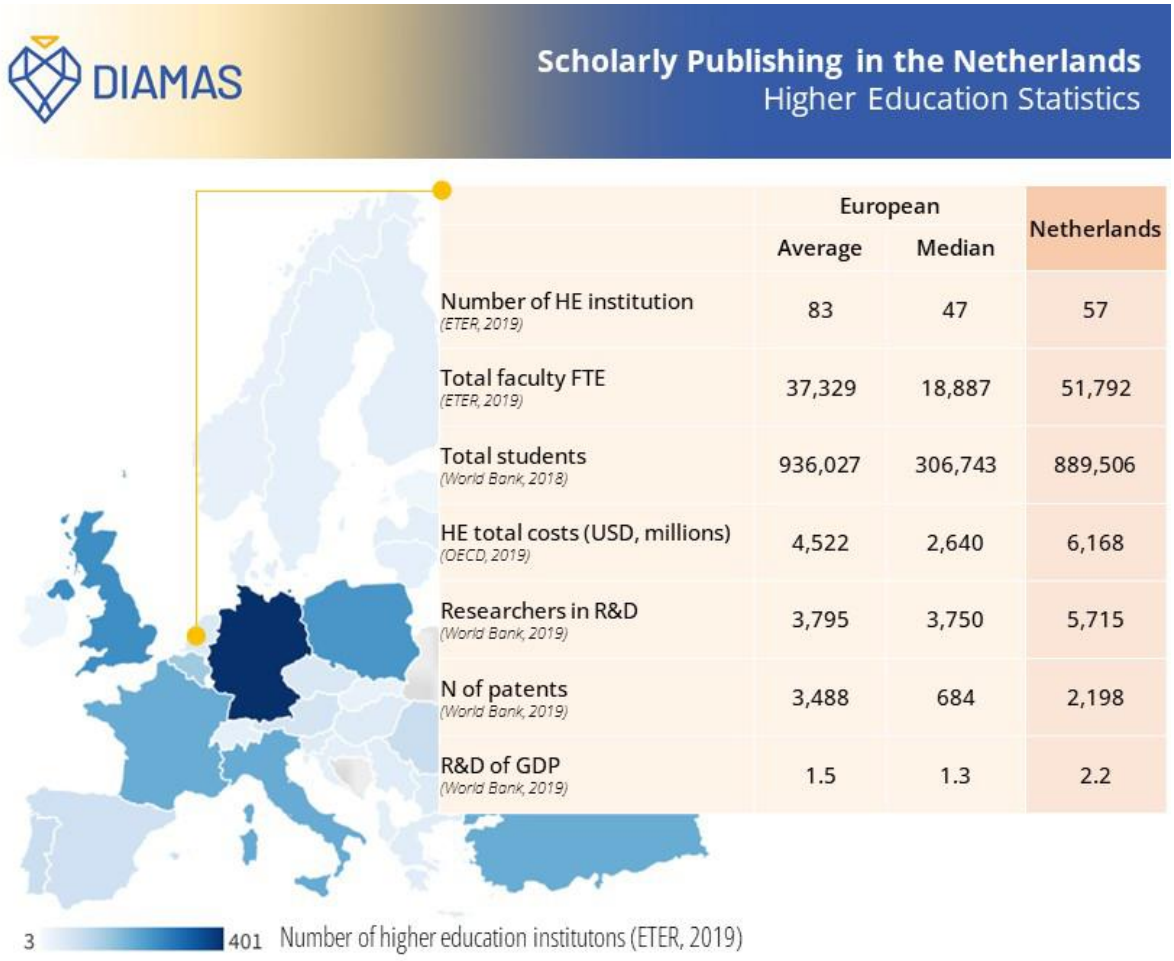


Figure 44. Scholarly Publishing in the Netherlands: Subject distribution of journal

Funding and assessment systems

Compared to other European countries, the Netherlands is larger when it comes to the number of higher education institutions, total number of students, and higher education total costs, which are all above the European median. In terms of the number of full-time faculty, total costs, and researchers in R&D, the Netherlands is also above the European average. Providing these key statistics extracted from international databases described in the methodology section above, Figure 45 summarises the scale for the Dutch higher education sector and overall R&D intensity in the country. This sector in the Netherlands also has a higher number of researchers than the European average.



	European		Netherlands
	Average	Median	
Number of HE institution (ETER, 2019)	83	47	57
Total faculty FTE (ETER, 2019)	37,329	18,887	51,792
Total students (World Bank, 2018)	936,027	306,743	889,506
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	6,168
Researchers in R&D (World Bank, 2019)	3,795	3,750	5,715
N of patents (World Bank, 2019)	3,488	684	2,198
R&D of GDP (World Bank, 2019)	1.5	1.3	2.2

Figure 45. Scholarly Publishing in the Netherlands: Higher Education Statistics

Research assessment in the Netherlands has been undergoing strategic transformation. The comparative investigations into research assessments in European countries conducted by Zacharewicz et al. have found that institutional funding is more important than project-based public funding for Dutch researchers (Zacharewicz et al., 2023) and that the only research output on which funding allocations are based in the Netherlands is the successful defence of a PhD thesis (Zacharewicz et al., 2019). Nevertheless, a track record of open science publications has become an important component of assessment for recruitment and promotion within Dutch research institutions, thanks to recent collaborative action to transform the way that research is assessed.

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Since 2019, the Universities of the Netherlands (formerly VSNU, now UNL), the Royal Netherlands Academy of Arts and Sciences (KNAW), the NWO and the Netherlands Organisation for Health Research and Development (ZonMw), alongside several higher education institutions, have acted to adapt the way in which research is recognised and rewarded in the country. This action is motivated by the premise that researchers' career pathways are diverse and can encompass leadership and collaboration activities in addition to individual research. Another premise for the cultural shift in research assessment in the Netherlands is that the quality of research outputs must be valued over their quantity (Recognition & Rewards, 2019).

Since the publication of the initial position paper on research assessment reform in 2019, the eighteen participating higher education institutions have worked towards transforming research assessment at the institutional level. A change management plan was launched at the inter-institutional level (Recognition & Rewards, 2021). One aspect of this plan is to encourage the sharing of good practices and centralised training for research assessments that will be available to all Dutch institutions via a shared online platform. The UNL, KNAW and NWO jointly updated its Strategy Evaluation Protocol (SEP) to apply from 2021 until 2027 (2020). The SEP contains guidelines and goals that are designed to support the evaluation of research units. Its latest iteration places a new emphasis on qualitative evaluations such as evidence-based narrative CVs and on open science practices.

The adjustment to include open science practices in research assessments in the Netherlands has been a long time coming. Through a tradition of collaboration between the VSNU (now the UNL), the Netherlands Federation of University Medical Centres (NFU), the NWO, the Netherlands has long had a national procedure for academic recruitment, promotion and research assessment that has proven able to adjust to changes in research culture, in particular to the growing urgency to transition to 100% open (Palstra et al., 2020). The transformation underway in Dutch research assessments insists that quality must not be equated with prestige. The Roadmap that was developed to accompany the 2019 position paper insists that "We are moving away from the inappropriate use of the Journal Impact Factor and the h-index" (2023, p. 4). However, although change is underway, according to Jansen and Sondervan's (2023) research into the penetration of Diamond OA in the Netherlands, JIF continues to be an important measure for research assessments, which makes publication by the Gold OA route in large commercial journals more advantageous for researchers than publication in smaller Diamond OA journals (Jansen & Sondervan, 2023). Maintaining JIF is also advantageous to commercial publishers because the Gold OA route furnishes lucrative APCs, such that a higher JIF rating has a positive correlation with more expensive APCs for that journal (Jansen & Sondervan, 2023). Furthermore, the weight of JIF in research assessment incentivises Dutch researchers to publish in the English language because journals with the highest JIF rating are not only commercial but also international, English-language publications.

The transformation of the Dutch attitude toward research assessment situates the Netherlands as a leader in this area on the international stage. As one of hundreds of Dutch signatories of DORA to declare a movement away from impact factors in research

assessment, NWO has also developed an inclusive assessment toolkit published to the website of DORA. Furthermore, in 2023 Utrecht University refused to participate in the Times Higher Education (THE) university ranking as an act of protest against 1) the untransparent methodologies that lie behind this ranking and 2) that these rankings serve commercial (for-profit) needs.

Open science practices constitute both another pillar of the 2019 position paper on research assessment and one of the four key aspects of the Standard Evaluation Protocol (SEP). To overcome the misalignment that has previously been identified between open science practices and highly-rewarded academic work in Dutch academic culture, researchers' implementation of open science practices had already been recommended to be taken into account for academic hiring and promotion before it was implemented in the 2021-2027 SEP (Recognition & Rewards, 2019; Cruz & de Jonge, 2020). Having nevertheless been absent from the 2015-2021 research assessment protocol, open science is an important addition to the strategy for 2021-2027 (VSNU, KNAW, NWO, 2014).

The Recognition & Rewards programme aspirationally includes openness of research outputs and reproducibility of research processes as key indicators of research quality, in deliberate alignment with CoARA's Agreement on Research Assessment that several Dutch institutions, including the NWO signed alongside the European University Association in November 2022 (CoARA, 2022; Erkennen & Waarderen, 2022). In this same year, the Netherlands National Programme Open Science recommended the improvement of national procedures for the recognition and reward of open science practices (NPOS, 2022).

Financial incentives to implement this transformation exist. Institutions that will develop a plan to adapt funding application assessments, hiring, promotion and tenure policies to recognise researchers' engagement with open sciences practices will be entitled to receive 50K EUR in 2024 (Recognition & Rewards, 2019; OSNL, 2023). 150K EUR is to be granted to a hosting institution in 2024 as dedicated funding to hire a project manager who will facilitate national coordination of the institutions' work in this area (OSNL, 2023).

Open access - requirements, incentives, and barriers

A succession of national advocacy initiatives for OA in the Netherlands since 2017 have developed a robust policy environment for OA and open science. The NPOS was active between 2017-2022 and 2023 saw the launch of the OSNL. This work has built on policy documents that include an Ambition Document 2030 and Rolling Agenda (NPOS, 2022) and a two-year Work programme that will direct the work of the OSNL until 2025 (OSNL, 2023). The OSNL is funded from 2022-2031 with 20m EUR annually from the Ministry of Education, Culture and Science (Tweede Kamer, 2022).

OA policy in the Netherlands is also developed at the institutional and research funder levels. To facilitate and support existing efforts for open science, which are initiated as policy at the institutional level, national bodies and associations develop open science

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strategies and goals. The UNL and the *Universiteitsbibliotheken en Nationale Bibliotheek* (UKB, a partnership between the Dutch University Libraries and The Royal Library of the Netherlands) take leadership in the transition to 100% OA by negotiating with publishers that strive for OA contracts (OpenAccess.nl). The UNL also directs the strategy and goals for open science among Dutch universities, coordinated by a body of representatives from all universities that are called the Chiefs of Open Science (COS) (Association of the universities in the Netherlands, 2023). Having been set up by the NWO, an original signatory of Plan S, the OSNL helps to kick-start and further strengthen projects and development already underway.

Requirements

Research funding is provided at the national level by the NWO and, for health research, ZonMW. Dutch researchers also strive for international funding from, for example, the European Commission. Both Dutch public funding bodies require grantees to publish scholarly outputs resulting from funded research OA, as shown in the Table 13.

Table 13. Dutch public funding bodies and requirements

Major national research funders	OA publication requirement	Routes to OA allowed and/or mentioned in the OA policy	Policy for costs of OA publication	Any funding provision for OA publication?
NWO	required for all research outputs	n/a	any costs should be included in project budget	available for books (grantees may apply); available for all open science practices through NWO Open Science Fund; funds also available for development of Open Science infrastructures
ZonMW	required for all research outputs	gold, green, hybrid	this cost treated as separate from project budget, so financial support is provided for gold OA publication	while financial support is an option, it is not available when costs could be covered by the institution

Incentives

Reaching the stated goal of 100% OA publication for scholarly journals is a collaborative effort that is being tracked. Annually, the Dutch universities monitor the overall percentage of OA uptake (per route: Gold, Hybrid, Green) in order to report progress on that goal to the Dutch government. Publication data has been collected and warehoused

since 2018. This data is rich: it is collected on the levels of DOI, publishers, contracts, institutions, and clusters of institutions. The level of Diamond OA is also tracked, alongside other types of OA publications.

In addition to this collective action towards an ambitious goal, incentives are also being built into the ways that research is recognised and rewarded: in 2024, 50K EUR is to be directed to institutions to support them to develop a plan that puts the Recognition & Rewards programme into action by answering the programme's call for open science practices to be accounted for in funding applications, hiring, promotion and tenure policies (Recognition & Rewards, 2019; OSNL, 2023).

Barriers

While researchers can gain access to funds that cover the costs of OA publishing, this funding does not serve to facilitate Diamond OA. For Diamond OA, national funding resources should be directed to Dutch Diamond publishers instead of to researchers, which has hitherto been done in order to cover the costs of Gold OA (Jansen & Sondervan, 2023).

Another challenge is that, similar to how policy development and funding for OA initiatives come from the institutional level rather than the national level, work on rights retention, licensing for OA, and copyright support in the Netherlands is also done at the level of the institutions. For example, prior work towards a right's retention strategy, including implementation of the Taverne Amendment, was institutionally rather than nationally funded, but with a centralised budget. Some of the institutional funding that went into this implementation came from library budgets, some from the budgets of institutionally-funded projects that were working towards OA and open science in the Netherlands (Sondervan et al., 2021).

Besides the secondary publishing rights that are enshrined in Taverne, there is no national programme for copyright (Puylaert, 2023). Copyright protections for authors of scholarly publications are managed at the institutional level and cannot currently be harmonised across the institutions, although more coordination in the future is recognised to be highly desirable (Universiteiten van Nederland, 2023). At present, no centralised funding has been allocated to rights retention work in the Netherlands. But rather, in-kind support is provided by experts collaborating on pilots and copyright projects. The implementation of Taverne was funded institutionally, but funds were distributed by a central budget; similarly, the collaborative development of a Creative Commons guide in 2020 was centrally funded.

Open access-related infrastructures

There is a robust infrastructure for OA publishing in the Netherlands, but structural support for Diamond OA lags behind other countries (Jansen & Sondervan, 2023). Every Dutch university has an institutional repository (Bosman & Kramer, 2024). Not all higher education institutions are OA publishers, although some university libraries and university presses publish scholarship OA. While some scholarly publishers in the

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Netherlands are developing OA publishing models, such as the Subscribe to Open deal for Diamond publishing at Amsterdam University Press (formerly the press of the University of Amsterdam, now privately owned), many newer institution-based publishers exclusively publish OA, often Diamond OA (Jansen & Sondervan, 2023).

The consortium New University Presses (NUPs) comprises six university presses (Delft, Radboud-Nijmegen, Groningen, Leiden, Maastricht, Tilburg), which collaboratively support Diamond OA publishing by developing shared catalogue infrastructure, exploring a national book platform, and undertaking other cooperative projects related to dissemination, metadata, peer review, open textbooks, innovative publications, business models, and marketing (NUPs). Furthermore, all Dutch IPSPs who responded to the DIAMAS survey provide at least one type of technical service: metadata and quality control, user interfaces, and software and hosting are the most common services they provide (Bosman & Kramer, 2024).

As for externally-provided technical infrastructures for open journal publishing, OJS is by far the most often used publishing system, with 11 installations among the 17 Dutch IPSPs who answered the survey (Bosman & Kramer, 2024). Open Monograph Press is used by some of the university presses that publish OA books.

Since 2021, openjournals.nl is the nationally-funded platform for mainly Dutch Diamond OA journals. NWO committed to financing this infrastructure until June 2023, when the transitional budget moved from NPOS to OSNL who assumed the funding of openjournals.nl until 2028 (Bosman et al., 2021; Jansen & Sondervan, 2023). Financial support has also come from the sponsorship of some universities in the Netherlands and Belgium, and participating journals[122] (Association of universities in the Netherlands, 2023; Jansen & Sondervan, 2023). For a hosting fee of 2400 EUR, openjournals.nl hosts and provides services for a growing number of 34 journals, mostly in the social sciences and humanities.

Openjournals.nl serves as a technical solution, i.e. publishing platform, for traditional journals. This infrastructure runs on open-source OJS software from PKP, offering both publishing services and a platform for publishing journals (Bosman & Kramer, 2024). It has the potential to become a capacity/expertise centre for Diamond OA publishing on a national level, but it requires a more stable, long-term source of funding. Currently, there is still a need for a national platform for supporting the entire workflow of Diamond OA publishing (Jansen & Sondervan, 2023). Furthermore, in addition to openjournals.nl, the NPOS Ambition has identified the need for a national OA infrastructure that can contain an even wider range of research outputs, including books, protocols, registered reports and preprints (Bosman et al., 2021).

Another open journal platform available to researchers in the Netherlands is Publinova,[123] which serves researchers at the Universities of Applied Sciences. Publinova provides OA

[122] https://openjournals.nl/index.php/about/
[123] https://over.publinova.nl/

sharing of publications and other research results. Smaller initiatives within institutions also exist to serve Diamond OA journal publishing. The platform SciPost[124] is one such initiative. It was initially funded by NWO and institutions both in the Netherlands and worldwide.

Institutional publishing

Funding and sustaining IPSPs

Higher education institutional libraries are funded through the institutions themselves, while also being connected nationally through the UKB and Samenwerkingsverband Hogeschoolbibliotheken (SHB, a partnership of libraries at universities of applied studies) (Bosman & Kramer, 2024). Institutional parent organisations provide subsidies and time-limited grants on which some Dutch IPSPs depend heavily, but there is significant variation in the funding models of Dutch IPSPs (Bosman & Kramer, 2024). In-kind and non-monetary support are also relied upon by many Dutch IPSPs, some of them receiving this kind of support from parent organisations and others from volunteers (Bosman & Kramer, 2024).

Institutional funding for OA journal publishing has not been nationally organised, but grant funding is incidentally available from NWO for supporting projects designed to implement and stimulate open science practices (for example, the Open Science Fund) and for the publication of OA books (Open Access Books call). Out of the Ministry of Education, Culture and Science's 20m EUR per year budget for 2022-2031, the Open Science Infrastructure Programme receives 7.5m EUR in 2024 and 10m in 2025 (OSNL, 2023).

Even so, no national budget for Diamond OA has yet been set in the Netherlands (Jansen & Sondervan, 2023). The NPOS strategy, which preceded the OSNL, planned instead to maintain the "harmonised multi-route approach (green, diamond, as well as gold Open Access)" to scholarly publishing (NPOS, 2022). The current plan repeats this language verbatim, while recognising "a renewed interest" in Diamond OA (OSNL, 2023). 300K EUR of the funds that will be allocated for enabling and strengthening institutional open publishing from 2025 may be directed towards building capacity for Diamond OA, which is the expected outcome of project-based work to build up a robust, efficient and sustainable network of institutional publishers (OSNL, 2023).

Many but not all universities fund Diamond OA publishing independently of national funding bodies. For just one example, the University of Amsterdam (UvA) offers a Diamond Open Access Fund annually to fund Diamond initiatives by both publishers of works by UvA researchers and internal efforts at UvA. Another example is the Erasmus University of Rotterdam's Open Access Fund, which has two streams, dedicated to covering BPCs for OA books and initiatives related to Diamond OA journals. Some other institutional funds for this purpose have been depleted in recent years, indicating issues with the sustainability of this uncoordinated approach. As was recommended by Jansen and Sondervan (2023), a national project has been launched to fund institutional libraries

[124] https://scipost.org/

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collectively for Diamond OA publishing (Project Diamond Open Access in the Netherlands, 2024). Forming a national consortium designed to pool funding for this purpose is a first step towards a national collaboration for providing finances, infrastructure, professional support, expertise centres, and monitoring for success for Diamond OA institutional publishing (Jansen & Sondervan, 2023).

This initiative reflects the top priorities of the OSNL, whose priorities include capacity building for open science and open science infrastructure, for which financial support is also currently being developed (Jansen & Sondervan, 2023). These priorities build on the NPOS recognition that investment in open science infrastructures, standardised workflows and open standards for metadata and interoperability across infrastructures, and collaboration "across institutional and academic boundaries" is essential for making its open science ambitions sustainable (NPOS, 2022).

NPOS had planned to have a national open digital infrastructure for scholarly publications and metadata in place by 2027 and an openly licensed public platform for scholarly publications by 2030 (NPOS, 2022). As a national infrastructure for open scholarly publishing, openjournals.nl is an inspiring example for further developing a national open scholarly communications infrastructure. To make the planned new infrastructure for open science into a reality, from 2024 the UNL will work on behalf of institutions to create a federated network of all Dutch institutional repositories, a central warehouse for open metadata and an open public platform where OA academic content is made more accessible to practitioners and the public (Association of universities in the Netherlands, 2023). Just as national funding may be available to these infrastructures for OA publishing, institutional publishers also lobby for funds from research funding organisations such as the NWO as well as from their institutions (Jansen & Sondervan, 2023).

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

There is precedent for collaborative action to enable OA publishing in the Netherlands (Bosman et al., 2021). To begin, the NWO is a member and original signatory of cOAlition S. Furthermore, NUPs is an example of a network of institutional presses that share the costs of developing services and infrastructures for Diamond OA.

Many Dutch IPSPs would consider collaboration with other organisations: out of the 17 surveyed, 11 or more would consider collaborating for activities including IT services, production, editorial services, communication, training (Bosman & Kramer, 2024). Already, institutional publishers in the Netherlands who use the same open source platforms collaborate with each other in an ad hoc fashion for troubleshooting and technical support, thereby creating together a service that open source platforms themselves do not have the capacity to provide at the same level as commercial platforms do.

For the publication of OA books, some Dutch institutional presses are exploring the possibility of collaborating for a shared catalogue and standardised editorial practices and data quality. Collaboration between institutional publishers, libraries, and funding organisations is seen to be an opportunity to gain efficiency in the institutional publishing landscape for books as well as for journals.

Collaboration between research institutions is already well established in the Netherlands. The "You Share, We Take Care" campaign is an ongoing collaboration of institutions through the UNL to protect the secondary publishing rights of Dutch scholars. Bodies such as UNL and UKB as well as infrastructures that formed out of consortia such as NUPs and LLB work collaboratively across institutions. These collaborations are limited by the lack of a national funding stream that goes towards inter-institutional initiatives, but historically institutions themselves have allocated funds from library budgets or research projects that enable collaborative action for OA and rights retention.

The Netherlands National Programme Open Science had stated that one of its strategic goals for 2030 is "Close collaboration between knowledge institutions, government, industry, and citizens to strengthen science and optimise the processes of creating, sharing, and communicating knowledge for the benefit of society" (NPOS, 2022). Establishing collaboration between national open scholarly publishing organisations and infrastructures that support them is a logical step towards the realisation of this goal and the more robust implementation of Diamond OA journal publishing.

Conclusions

Like many other European countries, The Netherlands has the ambition to achieve 100% Open Science by 2030: 100% of scholarly journal articles from researchers at publicly-funded knowledge institutions will be published immediately under an open licence. It also seeks to make it the norm for academic research by 2031. The government monitors its Open Access goals. All Dutch universities have OA policies. The Dutch transition to Open Science is characterised by strong advocacy networks and a tradition of collaboration between institutions, funders and policymakers. Collaborative networks such as the New University Presses and collaborative development of national open infrastructures are key to advancing Diamond OA in the Netherlands, and a new Diamond OA coordinator will help coordinate efforts on the topic. Accordingly, the current national work plan shows further attention to Diamond OA and institutional publishing.

To make the transition to Open Science, the Ministry of Education, Culture and Science has made a significant financial commitment to invest 20M euros annually for ten years until 2031. This addresses the four pillars of Open Scholarly Communication (with OA), FAIR data, Open Research Software and Societal Engagement/Citizen Science. This includes plans to significantly invest in national open infrastructures that can contain an even wider range of research outputs, including books, protocols, registered reports and preprints.

No national budget for Diamond has yet been set and institutional funding for OA diamond journal publishing has not been organised on a national level, but grant funding

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is incidentally available from the main research funder NWO to support projects designed to implement and stimulate open science practices. Many universities fund Diamond OA independently, and some of them through OA Diamond funds. Whilst institutional parent organisations provide subsidies and time-limited grants, there is significant variation in the funding models of Dutch IPSPs, and many IPSPs rely on in-kind and non-monetary support.

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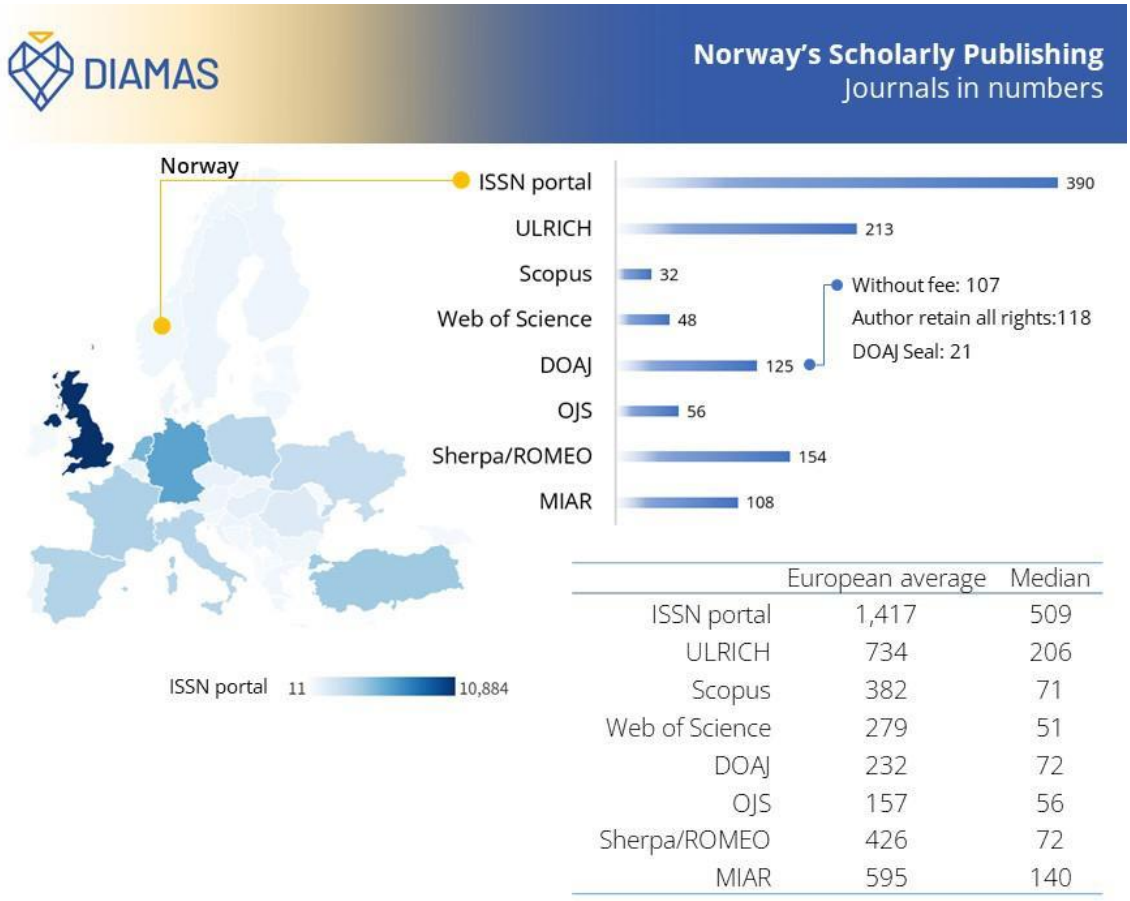
Norway

National landscape of scholarly publishing

In Norway, scholarly publishing had up until the 1950s mostly been done by institutions directly. Since then the national publishing environment started to change gradually with publishing duties being handled through a new company called Universitetsforlaget, owned by the major universities and the students´welfare unions. This publisher grew within Norway, and even within Sweden, to become "...the foremost scholarly publisher in Norway" (Bosman, Kramer, Stojanovski et al., 2024, p. 37). The event that substantially shaped the current national publishing environment happened in the late 1990s, when the company was sold off in parts due to financial challenges. The journals with international scope were transferred to Taylor & Francis and a national commercial publisher took over the Universitetsforlaget imprint and the Nordic language journals and book publishing that focus on the social sciences and humanities. The current Universitetsforlaget has a strong position in the national publishing landscape, where journals are either subscription-based or Diamond OA, with only one APC-based journal (Bosman, Kramer, Stojanovski et al., 2024, p. 37). The publisher has used and continues to use the name of Scandinavian University Press for journal publishing. Another larger national publisher in Norway is Cappelen Damm Akademisk, which publishes both Diamond OA and APC-based journals (Bosman, Kramer, Stojanovski et al., 2024, p. 37).

Based on our scan of bibliometric data for journals based in Norway that is provided in Figure 46, we can see that there are slightly over 200 active peer-reviewed journals in Norway (journals count 213 in Ulrichsweb). Checking DOAJ data, we can see that 125 Norwegian journals are listed, with the vast majority not having any fees required for publishing, suggesting that the majority of journals in the country are OA and adhering to a diamond model of publishing. In 2008 the number of Norwegian journals was 13, so the growth has been substantial since then (Frantsvåg, 2008). The current large share of OA journals listed in DOAJ is likely a consequence of university libraries (e.g. UiB, NTNU, UiT, UiO, OsloMet) setting up institutional publishing services during 2011-2015. Providing these services shepherded journals towards good publishing and OA practices, with journals receiving practical support for e.g. funding of DOIs and applying to be included in DOAJ. National science policy has strengthened and formalised these initiatives as part of a national OA policy that has been in place since 2017 (Ministry of Education and Research, 2017). The number of journals included in selective international indexing services is 48 for WoS and 32 for Scopus: these are quite high numbers when taken in relation to the total count of journals based on Ulrichsweb data (213).



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 46. Norway's scholarly publishing: Journals in numbers

Zooming in a bit more closely on the journals in Norway and their publishers, Figure 47 provides a view of how the 213 Norwegian journals indexed in Ulrichsweb and WoS are distributed across publisher types. Considering the wider set of journals included in Ulrichsweb first, the two most common publisher types are University Press or University, which is in contrast to the distributions for Europe and the World which have Professional publishers providing the most journals. Nevertheless, the share of 19% of Norwegian journals being published by Professional publishers is notable, and likely can be connected to the strong market presence of the Professional publisher Universitetsforlaget whose history was described earlier in this overview. What the bibliometrics are not able to disclose is that not all journals are actually owned by Universitetsforlaget despite being published by the company, but are owned and governed by a scholarly society or institution. Concerning the 48 Norwegian journals indexed in WoS, the publisher type distribution closely follows the ones in Europe and the World, with such journals being dominantly published by Professional publishers.

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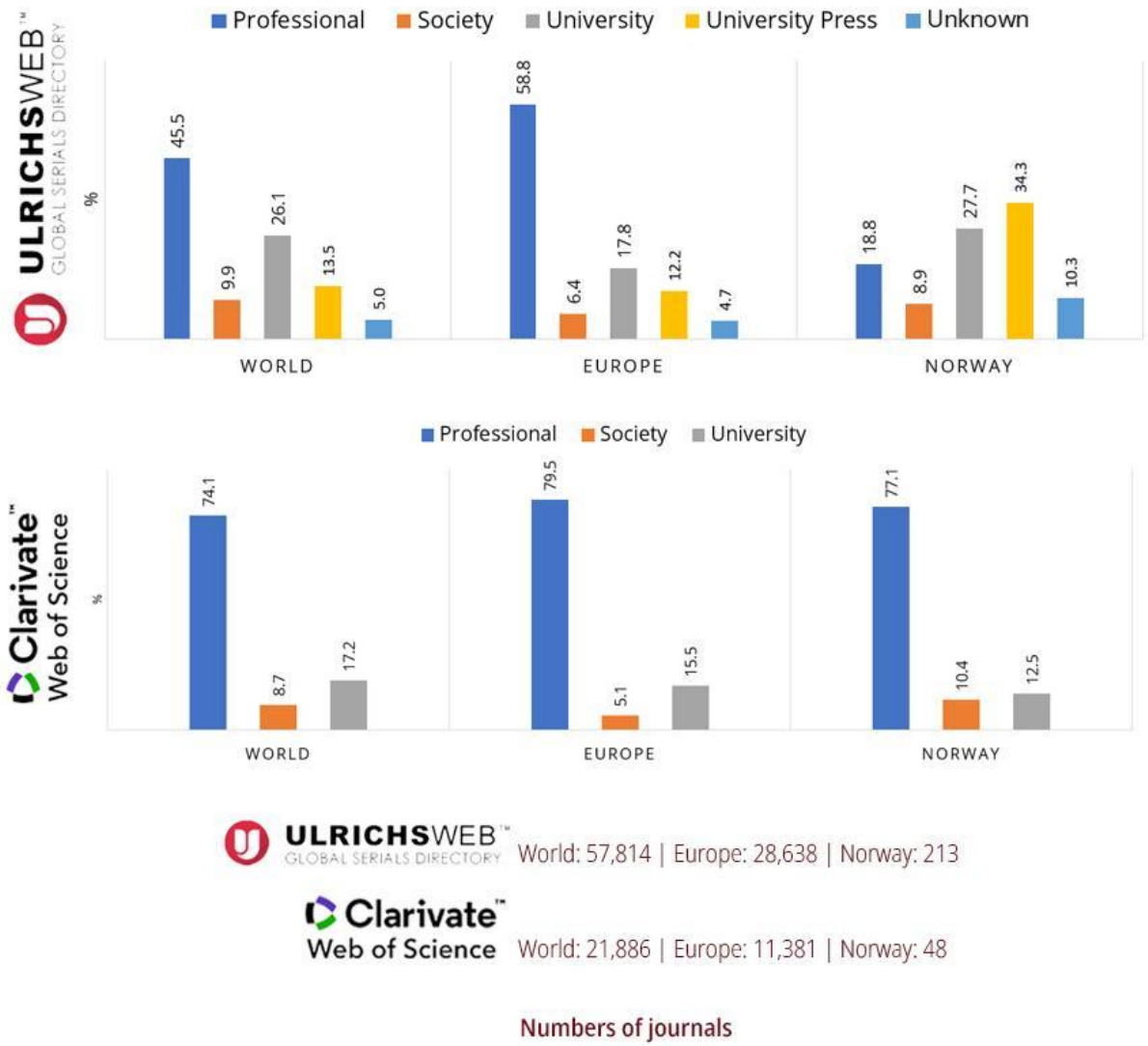

Figure 47. Norway's scholarly publishing: Publishers landscape

Figure 48 presents an alternative view by consulting the OASPA member categories for journals by different publishers active in the country. Based on the data, the share of publishers that are not OASPA members is roughly the same for the journals included in Ulrichsweb, with the main difference overall being that Norway has a smaller share of very large professional publishers than Europe or the World, but a notably larger share of large professional publishers than the average distributions for Europe or the World. Note however that the share of very large professional publishers is higher than Europe and the World for journals included in WoS. This is due to the fact that the count of Norwegian journals indexed in WoS is relatively low (48), and that the large professional publishers who have a large footprint in the Ulrichsweb statistic do not have much of a presence in WoS.

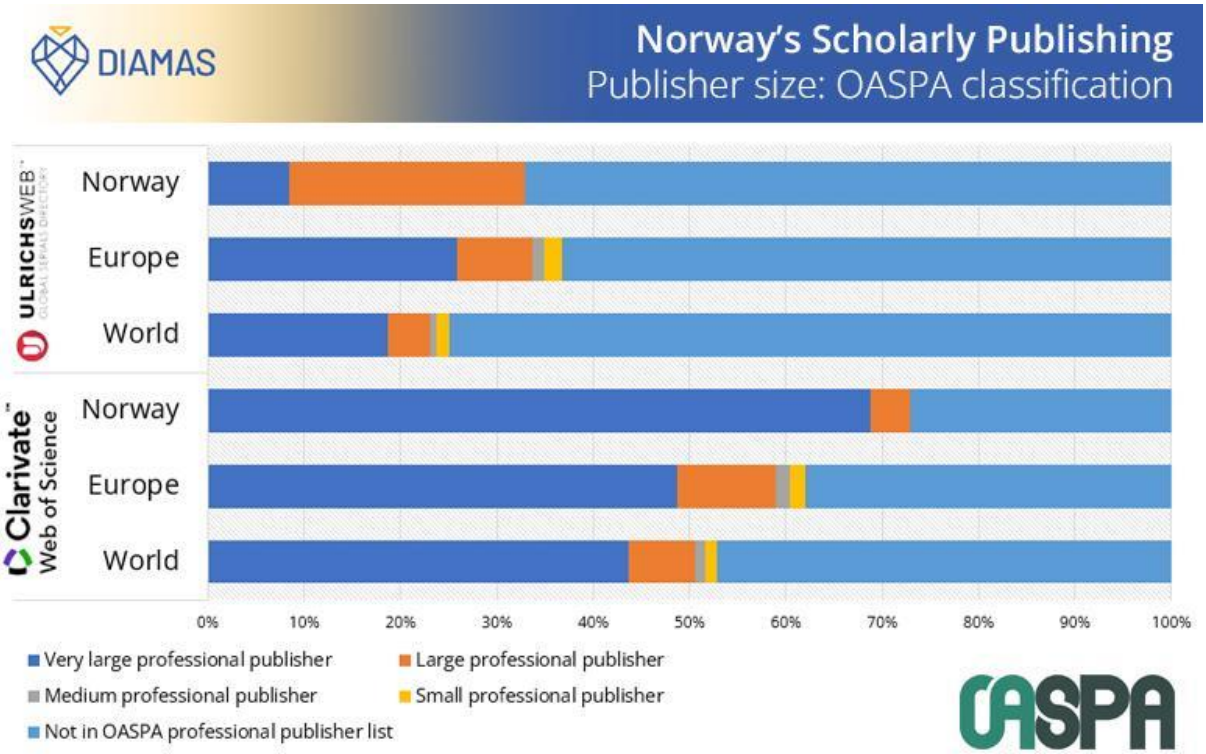

Figure 48. Norway's scholarly publishing: Publisher size OASPA classification

A visualisation of the publication languages of journals published in Norway is provided in Figure 49. Across all three bibliometric databases (ISSN, Ulrichsweb, WoS), Norway has a higher share of multilingual publication outlets compared to Europe or the World. What sticks out among the results is the high share of "Other Languages" for Ulrichsweb when comparing to the Europe and World shares, which is explained by the fact that a lot of journals (over 40%) publish only in Norwegian.

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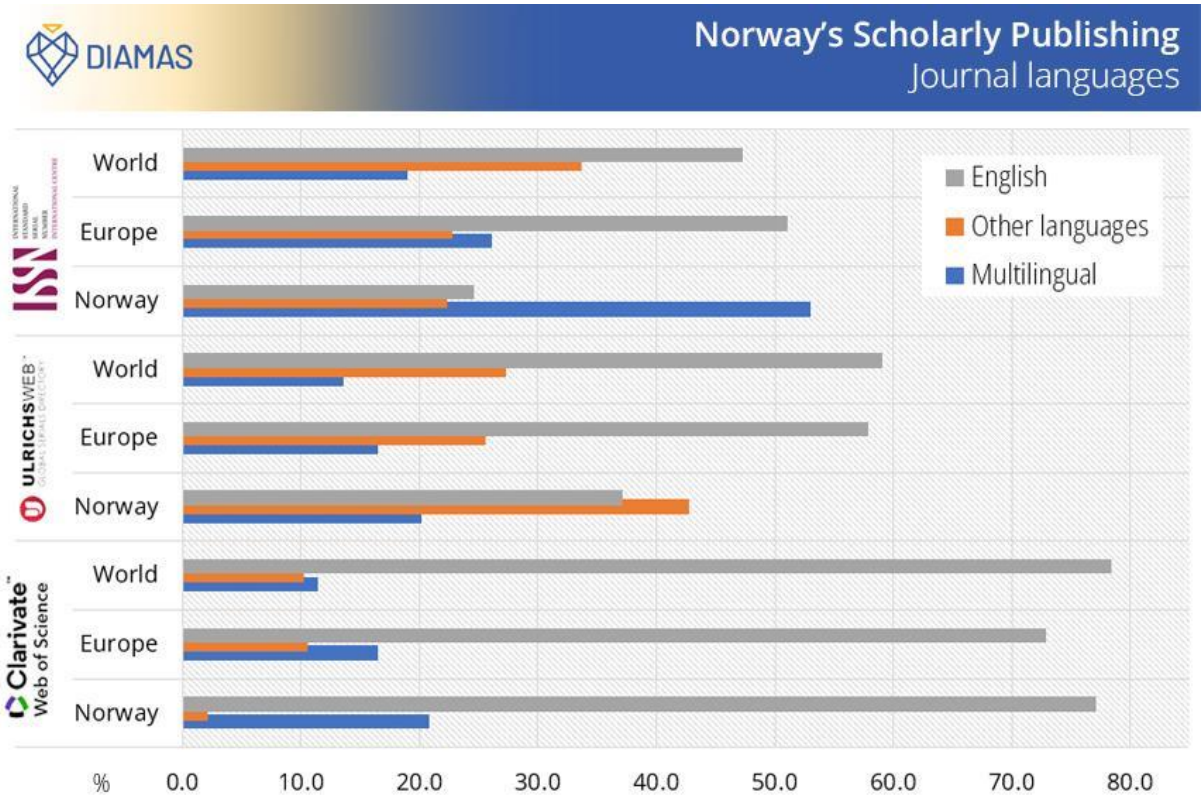

Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	Norway	Europe	World	Norway	Europe	World	Norway	Europe	World
English	96	26,665	77,372	79	16,584	34,172	37	8,298	17,155
Other languages	87	11,866	55,140	91	7,315	15,756	1	1,202	2,231
Multilingual	207	13,629	30,977	43	4,733	7,860	10	1,881	2,500

Figure 49. Norway's scholarly publishing: journal languages

The final bibliometric perspective on journals in Norway is provided in Figure 50 where the subject distribution of journals is displayed. For the broader population of journals included in Ulrichsweb, Norwegian journals differ from Europe and World averages by having a larger share of journals in the SSH and the arts. Norway has lower shares of journals in the medical and health sciences, natural & agricultural sciences, and engineering and technology than both the average for Europe, and the rest of the world. The distribution for Norwegian journals included in WoS roughly follows the distribution of the Europe and world averages, outside of having one markedly higher share when it comes to medical and health science journals.

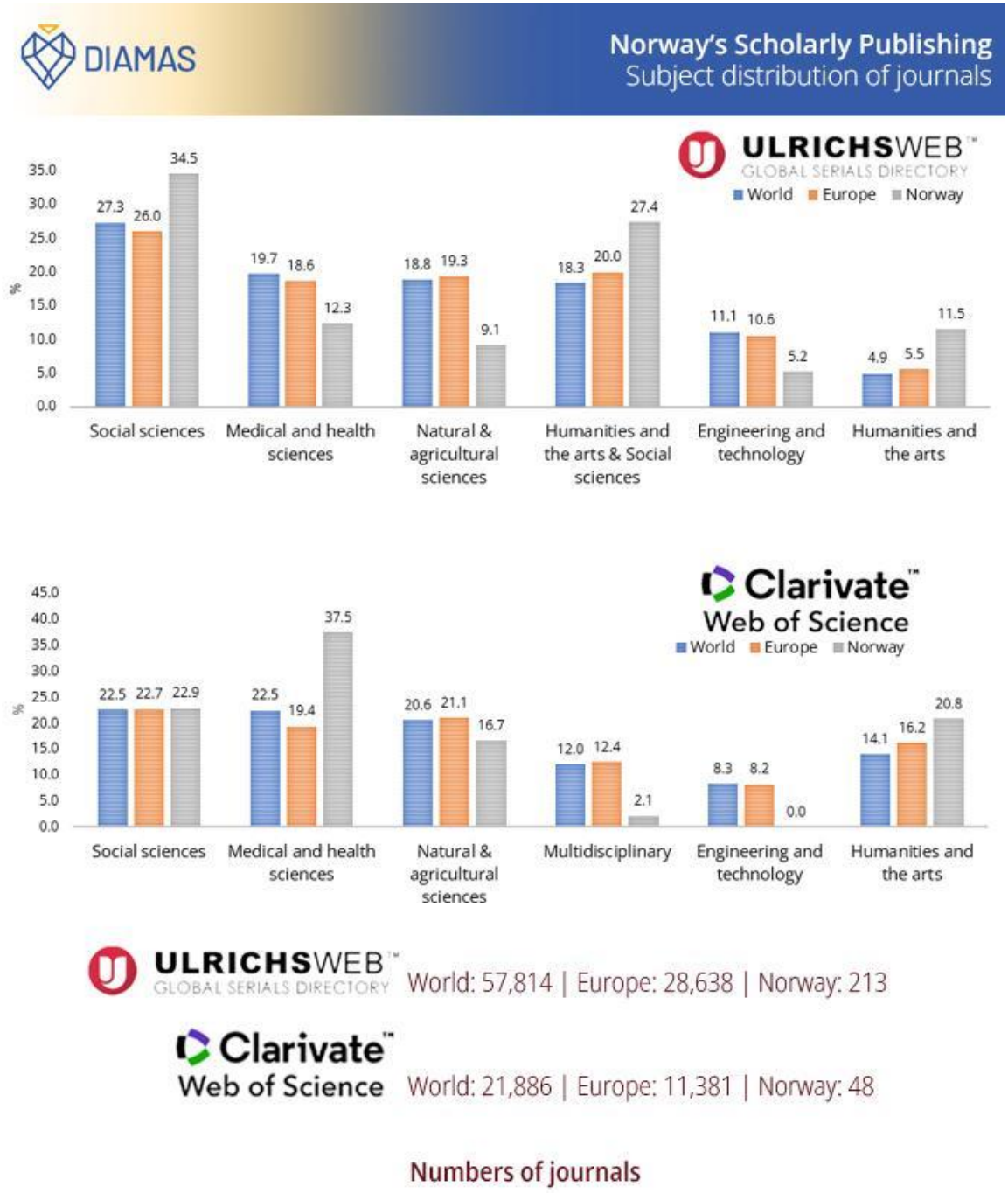

Figure 50. Subject distribution of journals in Norway

This completes the high-level bibliometric overview of journals published in Norway. In terms of how Norway is dealing with scholarly publishing in the context of international publishers' available data reveals that Norway is among the leading countries when it comes to signing transformative agreements which are collectively negotiated by the Norwegian Agency for Shared Services in Education and Research (Sikt)(an organisation described later in this overview) on behalf of higher education institutions.[125]

[125] https://esac-initiative.org/market-watch/#country_shares

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Funding and assessment systems

To give a sense of scale for Norway's higher education sector and overall R&D intensity in the country, Figure 51 provides some key figures extracted from international databases described in the methodology section of this deliverable. Compared to other European countries, Norway is smaller when it comes to the number of higher education institutions and total students, which are all below the European median. Total faculty FTE and HE total costs are however in line with European median values. Researchers in R&D, number of patents, and R&D of GDP are all above the European median.

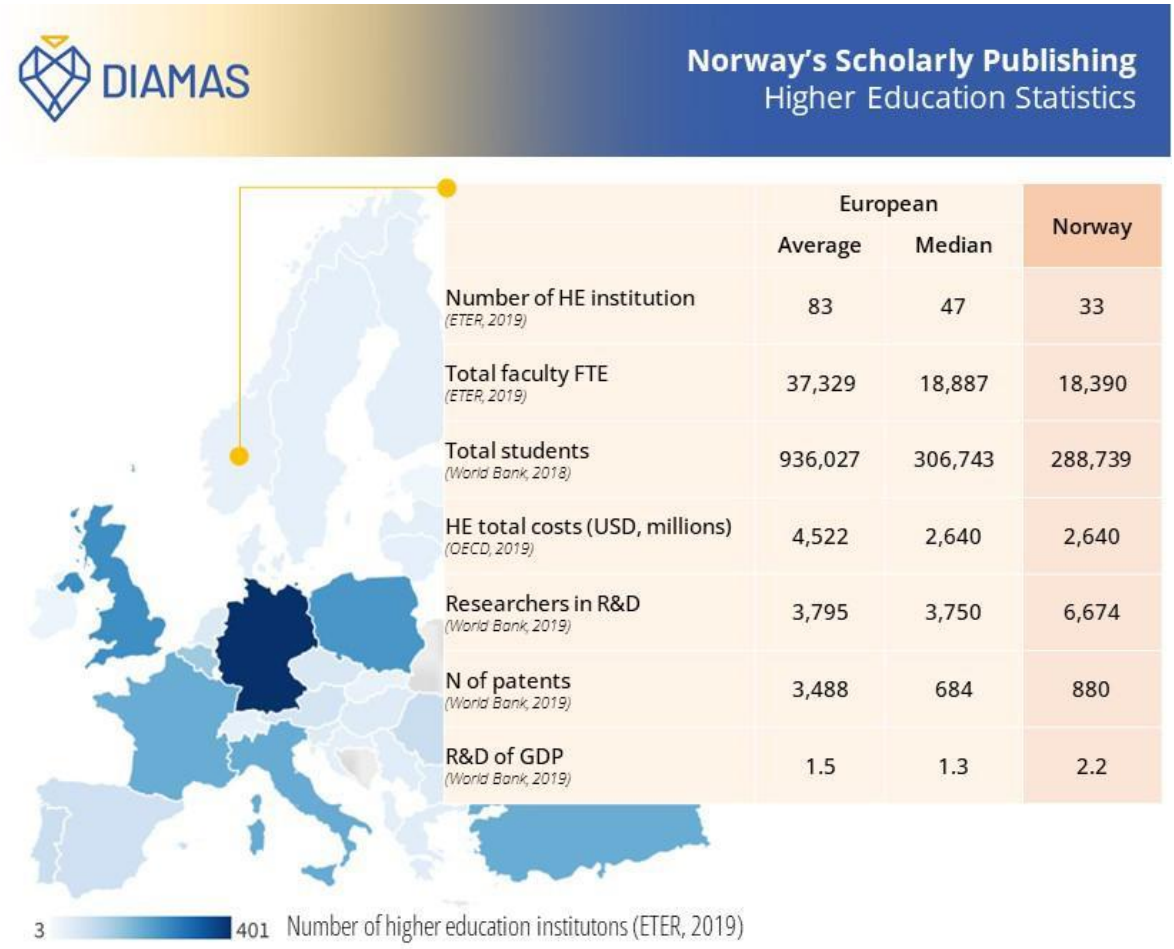

Figure 51. Norway's higher education statistics

All universities in Norway are substantially funded by public funding, with commonly no tuition fees for either domestic or foreign degree students. The total budget for the higher education sector is confirmed annually by the Norwegian Parliament as part of the national budget, from which block grants are allocated to each institution based on a performance-based allocation model.[126] Zacharewicz et al. (2019) provided a review of the presence and composition of such schemes in Europe, where Norway's model was

[126] https://eurydice.eacea.ec.europa.eu/national-education-systems/norway/higher-education-funding

also included and compared to other similar models. The performance-based allocation model has included a small component that takes into account the quantity and quality of individual publications (as based on the publication outlets placement in the national publication classification scheme managed by The National Board of Scholarly Publishing (Det nasjonale publiseringsutvalget) (Sivertsen, 2018). While WoS/Scopus metrics are not formally part of the national classification scheme, such information can be used as background for the panels that ultimately decide on the national classifications for the journals. There has recently been a decision to discontinue using the publication indicator as part of the performance-based funding model for universities from 2025 (but this continues for hospitals and research institutes), which will have an impact on the budget distributions in the coming years.

A holistic new research assessment framework has been developed in Norway, going by the name of NOR-CAM. Through the work of the working group led by the Norwegian Rectors Conference, Universities Norway (UHR), six driving principles have been proposed to be at the centre of the new assessment framework (UHR, 2022).

- "Measure quality and excellence through a better balance between quantitative and qualitative goals
- Recognise several competencies as merits, but not in all areas at the same time or by each employee
- Assess all results, activities and competencies in the light of Open Science principles
- Practice transparency in the assessment and visibility of what should be recognised as merit
- Promote gender balance and diversity
- Assist in the concrete practice of job vacancy announcements and assessment processes locally"

The full report linked to from UHR (2022) provides more background context as well as describes how this toolbox of flexible assessment principles is positioned to the many concurrent international developments along the same lines (e.g. DORA, CoARA). Overall, one can deem this development to be a positive for the growth of OA and acknowledgement of editorial work in addition to just publication output.

Open access, incentives, and barriers

In an article from 2008, Frantsvåg (2008) provides a useful historical snapshot of the early days of OA publishing developments in Norway. Franstsvåg's (2008) description of the landscape shows that Norway has engaged in national-level formal collaborative projects promoting OA to research publications for over 20 years, most notably through a project called NORA (Norwegian Open Research Archives), which was started between the universities of Oslo, Bergen, Trondheim and Tromsø (Frantsvåg, 2008). Through NORA, universities were able to establish and standardise their repositories, and over time establish institutional policies to also facilitate deposit of self-archived journal articles. NORA also provided some initial funding for universities to establish journal publication services based on OJS (Frantsvåg, 2008). Since 2011, the work of

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coordinating repository activities on the national level has been handled through Cristin, which is a service operated by Sikt (described in detail later in this section).

The historical overview of OA in Norway is continued by Wenaas & Gulbrandsen (2022) in a longitudinal analysis of how Norwegian universities have responded to national policy developments for OA during the timespan of 2009–2021. Based on the review of 182 policy documents, strategy documents and annual reports of universities the authors conclude that "When considering the profile of the institutional policies and the explicit referrals to national policies, we find there is a great deal of homogeneity between Norwegian universities, and they are mostly aligned with national policy. [...] All universities show commitment to open access, and several can be described as proactive as they tie it to different types of local incentives.". Overall it can be argued that Norway has been among the earliest movers when it comes to OA, and that the movement has been strong and consistent across the country and across both domestic outlets (Norwegian journals) as well for all research outputs authored by Norwegian authors (International journals).

Central stakeholders in the national science policy environment for scholarly publishing and OA in Norway are:

- **The Ministry of Education and Research (Kunnskapsdepartementet):** The highest governmental body with responsibility to oversee the higher education sector in the country.[127]
- **The Norwegian Directorate for Higher Education and Skills (HK-dir):** The Directorate for Higher Education and Skills is the executive agency for the Ministry of Education and Research within the higher education and higher vocational education sectors and is responsible for the national skills policy. Advises the Ministry, implements national policies, and coordinates incentive schemes and management instruments."[128]
- **The Norwegian Agency for Shared Services in Education and Research (Sikt):** A public administrative body under the Ministry of Education and Research, Sikt is a collaborative body that centrally coordinates and produces many of the key products and services needed by the higher education sector.[129] Among the portfolio of centralised activities among many are agreements with academic publishers, management of national data on research activities, and repository services.
- **Universities Norway (UHR) (Universitets- og høgskolerådet):** UHR is a cooperative umbrella organisation with 32 universities and university colleges as members.[130] They represent the collective voice of higher education institutions in the country and have been involved in many different types of policy and guideline development projects, including open access and research assessment.

[127] https://www.regjeringen.no/no/dep/kd/id586/
[128] https://hkdir.no/en/about-us
[129] https://sikt.no/en/about-sikt
[130] https://www.uhr.no/en/about-uhr

- **The Research Council of Norway (RCN) (Forskningsradet):** The national research funder that has issued project calls since 2020 requires that all journal articles funded by RCN must be made open access immediately upon publication. The RCN is a member of cOAlition S.[131]
- **NordForsk:** NordForsk was established in 2005 and works under the Nordic Council of Ministers, funding and providing services and infrastructure to facilitate cooperation in Nordic research.[132] Working under NordForsk is The Joint Committee for Nordic Research Councils in the Humanities and Social Sciences (NOS-HS), which is a cooperation between research councils in Denmark, Finland, Iceland, Norway and Sweden responsible for supporting research within the Humanities and Social Sciences.[133] NOP-HS had regular calls for funding targeted at journals active in the Nordic countries, but in 2022 it was decided to not announce such a call for 2023.

Until 2017, the national research funder, The Research Council of Norway (RCN) (Forskningsrådet) was a notable journal funding source for Norwegian journals. RCN used to have yearly application processes for providing baseline journal funding for journals in the social sciences and humanities, which provided support to around 40 journals annually (Wenaas, 2021). Since 2017 a requirement was introduced that all funded journals must be OA without an APC, making it a funding scheme exclusive to supporting Diamond OA journals. In conjunction with this OA requirement a journal funding consortium has been coordinated by Unit (the Norwegian Directorate for ICT and Joint Services in Higher Education & Research) running in its first phase from 2018 to 2021, acting under the name of NÅHST (Norskspråklege opne tidsskrift innanfor humaniora og samfunnsvitskap). This new model pooled money from NRC (~55%), The Ministry of Education and research (~40%), and most universities and university colleges in Norway (~5%). Based on the experiences from that first pilot three-year funding round, the following three-year period from 2021 onwards covered funding of 28 journals, for which an evaluation report is available as (Wikstrøm, Røeggen, Weisteen Bjerde, 2023). The most recent application round was organised in 2023 for the funding period of 2024-2026[134] where some of the central requirements include that journal must be included in DOAJ (or with submitted application provided as appendix) and the national publication channel listing, and they need to have around at least half of their content in Norwegian, with editors being tightly connected to the Norwegian higher education sector (NÅHST, 2024). The NÅHST model emphasises scholarly quality in its selection of journals to be funded, where the research community is involved in selecting the journals who received funding (The National Board of Scholarly Publishing are responsible for organising that component). The NÅHST-model is a unique example of how substantial funding for Diamond OA journals can be organised through a central model, where no other Nordic countries have anything similar in place.

[131] https://www.forskningsradet.no/en/research-policy-strategy/open-science/
[132] https://www.nordforsk.org/about
[133] https://www.nordforsk.org/research-areas/joint-committee-nordic-research-councils-humanities-and-social-sciences-nos-hs
[134] https://www.openscience.no/oa-i-norge/nahst

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Norway's first national open access policy was issued by the Ministry of Education and Research (2017). The policy contained the following summarising paragraph, which conveys the main message:

> *"The goal of the government is to make all publicly funded Norwegian research articles openly available by 2024. Norway shall be a driving force for all publicly financed research articles to be made openly available at the time of publishing. Research institutions, research funders and the wider research community must all play a part in order to reach this goal of full open access. The research community in particular is expected to play a vital role in promoting open access through their national and international networks, and to convert important journals within their subject areas from closed subscription-based journals to open access titles."*

The 2017 policy only covers research articles within its scope, but is diverse in what mechanisms it endorses on the path to achieve that. The policy also calls for more diverse research assessment, citing DORA, and the removal of reliance on journal impact factors for assessment tasks.

As the timeframe from that 2017 policy issued by the ministry pointed to 2024 being the end year of the policy, work to create an updated policy was started in 2023. As part of the government's long-term plan 2023-2032 for research and higher education, the task of supporting higher education institutions to develop a new policy beyond 2024 was given to HK-dir, The Research Council of Norway, and Sikt (openscience.no, n.d.). The working group that was formed involved the three research sectors in Norway (The University sector, the research hospitals and the research institutions) and in December 2023 the final report was published (Forskningsrådet, 2024). The 60-page report is not a policy but provides a comprehensive snapshot of the current status. It also outlines recommended tasks for the research sector for promoting open access as part of the scholarly publishing system in Norway.

Of the key Forskningsrådet (2024) recommendations that are of relevance in particular to the Norwegian IPSP landscape are the following for each stakeholder group (not all recommendations translated, translations made freely, since they are only available in Norwegian):

- **Government**
  - Update the national targets and policy for open access to scholarly articles
  - Finance and build essential infrastructure for open access publishing
  - Further develop the national registry of scholarly publication channels, making relevant and good diamond journals visible
  - Develop the NÅHST journal funding scheme to respond to current circumstances. Evaluate possibility to expand beyond SSH disciplines and consider how to support high quality open access international journals with an anchoring to Norway

    - Develop a funding model to support immediate open access to academic books
- **Funders**
    - Contribute to funding costs of open access and related infrastructure
    - Act as driver for developing alternative publication channels, for example diamond publication channels
- **Research performing institutions**
    - Maintain an overview of the institution's costs related to publishing activities
    - Enable faculty and research community members to take on editorial responsibilities in high quality open access publication channels and peer review within their own areas of expertise
    - Enable faculty and research community members to establish new or further develop open access publication channels
    - Support the development of diamond open access in line with the Action Plan for Diamond Open Access by establishing a capacity centre for diamond publishing
- **Researchers**
    - To select high-quality publication channels and services that provide immediate open access to all research outputs
    - Encourage or contribute to the development of good and open access discipline-specific publication channels that are of high-quality and provide transparency to costs
    - Researchers who take on editorial responsibilities or participate in editorial work for journals should
        - Reflect on the ownership of the journal
        - Evaluate the editorial independence of the journal in relation to the publisher
        - Evaluate if the journal has a pricing policy that is sensible in relation to incurred costs
        - Select diamond open access publishing if good alternatives for this are available within the discipline
        - Select a publication channel that asks for a sensible APC if good alternatives are available in the discipline

In the report, all stakeholders are also recommended to further national work on strengthening rights management and rights retention of authors and their institutions. Overall, there are several key recommendations here that are about strengthening Diamond OA publishing through mechanisms that the DIAMAS project is furthering through its actions. If these recommendations are adopted into practice and future policies, there should be positive development for the circumstances of institutional publishing in Norway.

Starting from January 2023, Universitetsforlaget have implemented a straightforward rights retention policy for its journals which is in line with the rights retention OA policies of large Norwegian universities, enabling authors to freely distribute the accepted manuscript under a CC-BY 4.0 licence (khrono.no, 2023). Due to the lack of a

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comprehensive Diamond OA funding model for all journals in the country, approaches like this enable funding streams to the journals through subscriptions while also enabling immediate liberally licensed OA availability through repositories.

Open access-related infrastructures

Norway does not have a national journal portal that would provide common hosting and act as an access point for journals in the country, rather there has mainly been a tradition of universities in the country setting up their own OJS-based journal portals (Björk, 2019). For example, the University of Oslo hosts over 30 journals on their FRITT portal,[135] UiT currently publishes 14 scholarly series and around a dozen grey material series on their Septentrio service.[136]

The Norwegian University of Science and Technology[137] and the University of Bergen[138] host over 10 journals. A summary of the organisation of the technical environment is also provided by Bosman, Kramer, Stojanovski et al. (2024). In 2021 a report by a national committee recommended a national publishing service should be created to centralise the technical publishing environment for institutional Diamond OA publications, however, at the time work on such a service was not initiated (Kolstrup, Aspaas, Hansen et al., 2021). For publishing data sets, based at UiT is used by nearly all institutions in Norway.[139]

Institutional publishing

In a recently published comprehensive DIAMAS country report for Norway, Jan Erik Frantsvåg provided a thorough description of the history and current national environment for scholarly publishing in the country, including a specific focus on the institutional publishers and service providers to institutional service providers (IPSPs) in the country (Bosman, Kramer, Stojanovski et al., 2024). Where not otherwise noted in this particular section, the findings are extracted and summarised from the aforementioned report. In the country report, the IPSPs are analysed through a Europe-wide web survey which was sent out as part of the core work within DIAMAS. As part of preparatory work of consulting bibliometric databases 77 institutional publishers or service providers to institutional service providers were identified from the outset and were sent an invitation to take part in the survey, and in the end 15 valid responses were ultimately received. The survey was also open for IPSPs to respond through social media and email list distributions. 10 of the responding organisations were public organisations, with 2 Private not-for-profit organisations and the rest being other types.

[135] https://journals.uio.no/
[136] https://septentrio.uit.no/
[137] https://www.ntnu.no/ojs/
[138] https://boap.uib.no/
[139] https://dataverse.no/

Table 14 provides a breakdown of the number of journals published by each of the responding institutional publishers, showing a fairly even representation from all size categories. 6 of the Norwegian responding institutional publishers reported to also publish books, and only 3 indicated also publishing conference proceedings. Humanities (10) and Social Sciences (9) were the most commonly represented research disciplines covered by the publishers.

Table 14. Number of academic scholarly journals published by Norwegian institutional publishers responding to the DIAMAS survey. (Bosman, Kramer, Stojanovski et al., 2024).

Publisher size	Number of responding institutional publishers in Finland	as % share
1	3	20%
2-5	2	13%
6-10	2	13%
11-20	4	27%
21-50	2	13%
51-100	1	7%
More than 100	0	0%
No response	1	7%

Funding and sustaining IPSPs

The country report by Jan Erik Frantsvåg includes a component analysing survey response that relate to funding and sustaining IPSPs, which has been used as a starting point to frame the analysis found in this section (Bosman, Kramer, Stojanovski et al., 2024). Since this national overview has a specific emphasis on these topics, the investigation of Frantsvåg has been further extended by analysing all the publicly available survey data that concerns these topics provided by (Kramer & George, 2024).

A distinct difference between the Norwegian IPSPs responding to the survey compared to the total for all respondents was that only 29% of the respondents had an approved annual budget, while the number for all survey respondents was 57%. The level of in-kind support provided by parent organisations, and the use of external services, were on similar levels to the total respondents' averages. Most Norwegian respondents were part of HEIs and have their funding as part of parent operations, without specific funds set aside for them to decide on how to use.

Table 15 provides a breakdown of the number of paid staffs directly employed or contracted by the IPSP (in FTE), showing that the bulk of respondents are within the "Less than 2" and "2-5" response categories.

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Table 15. Number of paid staffs directly employed or contracted (in FTE)

FTE response categories	Number of responses	as % share
None	1	7%
Less than 2	6	40%
2-5	5	33%
6-10	2	13%
11-20	1	7%

Based on the questions related to different types of funding mechanisms, it is apparent that IPSPs responding to the survey used quite different resourcing combinations from each other. Table 16 presents which funding mechanisms the Norwegian IPSPs rated as being highly or very highly reliant on during the last three years.

Table 16. Reliance on funding over the last 3 years (number of Norwegian responses rating the type of funding "High" or "Very High"

Table 16. Reliance on funding over the last 3 years (number of Norwegian responses rating the type of funding "High" or "Very High"

Type of funding	Number of responses	as % share
Fixed and permanent subsidy from the parent organisation	3	20%
Periodically negotiated subsidy from the parent organisation	2	13%
Time limited grants or subsidies (private or public) from outside own organisation	2	13%
Permanent public government funding	2	13%
Voluntary Author Contributions	2	13%
Collective funding	1	7%

Concerning the experienced stability of these funding types most of these funding types were deemed mostly stable, outside "Time limited grants or subsidies (private or public) from outside own organisation" where the respondents were divided between "Very unstable" (1), Unstable (1), "Stable" (2), and "Don't know" (5).

Table 17 presents the degree to which the Norwegian respondents reported reliance on Non-monetary or in-kind support, and Monetary income, where both categories have fairly similar answer distributions. Both received 5 "Very High" responses, with the rest of the reliance categories have 1-2 responses each per type of resource

Table 17. Reliance on resources (Non-monetary or in-kind support, and Monetary income)

Reliance	Non-monetary or in-kind support	Monetary income
Very low	1 (7%)	1 (7%)
Low	1 (7%)	1 (7%)
Neither high nor low	0	1 (7%)
High	2 (13%)	1 (7%)
Very high	5 (33%)	5 (33%)
Don't know	0	1 (7%)
Not applicable	4 (27%)	3 (20%)

Table 18 provides a breakdown of the type of in-kind support provided by the parent organisation of the IPSP, where it is clear that there is a broad spectrum of different types of support provided. On top with 8 answers is "Salaries of permanent staff", which is followed by 7 answers each to "Facilities and premises", "General IT services", and "Service-specific IT services". "Human Resource management, general financial and legal services" was also a notable category of in-kind support provided with 6 answers.

Table 18. In-kind support provided by parent organisation (respondents could select all that apply)

Type of in-kind support	Responses	as %
Facilities and premises	7	47%
General IT services	7	47%
Human Resource management, general financial and legal services	6	40%
Salaries of permanent staff	8	53%
Salaries of temporary staff	3	20%
Service-specific IT services	7	47%
Don't know	1	7%
Not applicable	1	7%

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

Table 19 displays which categories of external services (if any) the Norwegian IPSPs reported to utilise.

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Table 19. Use of external services

	Editorial services	Production services	IT services	Commun. services	Administ., legal and financial services	Training support and/or advice on publishing policies, and best practice	Other
In-kind	5 (33%)	5 (33%)	5 (33%)	5 (19%)	5 (33%)	5 (33%)	0
Outsourced	3 (20%)	5 (33%)	5 (33%)	0	1 (7%)	0	1 (7%)
Voluntary	1 (7%)	1 (7%)	0	0	1 (7%)	0	0
None-N/A	2 (13%)	2 (13%)	3 (20%)	5 (33%)	5 (33%)	6 (40%)	0

Table 20 provides a breakdown of the Norwegian responses to a survey question which queried into which areas of cooperation could be considered by the respondents.

35% (5) of Norwegian respondents answered "No" or "Don't know" to the question about in which areas of cooperation could be considered (the share for all respondents to the whole survey was 27%). An indication of interest in collaborating regarding" IT services", and "Training, support and/or advice on publishing policies and best practice" seem most promising based on these responses. For IPSPs part of a parent organisation the opportunities for collaboration in areas such as "Administrative, legal and financial services", like many of the respondents from Norway were, is not possible since they need to follow and use the parent's routines, systems and practices.

Table 20. Areas in which collaboration with other organisations would be considered (respondents could select all that applied)

Collaboration areas	Responses	as %
Administrative, legal and financial services	2	13%
Communication services	4	27%
Editorial services	2	13%
IT services	8	53%
Production services	5	33%
Training, support and/or advice on publishing policies and best practice	7	47%
None	3	20%
Don't know	2	13%

Conclusions

Norway was one of the early movers when it comes to actions to further OA in the country, and that momentum and leading position has remained over time. There is strong collective action among stakeholders nationally to coordinate the circumstances for OA publishing, both nationally and through international publishers. Institutional publishing is dominantly handled by Universities and University Presses, with some also by scholarly societies. Most of such journals are already Diamond OA, with only a small minority being APC-based or limited to subscription-based access. There is a unique

funding mechanism in Norway that provides funding to a select set of high-quality Diamond OA journals within the social sciences and humanities, something which is not present in any other country. Based on the recent national science policy documents, the future looks bright for developing more financial and technical support for Diamond OA journals active in the country.

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Poland

National landscape of scholarly publishing

Scholarly communication in Poland, as in many countries, involves a complex ecosystem that includes academic institutions, government agencies, libraries, publishers, and professional associations. Here is an overview of how scholarly communication is organised at the national level in Poland. In view of the IBL PAN's area of competence and scientific interest, the overview is a description of the situation in the SSH.

Academic and Research Institutions

- **Universities and Research Institutes**: Poland has numerous universities and research institutes that are crucial in generating scholarly research. These include both public and private institutions. Major universities, such as the University of Warsaw, Jagiellonian University, and Warsaw University of Technology, play significant roles in scholarly communication through their faculties, research units, and academic publishing.
- **Polish Academy of Sciences (PAN)**: This is one of the main research entities in Poland, overseeing various autonomous research institutes across different disciplines. PAN also publishes a wide range of scientific journals and monographs.

Governmental Role

- **The Ministry of Science and Higher Education**: This government body is responsible for higher education and scientific research policies in Poland. It oversees funding, accreditation, and evaluation of research and higher education institutions.
- **The National Science Centre (NCN), Polish National Agency for Academic Exchange (NAWA) and the National Centre for Research and Development (NCBR):** These agencies are key in funding research projects and initiatives in Poland. They support scientific research and development activities, including those that lead to the publication and dissemination of research findings.

Libraries and Digital Repositories

- **Academic Libraries:** University and research institute libraries play a significant role in scholarly communication by providing access to academic journals, books, and databases. They also support open access initiatives and manage institutional repositories.

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- **Digital Repositories and Databases:** Platforms like POL-on[140] the Integrated System of Information on Science and Higher Education, or OPEN - the Repository of Open Scientific Publications[141] [Repozytorium Otwartych Publikacji Naukowych OPEN] help in storing and disseminating scholarly works, including theses, dissertations, and research papers.

Scholarly Publishing

- **Academic Journals and Books:** Polish researchers publish in both domestic and international journals. Poland has its own array of scholarly journals across various disciplines, many of which are indexed in international databases like Scopus and Web of Science.
- **OA:** Poland supports open access to scholarly communication, with many institutions hosting their own digital repositories. The DOAJ lists several Polish journals, indicating a commitment to open access principles.

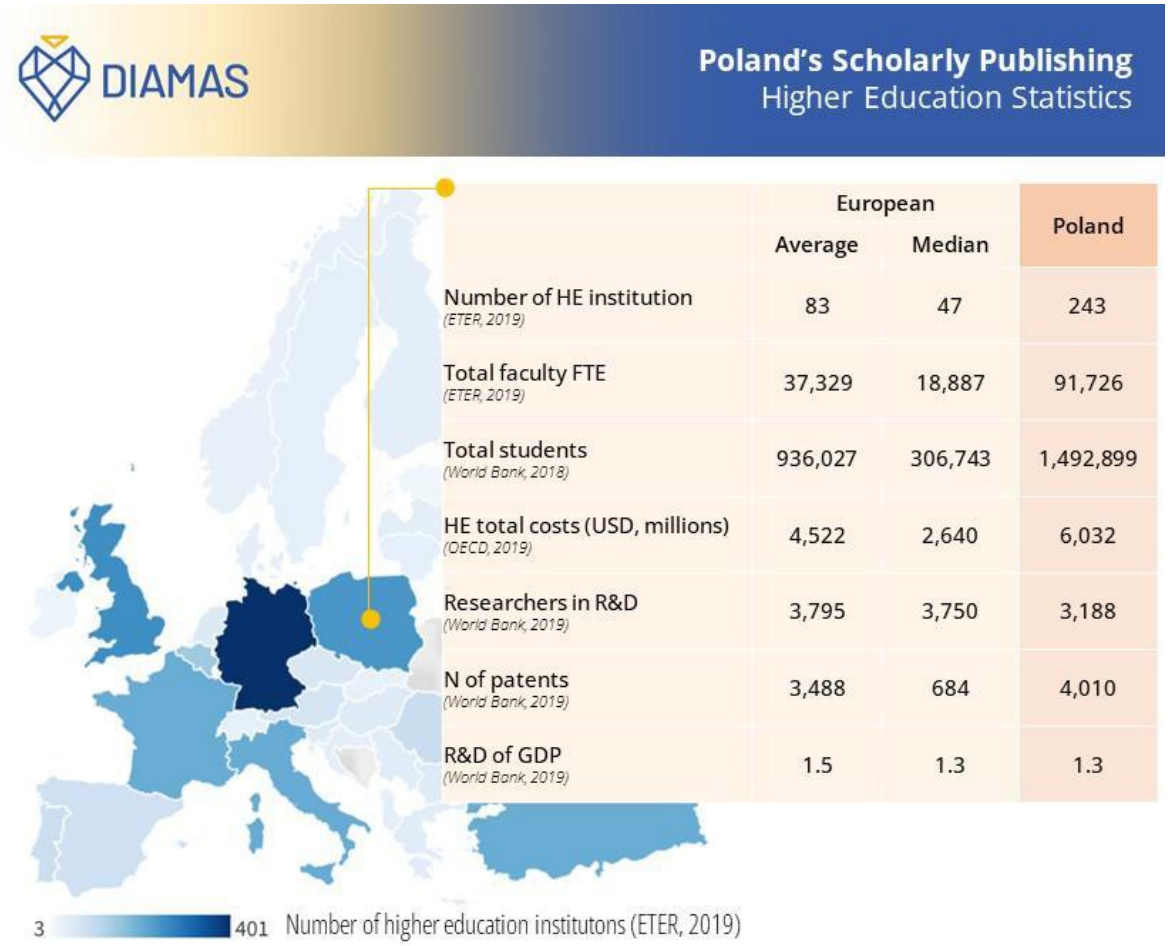
Professional Associations and Societies

- **Scientific Societies:** Various professional associations and scientific societies in Poland also contribute to scholarly communication by organising conferences, seminars, and workshops, and by publishing academic journals and newsletters in specific fields of study.

Challenges and Development

The scholarly communication landscape in Poland faces challenges similar to those in other countries, including issues related to open access mandates, research evaluation standards, and the integration of Polish scholarship into global scientific discourse. However, initiatives aimed at enhancing the visibility and accessibility of Polish research, as well as improving the quality and internationalisation of scholarly publishing, are ongoing.

[140] https://polon.nauka.gov.pl/en/
[141] https://open.icm.edu.pl/home



	European		Poland
	Average	Median	
Number of HE institution (ETER, 2019)	83	47	243
Total faculty FTE (ETER, 2019)	37,329	18,887	91,726
Total students (World Bank, 2018)	936,027	306,743	1,492,899
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	6,032
Researchers in R&D (World Bank, 2019)	3,795	3,750	3,188
N of patents (World Bank, 2019)	3,488	684	4,010
R&D of GDP (World Bank, 2019)	1.5	1.3	1.3

Figure 52. Higher Education Statistics of Poland

Data from ETER 2019 on Polish higher education show that there were 243 HEIs in Poland in 2019 (Figure 52, note that data do not include all the research institutes, institutes of the Polish Academy of Sciences and scientific units). The number of non-public HEIs has increased over the past few years. The most up-to-date complex data presented in the report on Polish science from 2022[142] shows that the area of science in Poland consists of 608 scientific institutions. R&D activity is conducted at 369 universities (including 131 belonging to the public sector), 102 research institutes and 78 institutes of the Polish Academy of Sciences, and 59 other scientific units.

Evaluation of scientific activity conducted in 2022 resulted in a total of 1185 scientific categories awarded in 47 unique disciplines, according to data obtained before the appeal process.

The evaluation of scientific journals is conducted by the Ministry of Science and Higher Education. This evaluation process plays a critical role in the academic landscape by influencing the funding, reputation, and development priorities of research institutions and universities.

[142] https://radon.nauka.gov.pl/analizy/nauka-w-Polsce-2022

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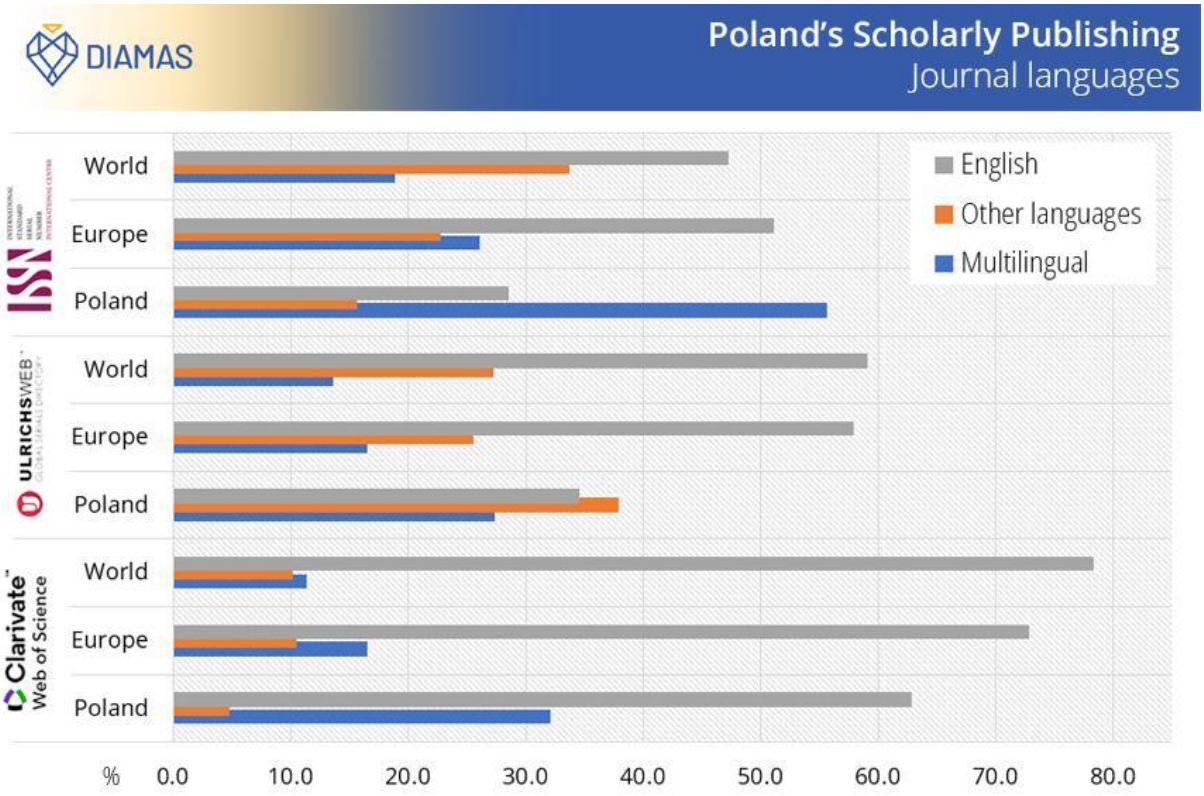
Key points of the evaluation system

- **List of Journals:** The Ministry prepares and updates a list of scientific journals and a list of scholarly publishers that are recognized for their scholarly value. This list categorises journals into various disciplines and assigns points to them based on their perceived scientific merit and international standing. However, the assessment criteria are not fully transparent, so many controversies arise each time the lists are updated.
- **Point System:** Journals and publishers are awarded points on a scale that reflects their impact and importance in the scientific community. The point system is designed to distinguish between journals based on criteria such as impact factor, international collaboration, and editorial standards. Higher points are given to journals with more stringent peer-review processes, wider international reach, and significant impact in their fields.
- **Impact on Academia:** The points awarded to journals are used to assess the scientific output of researchers and institutions. Publishing in higher-ranked journals, as determined by this point system, can lead to greater recognition, funding opportunities, and career advancement for scholars.
- **Updates and Revisions:** The list of journals and their point assignments are regularly reviewed and updated to reflect changes in the scientific landscape, ensuring that the evaluation system remains current and accurately represents the quality and impact of scholarly publications.

This evaluation system encourages Polish researchers to aim for publication in high-ranked journals, thereby fostering higher standards of research and international collaboration. However, it has also sparked discussions regarding its impact on research priorities and the pressure it places on academics to publish in highly ranked journals.

The infographic in Figure 53 provides an analysis of scholarly journals in Poland, based on data from ETER 2019. The ISSN data reveals that a significant majority of Polish journals are multilingual, with English-language journals comprising a smaller fraction. Ulrich's Web data indicates a more balanced distribution among English, other languages, and multilingual journals in Poland, with a noticeable presence of journals in languages other than English. Clarivate's Web of Science data highlights that multilingual journals are predominant, while English-language journals are less common. Overall, the data showcases Poland's distinctive trend of favouring multilingual publishing over the predominantly English-focused trends observed in broader European and global contexts.



Numbers of journals

	ISSN Poland	ISSN Europe	ISSN World	Ulrichsweb Poland	Ulrichsweb Europe	Ulrichsweb World	Clarivate Web of Science Poland	Clarivate Web of Science Europe	Clarivate Web of Science World
English	896	26,665	77,372	555	16,584	34,172	219	8,298	17,155
Other languages	491	11,866	55,140	608	7,315	15,756	17	1,202	2,231
Multilingual	1,742	13,629	30,977	440	4,733	7,860	112	1,881	2,500

Figure 53. Poland's Scholarly Publishing: Journal languages

According to the recent report on Polish science from 2022,[143] English-language publications accounted for half of the scientific papers reported between 2017 and 2021. They dominated especially in the group of scientific articles (65%), while publications in Polish predominated among scientific monographs (85%) and their chapters (71%). Almost all articles published in 2019-2021 in the highest scoring journals, i.e. 140 and 200 points, were English-language papers. The lower scoring category was associated with a higher proportion of publications in Polish, ranging from 7% for 100-point journals to almost half for journals assigned 20 points. Publications in other languages accounted for 3% of scientific papers reported between 2017 and 2021.

The Virtual Library of Science[144] - a central database granting access to publications of foreign publishers, journals, as well as metadata of such providers like Scopus or WoS - is funded by the ministry responsible for science. It is maintained and developed by the

[143] https://radon.nauka.gov.pl/analizy/nauka-w-Polsce-2022
[144] https://www.psnc.pl/virtual-library-for-science-wbn/

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Interdisciplinary Center for Mathematical and Computational Modeling at the University of Warsaw (ICM UW), which not only makes the technology available to users and institutions, but also negotiates the fees. In 2020, Poland spent PLN 256 Million on access to these publications, and in 2022 - over PLN 236 million.[145,146]

Funding and assessment systems

As mentioned in Zacharewicz et al. (2019), funding in Poland is based on allocation mechanisms on assessments of research outputs through quantitative bibliometrics. The number of points obtained in the evaluation is a crucial factor in the parametric assessment of institutions, conducted every 4 years. In 2013, the evaluation process was conducted according to bibliometric measures such as impact factors, among other, such as patents, revenues from industry cooperation and external R&D funding normalised by numbers of R&D employees of an organisation, scientific awards of researchers, and financial outcomes of commercialisation of research results. Since 2017, the assessment has been conducted on the basis of three general criteria: the scientific or artistic level of the activity (this is still based on impact measures), the financial effects of scientific research and development work, and the impact of scientific activity on the functioning of society and the economy, the third being especially important for the SSH. (The evaluation was originally supposed to cover the years 2017–2020. Ultimately, however, it covered the years 2017–2021 and started on January 1, 2022).

The Science Evaluation Committee (KEN) may award each of the assessed disciplines one of five scientific categories: A+ (the highest category), A, B, B+ or C (the lowest category). Category A+ is awarded to outstanding units from among those that received category A.

In the 2022 evaluation, a total of 1,185 scientific categories were awarded in 47 unique disciplines (40 categories A+, 375 categories A, 580 categories B+, 153 categories B, and 37 categories C). The most prestigious group with category A+ included only 3% of disciplines submitted for evaluation by scientific entities, including two thirds of them being practised at public universities. Every third discipline was awarded category A, of which 66% of disciplines assessed in this way were reported by public universities. Category A dominated among all grades obtained by scientific disciplines at the Polish Academy of Sciences (57) and research institutes (37). (Nauka w Polsce, 2022).[147]

Journals with high impact factors are prioritised in the national evaluation, the representation of which are lists of rated journals and publishers (the last is from 5th January 2024).[148] The biggest number of points is assigned to publications in foreign journals, i.a. “Nature”. It is important to mention that the list tends to be politicised. In

[145] https://miesiecznik.forumakademickie.pl/czasopisma/fa-7-8-2021/ile-placimy-za-dostep/
[146] https://wbn.icm.edu.pl/komunikaty/#komunikat19012023
[147] https://radon.nauka.gov.pl/analizy/nauka-w-Polsce-2022
[148] https://www.gov.pl/web/nauka/komunikat-ministra-nauki-z-dnia-05-stycznia-2024-r-w-sprawie-wykazu-czasopism-naukowych-i-recenzowanych-materialow-z-konferencji-miedzynarodowych

the last years, the problem has grown due to some controversial decisions of the former minister of education and science Przemysław Czarnek, who arbitrarily increased the number of points for some journals. Those decisions were reversed by the current Minister (Leszczyński, 2024; Prezydium PAN, 2023).

Open access – requirements, incentives, and barriers

Poland has introduced recommendations[149] to support OA to scientific publications and research data, aligning with broader European and global movements towards open science. The Ministry of Science and Higher Education has been instrumental in issuing and promoting these policies. Key aspects of Poland's approach to open access include:

National Policies and Initiatives

Poland does not have a comprehensive open access and open science policy yet. The first national document that addressed the area of open access was the aforementioned recommendations "Directions for the Development of Open Access to Publications and Research Results in Poland" [Kierunki rozwoju otwartego dostępu do publikacji i wyników badań naukowych w Polsce][150] adopted by the Ministry of Science and Higher Education in 2015. This document indicated the main actions for implementing the model of open access to scientific publications and research results in Poland and defined the most important concepts in this area. It also contained recommendations for different categories of stakeholders operating in the area of open science: research funders, universities and publishers of scientific journals. It was the first national document indicating the need for individual institutional stakeholders to adopt open access policies. "Directions for the development..." also indicated a number of supportive actions to be taken by the Ministry of Science and Higher Education and specified how the implementation of the recommendations would be evaluated.

The most important recommendations contained in the Directions of development of open access to publications and scientific research results in Poland are as follows:

- Development and adoption by individual universities, research institutes and institutes of the Polish Academy of Sciences, as well as by NCN and NCBR of their own institutional policies on OA, which will define the principles of publishing research results in OA (mainly concerning articles in peer-reviewed journals, but also e.g. peer-reviewed conference proceedings, possibly research data).
- Appointment of OA officers by heads of research units and universities.
- Transition of scientific journals to open access models.
- Making dissertations available in open repositories.
- Monitoring and reporting to the Ministry of Science and Higher Education on progress in the implementation of OA, including systematic analysis of the

[149] https://www.gov.pl/documents/1068557/1069061/20180413_Kierunki_rozwoju_OD_wersja_ostateczna.pdf
[150] https://www.gov.pl/documents/1068557/1069061/20180413_Kierunki_rozwoju_OD_wersja_ostateczna.pdf

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number of publications produced in a given scientific unit or university in order to determine the proportion of publications in OA in relation to all publications.
- Organising OA training for all researchers and PhD students of a scientific unit or university. Taking into account the experience and potential of scientific libraries, which often coordinate the editing and deposit of scientific publications in repositories.

Poland's proactive approach to OA is also exemplified by the Act of 20 July 2018 The Law on Higher Education and Science,[151] mandating OA for articles in journals funded through the "Support for Scientific Journals" program.

The issue of 'openness' of publications and research data was also indirectly addressed within the framework of the aforementioned Act, which created a legal framework for the implementation of Open Science in Poland and updated the method of evaluating the quality of scientific activity. In the context of Open Science, it is particularly important to introduce into the system the third criterion of evaluation of the impact of scientific activity on the functioning of society and the economy.

Under the changes introduced at that time, the relationship between the most important results of scientific research, including development works or artistic creation in a given unit and the economy, functioning of public administration, health protection, culture and arts, protection of the natural environment, security and defence of the state or other factors influencing the civilisational development of society is evaluated. Open access publishing and the sharing of research data translate into increased visibility of the research in question, and indirectly into increased citation rates and recognition of research teams operating in a particular sector. The impact of ongoing scientific activity on society and the economy can be greater the easier it is to access publications and data.

To facilitate OA, Poland has developed national platforms and repositories. For instance, KRONIK@ (CHRONICLE) National Repository of Science and Culture Objects[152] is a significant initiative that aggregates content from institutional repositories across the country, making Polish scientific research outputs more visible and accessible. Another example is OPEN - the Repository of Open Scientific Publications,[153] which enables Polish researchers from all fields to openly share their articles, books, conference materials, reports, doctoral theses, and other scientific texts.

Yet, it should be stressed that Poland lacks a comprehensive open science policy and open access remains only a recommended option, with an exception that some funders and programmes request for beneficiaries.

[151] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20180001668
[152] https://kronika.gov.pl/
[153] https://open.icm.edu.pl/home

Implementing Bodies

The implementation and promotion of open access policies in Poland involve various stakeholders:

- **The Ministry of Science and Higher Education (MNiSW)**: As the main governmental body, it oversees the national policies related to science and higher education, including open access. MNiSW focuses on cooperation between science and the economic environment. It makes sure that the achievements of Polish scientists are visible on the international arena. Each year, the Ministry of Science and Higher Education allocates funds for programmes that increase the potential of Polish science and support the popularisation of the achievements of domestic researchers.
- **Research Funding Agencies**: NCN, NAWA and NCBR support open access by requiring funded projects to provide open access to publications and research data. NCN is an executive agency established to support scientific activity in basic research. It facilitates the implementation of empirical or theoretical work aimed primarily at gaining new knowledge about the foundations of phenomena and observable facts, without aiming at direct commercial application. In its 10 years of existence, the Centre has awarded more than 23,000 grants to researchers working in academic centres across Poland. NCBR is a modern government agency supporting the implementation of key projects for the state. NCBR is a key centre for supporting and creating innovative technological and social solutions. It initiates and implements projects contributing to the civilisational development of the country.

Some research funding bodies, e.g. the NCN, already include in their policies the requirement for beneficiaries to publish research results in open access. Both the MNiSW and the NCN recommend the use of CC BY licences for publicly funded publications. In addition, research entities are encouraged to implement or update their own institutional policies in line with national policies and provide their staff with support in research data management, including the opening process, by hiring qualified staff, primarily data stewards, data curators or data librarians. It is assumed that possible grants to NGOs, which will be linked to indirect research funding, will ultimately be conditional on the implementation of similar solutions.

Currently, the MNiSW is carrying out a consultation, involving the most important research units in Poland, on the document 'Policy of open access to research data financed from public funds', which is described in the Act of August 11, 2021 on open data and reuse of public sector information (Journal of Laws of 2021, item 1641).[154] The issues addressed in the document are particularly important in the context of public funding - on the one hand, it is necessary to avoid double funding of similar research tasks, the implementation of which is always associated with the production of data, with public funds, and on the other

[154] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20210001641

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hand, to create from public data a publicly available set that can be used by other scientists, innovative entrepreneurs and scientifically engaged citizens.

Open Science, understood as open access to scientific publications and the opening up of research data, is one of the priorities listed in the National Science Policy in the context of increasing the quality of the research performed. The policy draws attention to the need to encourage Polish scientists to publish the results of their research in the global circulation of science, and to the necessity of effective application of the intellectual property system.

The relevant activities of the minister responsible for higher education and science in supporting open models of scholarly communication started in 2004, when the OECD Declaration on Access to Research Data from Public Funds was signed. In 2008, the members of the European University Association (43 Polish universities) and the Conference of Rectors of Academic Schools in Poland (CKRASP) issued Recommendations on Open Access.

Since 2015, the Ministry has also conducted periodic monitoring of the effects of its activities. In 2017, a survey of HEIs was conducted, focusing primarily on the level of implementation of the recommendations contained in the "Directions for the development...".

In 2018, a "Report on the implementation of the policy of open access to scientific publications in 2015 - 2017"[155] was published. It provided an overview of the open access activities implemented in 2015-2017, a discussion of the main problems and barriers, and recommendations for future action. In 2020. MEiN conducted another survey, this time covering a broader subject area, including issues of international cooperation and Application Programming Interfaces (APIs).

The cycle of monitoring the state of open science in Poland continues, with a wide-ranging analysis launched in January 2023 [Analiza stanu otwartej nauki w Polsce[156]], including a survey and in-depth interviews at different levels of the organisation. Its aim is to assess the scale of involvement of scientific entities in Poland in open science activities between 2017 and 2021, in terms of: open science policies and procedures, availability of publications, data and other digital research objects produced at scientific entities, infrastructure and services, human resources, competence development support, support and rewards, and international cooperation in open science.

According to the data from the aforementioned survey, conducted by the Ośrodek Przetwarzania Informacji – Państwowy Instytut Badawczy [Information Processing

[155] https://www.gov.pl/attachment/39be7405-7ba5-460e-9a66-56487dd05fe2
[156] https://radon.nauka.gov.pl/analizy/analiza-stanu-otwartej-nauki-w-Polsce

Centre - National Research Institute] in the first quarter of 2023 (survey form completed by 197 out of 597 entities constituting the higher education and science system)

- Approx. 27% of the surveyed entities that make up the higher education and science system have an institutional policy on open access, and more than half of the others plan to adopt one.
    - At least 54 open access policies were established between 2016 and 2023.
    - Of the adopted institutional policies, only about half also cover the area of research data.
- At the time of the survey, at least 32 universities still planned to develop an open access policy in that calendar year. According to the declarations of the universities, the main obstacles to the introduction of institutional open access policies are the financial/strategic priorities of the universities and the lack of adequate knowledge of copyright and proper protection of the rights of authors of publications.
- The source of funding for the university's data (and publication) sharing activities in terms of adopted institutional policies is primarily its own resources. Other sources of funding (e.g. research projects, structural funds, ministerial programmes) are used minimally or not at all.
- The main way in which Polish universities provide access to research data is by placing them on the Internet, including in particular in various types of repositories.
- Approx. 35% of entities surveyed at the beginning of 2023 had their own or co-created digital repository for research data. 69 entities declared the creation of a total of 102 repositories.
    - Institutional repositories are the most common. The most common object deposited is the full content of scientific publications. Research data can be deposited in 61 out of 102 repositories.
- At the beginning of 2023, 80 of the 197 entities surveyed employed a total of 365 open science professionals. 76 of these individuals were employed in a position dedicated exclusively to open science.
    - Those entities that already employ at least one person specialising in open science are also those that feel the need to employ additional specialists more strongly than those that do not employ such people at all. Reasons for the lack of plans to hire open science specialists include the lack of clear guidelines for open science positions and the problem of recruiting staff.

However, on the basis of surveys of the state of open access in Poland, conducted periodically by the MNiSW and then by the Ministry of the Economy, slow but steady progress can be observed in the implementation of the open science model by universities, which manifests itself not only by adopting institutional policies and opening repositories, but also by hiring data stewards, improving staff competences, publishing in open journals (both in the context of publishing articles and publishing open journals, e.g. OJS), or involvement in international ventures such as EOSC, CoNOSC, cOAlition S, Science Europe and OpenAIRE. This growth is partly a result of the 2015 recommendations, "Directions for the Development of Open Access to Publications and Research Results in Poland" [Kierunki rozwoju otwartego dostępu do publikacji i wyników badań naukowych w Polsce][157], and the accompanying activities of the MNiSW/MEiN, and

[157] https://www.gov.pl/documents/1068557/1069061/20180413_Kierunki_rozwoju_OD_wersja_ostateczna.pdf

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is partly to be attributed to the implementation of open access policies for publications and data by funding agencies, which translates to their beneficiaries.

OA Policies in Poland

In Poland, both at national and institutional level, there is a lack of coherent approach to OA in general. There is no OA policy at the national level.

Stakeholders

- **List of relevant National Policymakers:**
  - Ministry of Science and Higher Education [Ministerstwo Edukacji i Nauki]
  - Ministry of Culture and National Heritage [Ministerstwo Kultury i Dziedzictwa Narodowego]
  - Parliament of the Republic of Poland [Parlament Rzeczpospolitej Polskiej]
- **List of relevant RFOs:** It is worth highlighting that OA principles are often present in the programs, scholarship or grant regulations.
  - National Science Center [Narodowe Centrum Nauki]
  - National Center for Research and Development [Narodowe Centrum Badań i Rozwoju]
  - Foundation for Polish Science [Fundacja na Rzecz Nauki Polskiej]
  - Ministry of Science and Higher Education [Ministerstwo Edukacji i Nauki]
  - Polish National Agency for Academic Exchange [Narodowa Agencja Współpracy Akademickiej]
  - National Program for Humanities Development [Narodowy Program Rozwoju Humanistyki]
  - IDUB [Inicjatywa Doskonałości Uczelnia Badawcza]
- **RPOs:** The largest group of entities that have adopted open access policies are universities and research institutions, and include:
  - Warsaw School of Economics ('Open Access Policy of the Warsaw School of Economics' adopted in 2017),
  - University of Gdańsk (open access policy adopted in 2017),
  - Jagiellonian University ('Open Access Policy to scholarly publications and research data of employees, doctoral students, and students of the Jagiellonian University' adopted in 2022),
  - Jan Długosz University of Humanities and Sciences in Częstochowa (Institutional openness policy adopted in 2019),
  - Jan Kochanowski University in Kielce (Open access policy adopted in 2020),
  - Institute of Literary Research of the Polish Academy of Sciences (Openness Policy adopted in 2021),
  - Institute of Slavic Studies of the Polish Academy of Sciences (Open access policy adopted in 2017),

- Institute of Legal Studies of the Polish Academy of Sciences (Institutional Openness Policy adopted in 2019).

It is also worth singling out an initiative from the medical field as an attempt to unify regulations at a higher than institutional level. The Polish Medical Platform, which wanted to unify access to publications and research data, began working with medical university senates to implement the provisions of the Platform's Open Access Policy, common to all partners. Academic institutions and universities joined the agreement in 2018 were:

- Medical University of Wrocław,
- Medical University of Białystok
- Medical University of Gdańsk
- Medical University of Silesia in Katowice,
- Medical University of Lublin
- Pomeranian Medical University in Szczecin,
- Warsaw Medical University,
- Institute of Medicine in Łódź.

- **Publishers:** There is no published/open OA strategy or policy. Often the publishers publish (e.g. tab. on the official website) with books accessible for everybody (OA books). Many learned societies in Poland publish diamond journals (Kansy, 2019).
- **Libraries:** The Majority of university libraries are open on a basis of its university's OA policy (e.g. Adam Mickiewicz University in Poznań or University of Silesia and its library). List of Libraries/RIs with OA policy:
  - Adam Mickiewicz University Library [Biblioteka Uniwersytetu Adama Mickiewicza]
  - University Library of the University of Warmia and Mazury [Biblioteka Uniwersytecka UWM]
  - POL-on The Integrated System of Information on Science and Higher Education [POL-on Zintegrowana Sieć Informacji o Nauce i Szkolnictwie Wyższym]
  - National Library [Biblioteka Narodowa]

Open access-related infrastructures

Published in January 2020, the Polish Roadmap for Research Infrastructures[158] includes 70 strategic research infrastructures, divided into six scientific areas, following the European Strategy Forum on Research Infrastructures classification: Physical sciences & engineering (23 projects); Social sciences & humanities (6); Technical sciences & energy (14); Earth & environmental sciences (5); Medical, biological & agricultural sciences (16); Digital infrastructures (6). 40 out of 70 infrastructures included in the

[158] https://www.gov.pl/attachment/b3cc211e-39d5-4de1-a914-5796bc5944a4

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Polish Roadmap for Research Infrastructures are nationally-based, while 30 have an international dimension. None of them are strictly publishing infrastructures, but many of them emphasise open access as an important aspect of their operation.

Journal platforms

Many universities in Poland have their own publishing arms and journals. These are spread across the country and cover a wide range of disciplines. They operate independently of one another and contribute to the decentralised aspect of the landscape. Various professional associations and scientific societies in Poland also publish their journals. These entities usually focus on specific fields or areas of study, further contributing to the decentralised nature of scholarly publishing in Poland. Polish journals and research institutions often collaborate with international publishers and platforms, which adds an external layer of distribution and decentralisation. List of journal platforms in Poland:

- Akademicka Platforma Czasopism (APCZ)[159] [Academic Journals Platform] – Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika [The Nicolaus Copernicus University Press]
- Czasopisma PAN [PAS Journals][160] - Polska Akademia Nauk [Polish Academy of Sciences]
- Portal Czasopism Naukowych (PCN)[161] [Scientific Journals Online] – Wydawnictwo Uniwersytetu Jagiellońskiego [Jagiellonian University Press]
- PRESSto[162] - Uniwersytet im. Adama Mickiewicza w Poznaniu [Adam Mickiewicz University Poznań]
- Platforma Czasopism Uniwersytetu Łódzkiego[163] [Journals University of Lodz] - Uniwersytet Łódzki [University of Lodz]
- Platforma czasopism Uniwersytetu Szczecińskiego[164] [University of Szczecin Journals Platform] - Uniwersytet Szczeciński [University of Szczecin]
- Platforma e-czasopism naukowych na UMCS[165] [Scientific e-Journals] - Uniwersytet Marii Curie-Skłodowskiej [The University of Maria Curie-Skłodowska]
- Czasopisma UKSW[166] - Uniwersytet Kardynała Stefana Wyszyńskiego w Warszawie [Cardinal Stefan Wyszyński University in Warsaw]
- Uniwersytecka Platforma Czasopism UJK[167] [University Journals Platform of The Jan Kochanowski University] – Uniwersytet Jana Kochanowskiego w Kielcach [The Jan Kochanowski University in Kielce]

[159] https://apcz.umk.pl/
[160] https://www.czasopisma.pan.pl/
[161] https://www.ejournals.eu/czasopisma/
[162] https://pressto.amu.edu.pl/
[163] https://www.czasopisma.uni.lodz.pl/
[164] https://wnus.usz.edu.pl/all/pl/
[165] https://journals.umcs.pl/
[166] https://czasopisma.uksw.edu.pl/
[167] https://czasopisma.ujk.edu.pl/

- Platforma Czasopism Uniwersytetu Śląskiego[168] [University of Silesia in Katowice Journals Platform] - Uniwersytet Śląski w Katowicach [University of Silesia in Katowice]
- Platforma Czasopism Uniwersytetu Warmińsko-Mazurskiego[169] [University of Warmia and Mazury in Olsztyn Journals Platform] - Uniwersytet Warmińsko-Mazurskiego w Olsztynie [University of Warmia and Mazury in Olsztyn]
- Platforma Czasopism Uniwersytetu Opolskiego[170] [Journals platform of the University of Opole] - Uniwersytet Opolski [University of Opole]
- Platforma Czasopism KUL - CzasKUL[171] [KUL Journals Platform – CzasKUL] - Katolicki Uniwersytet Lubelski Jana Pawła II [The John Paul II Catholic University of Lublin]
- Platforma Czasopism IS PAN[172] [Institute of Art. Polish Academy of Sciences. Journals] - Instytut Sztuki Polskiej Akademii Nauk [Institute of Art. Polish Academy of Sciences]
- Platforma Czasopism UPJP2[173] [UPJP2 Journals Platform] - Uniwersytet Papieski Jana Pawła II [The Pontifical University of John Paul II in Cracow]
- Biblioteka Nauki[174] [Library of Science] - Interdyscyplinarne Centrum Modelowania Matematycznego i Komputerowego UW [Interdisciplinary Centre for Mathematical and Computational Modelling at the University of Warsaw]

Institutional publishing

The DIAMAS Survey collected 31 responses from Poland, predominantly comprising 23 public institutions, with 5 not-for-profit organisations and 3 companies. The survey highlighted the diverse sizes and scopes of these entities, with only two university publishers employing over 30 people. While most published in social sciences (23) and humanities (20), linguistic diversity was evident, with 26 journals published in Polish, two in English, and 26 being multilingual. Bilingual full-text publishing, different language versions in various journals, and simultaneous language versions as separate documents were common practices. However, only 13 IPSPs translated metadata into English, and few provided language services to authors.

Poland's OA publishers are actively engaged in international organisations, with a minority participating in CoARA and COPE, among others. National scholarly communication associations boast greater membership engagement. The IPSPs primarily focus on publishing journals (30), academic books (26), and conference outputs (20). While fixed subsidies from parent organisations form a stable source of funding for most (23), content and print sales contribute minimally (13). Only a few IPSPs utilise

[168] https://www.journals.us.edu.pl/
[169] https://czasopisma.uwm.edu.pl/
[170] https://czasopisma.uni.opole.pl/
[171] https://czasopisma.kul.pl/
[172] https://czasopisma.ispan.pl/
[173] https://czasopisma.upjp2.edu.pl/
[174] https://bibliotekanauki.pl/

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article processing charges (APCs) for revenue. The reliance on in-kind support for facilities, IT services, and HR management is evident.

Funding and sustaining IPSPs

According to the data presented in the report on Polish science[175] from 2022, the system is mainly funded by the institution's base funding and there are additional programmes for journals, like 'Development of scientific journals' - launched by the Ministry of Science and Higher Education in 2021 (functioning then as the Ministry of Education and Science). The subject of the program is the support of Polish scientific journals in implementing the strategy of their development, including activities aimed at raising the level of publishing and editorial practices, increasing the impact of journals on the development of science and maintaining journals in international scientific circulation.

Financial resources for scientific entities for the maintenance and development of research potential and for the maintenance and development of teaching potential are allocated in the form of a single subvention, which replaced the previously separate subsidies for statutory and teaching activities. At the same time, universities are free to decide on the allocation of the funds provided under the subvention. These amounts can also be spent on the purchase of fixed assets. The amount of the subsidy is determined on the basis of algorithms that take into account data on, among other things: the type of higher education and science entity, doctoral students, scientific categories, cost-intensity coefficients and employed persons conducting scientific activities. As a result, it is difficult to determine precise figures for IPSPs in Poland.

The DIAMAS Polish country report confirms this. According to it, the respondents of the survey most rely on fixed and permanent subsidies from their parent organisation, which they consider stable (11) or very stable (12). 23 selected this type of funding as very high, high or neither high nor low, content and print sales being a low source of financial support (13 selected 'not applicable'). Only four IPSPs use APCs as a form of funding. 14 respondents have permanent public government funding. 27 rely on public time limited grants or subsidies, all of them from outside of their organisation. However, 20 consider this kind of funding as unstable or neither stable nor unstable. Most Polish IPSPs heavily rely on in-kind support (Table 118): facilities and premises (22), general IT services (25), human resource management, general financial and legal services (21), salaries of permanent staff (23), salaries of temporary staff (17), service specific IT services (17).

[175] https://radon.nauka.gov.pl/analizy/nauka-w-Polsce-2022

Table 21. In-kind support provided by parent organisation

	n	%
Facilities and premises	22	84.6
General IT services	25	96.2
Human Resource management, general financial and legal services	21	80.8
Salaries to permanent staff	23	88.5
Salaries of temporary staff	17	65.4
Service-specific IT services	17	65.4
Other	3	11.5

Public funding, despite its relative stability, is criticised by some respondents as forcing collaboration with partners who are not necessarily the most desirable. The respondents declared that "public procurement as the main selection factor define the price, which causes two main risks - extending the procedure for acquiring people to cooperate, a small possibility of relying on proven, reliable concealers, editors, deposits or entities that perform other services (printing, IT service, etc.)".

One of the biggest challenges to financial sustainability was highlighted by one respondent, who said that publishing scholarly articles in Open Access journals requires obtaining funding from organisations outside the home institution. Another IPSP stated that "scientific institutions as part of broadly understood humanities are underfunded. The solution would be a systemic increase in subsidies."

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

There are not many lasting collaborations between institutional publishers and service providers or funders. One of the most significant is the 'Universalia' competition of the National Programme for the Development of the Humanities (NPRH),[176] which makes it possible to receive funding for translations into English, French, German, Italian, Spanish or Russian and for the publication of the most outstanding monographs of Polish humanities in prestigious foreign publishing houses.

The"Perfect Science"[177] programme founded by the MNiSW offers support to entities of the higher education and science system and other organisational units working for the dissemination of science in the implementation of projects aimed at presenting scientific achievements, including the latest results of scientific research or development work, by organising scientific conferences and publishing scientific monographs.

[176] https://www.gov.pl/web/nauka/narodowy-program-rozwoju-humanistyki
[177] https://www.gov.pl/web/nauka/doskonala-nauka

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Another important form of cooperation is between institutional publishers and IT service providers, thanks to which universities create their own journal platforms (some of them are mentioned in this report in the subsection 'Journal platforms').

Conclusions

This national overview describes the Polish approach to OA within the social sciences and humanities, which has experienced noticeable development over the last few years, including the recently growing interest in the diamond model of OA publishing. The report lists the most important academic and research institutions in Poland and their role in the scholarly communication ecosystem. It names the most important stakeholders and presents programmes that fund scientific publishing.

Key challenges and issues include open access mandates, research evaluation standards, and the integration of Polish science into the global scientific discourse. Poland does not have a comprehensive open access and open science policy yet, but there are recommendations at the government level: In 2015, The Ministry of Science and Higher Education issued recommendations for the development of OA,[178] including the adoption of institutional OA policies. An example of Poland's proactive approach to open access is the Act of 20 July 2018 The Law on Higher Education and Science,[179] which mandates open access to articles in journals funded under the "Support for Scientific Journals" program. Evaluation of scientific journals is conducted by the Ministry of Science and Higher Education. The evaluation process plays a key role in academia, influencing the funding, prestige and development priorities of research institutions and universities. The internationalisation of Polish science is influenced by the growing number of scientific journals in OA and the significant percentage of publications in English. According to the Report on the State of Open Science in Poland 2023,[180] 84% of scientific journals in Poland are OA.

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[178] https://www.gov.pl/documents/1068557/1069061/20180413_Kierunki_rozwoju_OD_wersja_ostateczna.pdf
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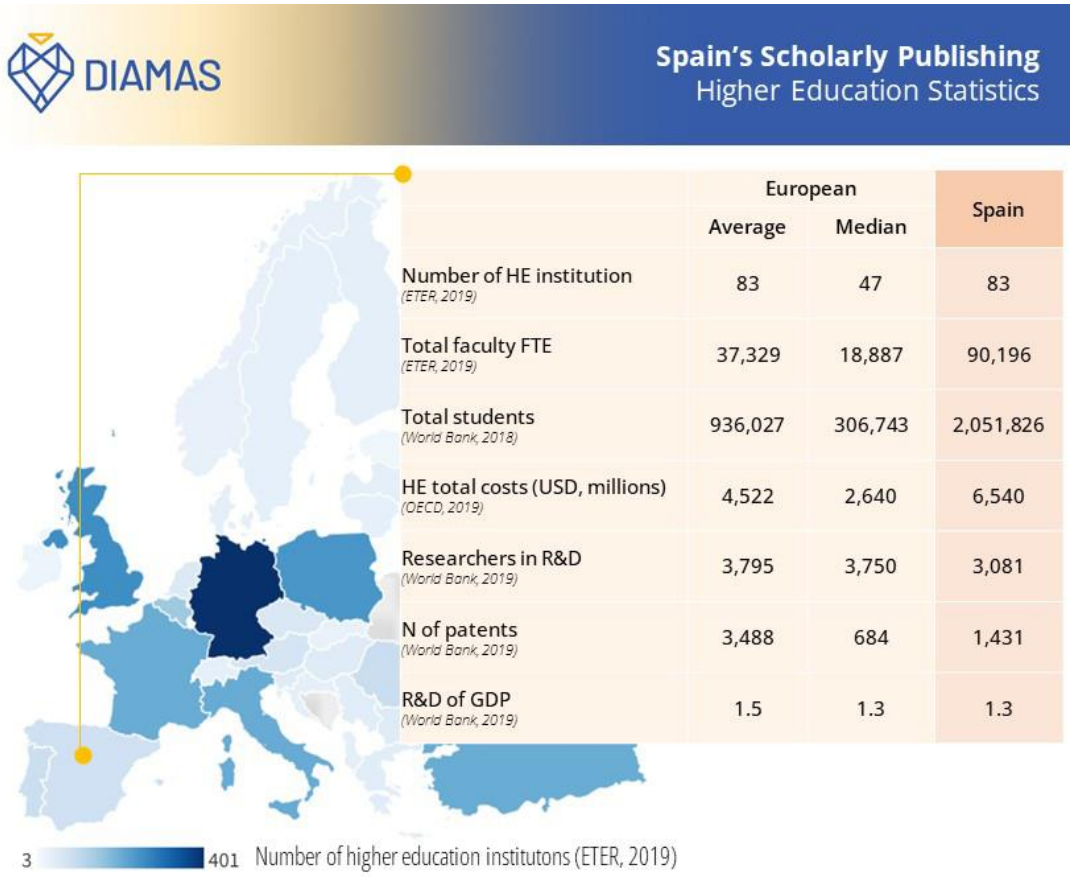
Spain

National Landscape of scholarly publishing

National research framework

The Spanish University System comprises a total of 89 universities, with 50 being public and 39 privates. Six of these universities are distance learning institutions, including 5 private and 1 public one, according to data provided by the Statistics of Universities, Centers, and Degrees (EUCT)[181] published by the Ministry of Science, Innovation, and Universities (MICIU)[182] in 2023. These institutions play a crucial role in the field of scholarly communication, and their publishing departments are the main drivers of scientific and academic communication in the country.



	European Average	European Median	Spain
Number of HE institution (ETER, 2019)	83	47	83
Total faculty FTE (ETER, 2019)	37,329	18,887	90,196
Total students (World Bank, 2018)	936,027	306,743	2,051,826
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	6,540
Researchers in R&D (World Bank, 2019)	3,795	3,750	3,081
N of patents (World Bank, 2019)	3,488	684	1,431
R&D of GDP (World Bank, 2019)	1.5	1.3	1.3

Figure 54. Number of Higher Education (HE) institutions in Spain in 2019

[181] https://www.universidades.gob.es/wp-content/uploads/2023/03/Principales_resultados_EUCT_2022-FINAL.pdf | https://www.universidades.gob.es/estadistica-de-universidades-centros-y-titulaciones-euct/ | Facts and Figures of the Spanish University System. 2022-2023: https://www.universidades.gob.es/wp-content/uploads/2023/04/DyC_2023_web_v2.pdf

[182] https://www.ciencia.gob.es/en/

Spain is a decentralised state. It has a National Government and 17 Autonomous Regions (CCAA). The Spanish Science, Technology and Innovation System (SECTI)[183] institutional and administrative arrangements are distributed at both administrative levels. Most of the R&D funding and assessment agencies work under the national government, whereas the universities belong to the regional governments.

Figure 55. Territorial distribution of the 89 Spanish universities. Academic year 2022-2023

In the 2021-2022 academic year, 133,484 individuals were included in the teaching and research staff (PDI) of the Spanish universities. Compared to the previous year, this represents an increase of 2.6%, resulting from significantly different rates between public (1.3%) and private (10.3%) universities.

Spain has significantly increased its R&D investment as a percentage of GDP, rising from 1.19% in 2016 to 1.43% in 2021. This increase has been primarily driven by companies and private non-profit institutions, which account for 56.2% of the expenditure, while higher education (26.6%) and public administration (16.91%) have reduced their investment. In 2022, 120,614 scientific papers were published, representing a growth of 14.68% compared to 2019. Spain maintains its 12th position in global scientific production.

The University of Barcelona, the University of Navarra, and Pompeu Fabra University are the three institutions with the highest scientific production, with Engineering, Computer Science, and Physics and Astronomy being the most published areas. These data, extracted from the CYD 2023 Report, published by the Science and Development

[183] https://www.ciencia.gob.es/en/Estrategias-y-Planes/Sistema-de-Informacion-sobre-Ciencia--Tecnologia-e-Innovacion--SICTI-.html

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Foundation[184], help understand the R&D situation in Spain and the driving role of universities in scientific production.

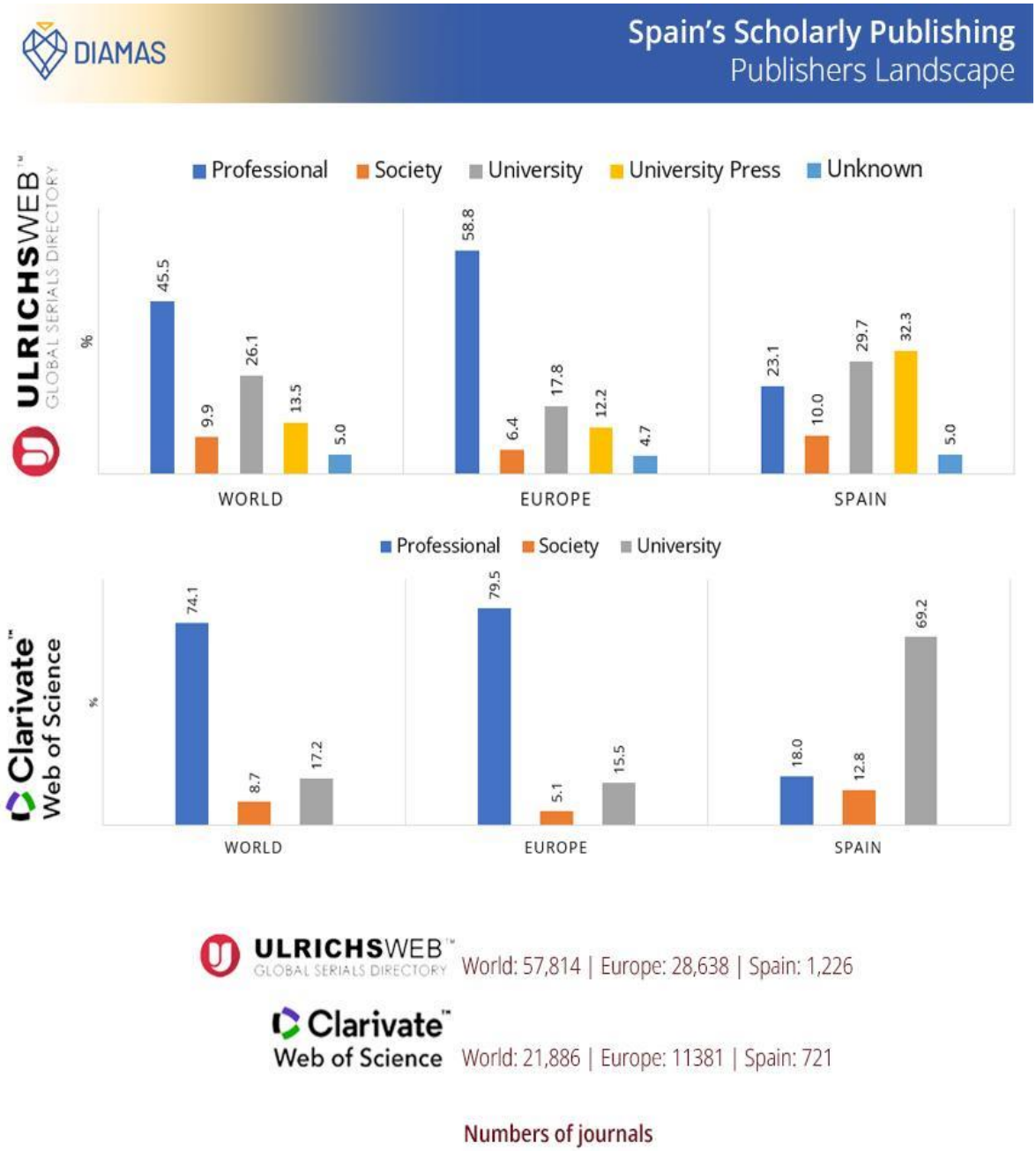

Figure 56. Spain's scholarly publishing: Publishers landscape

In addition to universities, the Spanish National Research Council (CSIC)[185] stands out for its significant and active role in research and scholarly publishing.

[184] https://www.fundacioncyd.org/publicaciones-cyd/informe-cyd-2023/
[185] https://www.csic.es/en

The CSIC[186] – one of the State Agencies included in the list of Public Research Bodies (OPIs)[187] – is, along with universities, the main executive body for scientific and technical activities in Spain, with a presence in all autonomous communities through its research institutes. Its multidisciplinary and interdisciplinary nature enables it to establish agreements and alliances with multiple and diverse agents of the SECTI, both public and private. The CSIC currently has 120 research institutes distributed throughout the national territory (except one in Rome, Italy). Of these 120 institutes, 51 are joint centres with other institutions, primarily universities.

Research Performing Organizations

The institutions that carry out the scientific research in Spain are the universities, the OPIs of the General State Administration, the research bodies of other Public Administrations, health research centres, companies and the technology centres.

The OPIs are entities created by the Law 17/2022, of September 5, on Science, Technology, and Innovation (Science Law)[188] for the direct execution of scientific and technical research activities, activities for the provision of technological services and those other activities of a complementary nature. The coordination of their actions is the responsibility of the MICIU.

The OPIs are currently:

- The CSIC is a State Agency for scientific research and technological development, with a special legal status, its own assets and treasury, functional and managerial autonomy, full legal capacity and of unlimited duration (art. 1 Statutes – Articles of Association).
- The Institute of Health Carlos III (ISCIII)[189] is a national and international reference in biomedical research and public health. Its mission is to contribute to improving the health of all citizens and to fight diseases through the promotion of research and innovation in Health Sciences and Biomedicine and through the provision of groundbreaking scientific and technical services and educational programmes directed towards the National Health System.
- The Research Centre for Energy, Environment and Technology (CIEMAT)[190] is a public research body assigned to the MICIU focusing on energy and environment and the technologies related to them.
- The Institute of Astrophysics of the Canary Islands (IAC)[191] is a nationally funded research centre that runs two of the best international observatories in the world. Its mission is to carry out and promote any type of astrophysical or related research, as well as to develop and transfer its technology.

[186] Memoria anual de la actividad científico-técnica del Consejo Superior de Investigaciones Científicas: https://www.csic.es/sites/default/files/2023-10/MEMORIA%20ANUAL%20CSIC%202022.pdf
[187] https://www.ciencia.gob.es/en/Organismos-y-Centros/OPI.html
[188] https://www.boe.es/buscar/act.php?id=BOE-A-2022-14581
[189] https://www.isciii.es/Paginas/Inicio.aspx
[190] https://www.ciemat.es/portal.do;jsessionid=3D8556F56823AE7ADF13E67F0A8FDCDD
[191] https://www.iac.es/en/about-us

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- The National Institute of Aerospace Technology (INTA)[192] depends on the Spanish Ministry of Defence. It is responsible for performing scientific research activities and prototypes in its field of knowledge, as well as for providing technological services to companies in the industry, universities, and other institutions.

Funding and assessment systems

The instruments in which the research, investigation and development (R&D&I) policy is reflected are the State Plan for Scientific and Technological Research and Innovation (PEICTI)[193] and the Spanish Strategy for Science, Technology and Innovation (EECTI) 2021-2027:[194]

- The PEICTI is a governmental initiative that establishes strategies and priorities to promote scientific research, technology, and innovation. Its main objective is to drive the scientific and technological progress of the country, as well as to strengthen its competitiveness internationally. This plan defines specific actions to foster scientific excellence, improve public-private collaboration, address societal challenges, and promote knowledge transfer between the scientific community and society at large.

- This Plan aims to achieve the objectives of the EECTI, which has been designed to maximise coordination between state and regional planning and programming and to facilitate the articulation of Spanish research, development and innovation policies with the EU science and innovation framework program, Horizon Europe (2021-2027). It contains all the public calls for R&D&I grants managed at the national level.

Funding system

At the national level, there are four main funding entities under the umbrella of the MICIU. All the national calls for funding launched by these institutions are included in the State Plan for Scientific and Technological Research and Innovation (PEICTI).[195] In addition, there are regional entities that promote research, development, and innovation at the regional level through their Regional Plans, and other minor funding actors within the Local Administration, as well as private institutions such as associations and foundations. Main Spanish funding entities:

- The Spanish State Research Agency (AEI)[196] belongs to the MICIU, and it is responsible for the proposal, management, monitoring and evaluation of the PEICTI. Its main objectives comprise the fostering of scientific and technical

[192] https://www.inta.es/INTA/en/quienes-somos/
[193] https://www.ciencia.gob.es/Estrategias-y-Planes/Planes-y-programas/PEICTI.html
[194] https://www.ciencia.gob.es/en/Estrategias-y-Planes/Estrategias.html
[195] https://www.ciencia.gob.es/en/Estrategias-y-Planes/Planes-y-programas/PEICTI.html
[196] https://www.aei.gob.es/en

research in all areas of knowledge through the efficient allocation of public resources, the promotion of excellence, duly encouraging cooperation between the System agents and providing support for generating high impact scientific and technical, economic and social knowledge, including the most serious societal challenges.

- The Centre for the Development of Industrial Technology (CDTI)[197] is a Public Business Entity, answering to the MICIU, which fosters the technological development and innovation of Spanish companies. It is the entity that channels the funding and support applications for national and international Research, Development and Innovation projects of Spanish companies.
- The Institute of Health Carlos III (ISCIII)[198] is the organisation managing the activities of the Health Research and Development Strategy (AES) under the PEICTI. The AES is executed through a single annual competitive call and develops the annual action programs of the different State Programs. This institution represents the set of actions aimed at protecting the health of citizens through R&D&I.
- The Spanish Foundation for Science and Technology, F.S.P. (FECYT)[199] is a public foundation attached to the MICIU. The FECYT works to strengthen the link between science and society through actions that promote open and inclusive science, culture and scientific education, responding to the needs and challenges of the Spanish system of science, technology and innovation.

Open Science National Funding Call "María de Guzmán"

The Maria de Guzmán Call for the Promotion of Open Science is an initiative developed by the FECYT with the aim of promoting and supporting the implementation of open science infrastructures in the field of scientific research in Spain.

This initiative seeks to improve technological capacity, quality, and interoperability of institutional digital infrastructures for scientific information dissemination, storage, preservation, and management, necessary for open science, such as institutional repositories, curricular information management systems, institutional research management systems (CRIS), and institutional publishing services responsible for technical editing and editorial management.

In the 2020-2021 call, the total amount of grants awarded was €1,098,000, supporting 43 open science infrastructure projects, following the distribution in Table 22.

[197] https://www.cdti.es/en
[198] https://www.isciii.es/Paginas/Inicio.aspx
[199] https://www.fecyt.es/en

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Table 22. Distribution of the grants (2020-2021)

Objectives	Funded projects (2020-2021)	€
Academic publishing	9	€142,248.84
Institutional repositories	19	€550,562.36
Current research information systems	15	€405,188.80

In the 2023 call, the total amount of grants awarded was €2,744,193.93, supporting 48 open science infrastructure projects. The distribution has been as shown in Table 23.

Table 23. Distribution of the grants (2023)

Objectives	Funded projects 2023	€
Academic publishing	11	€427,071.00
Institutional repositories	18	€991,418.74
Current research information systems	19	€1,325,704.19

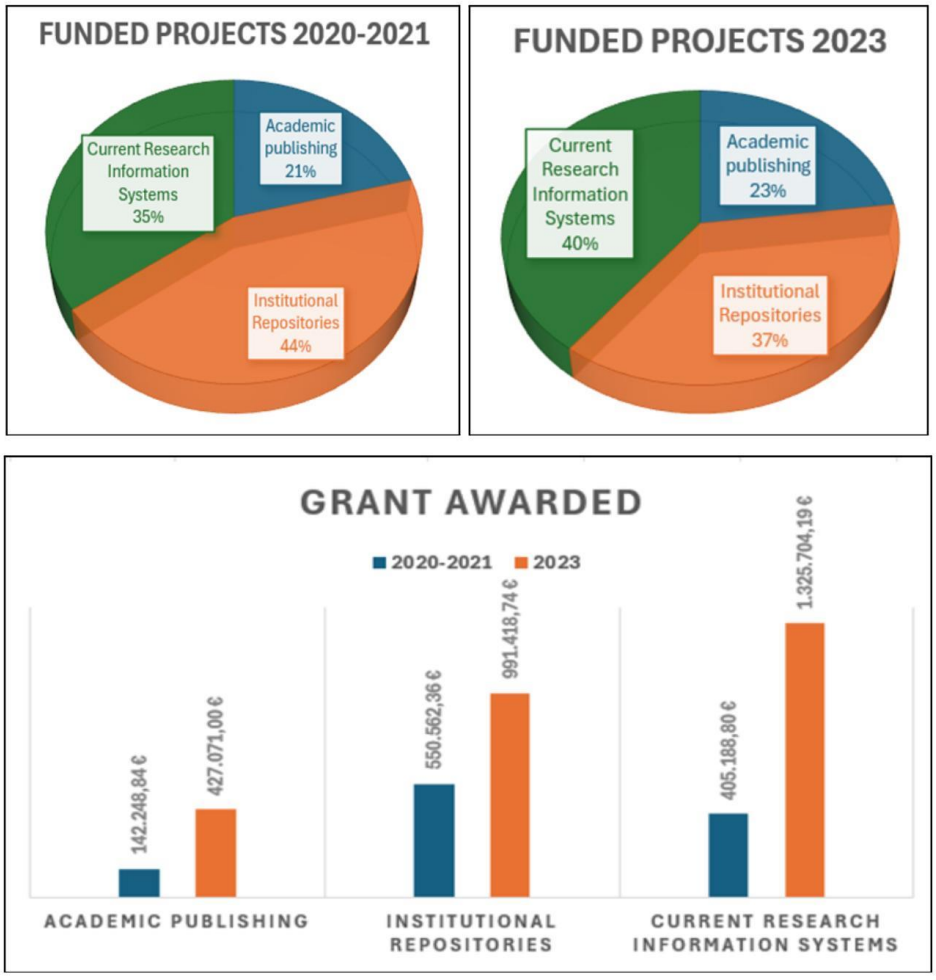

Figure 57. Distribution by objectives of the funds from the María de Guzman call, managed by FECYT (Source: FECYT)

Assessment system

Spain benefits from the collaboration of the National Agency for Quality Assessment and Accreditation (ANECA)[200], whose main objective is to ensure and evaluate excellence in research and higher education. ANECA is dedicated to assessing aspects such as study plans, quality systems of universities, and research activity of academic staff. It grants accreditations and quality certifications to institutions and programs that meet established standards, promoting the improvement of higher education.

ANECA employs various methods and criteria to evaluate researchers, including assessing research activity (both the quantity and quality of scientific publications), participation in competitive research projects, supervision of doctoral theses, obtaining patents, reviewing professional trajectory, accreditation of academic categories, and participation in evaluation committees.

The evaluation carried out by ANECA is a crucial process for the academic career of researchers, and scientific articles play a fundamental role, understood as one of the main indicators of research activity and quality. Some of the aspects considered by ANECA to evaluate researchers include the quality of published articles, their impact and visibility (measured through indicators such as the number of citations received, the impact factor of the journals in which they are published, and international visibility), scientific production (quantity of published articles), or contribution to knowledge transfer (publication of articles in open-access journals or relevance to specific professional sectors or areas.)

These elements are important in the scientific production of researchers and greatly influence the how, how much, and why of publishing papers in Spain, defining the model and system of academic publishing in the country.

TheQuality Assessment and Accreditation system of ANECA is complemented by the standardised curriculum system. The Normalised Curriculum Vitae (CVN) is a model based on a consensus reached in the Spanish Science, Technology and Innovation System, and it has been designed to provide standardised CV information and to enable interoperability between all current national research information systems (CRIS). It is used by more than 225,000 Spanish researchers, representing 54.4% of the national researchers' community. 148 institutions have adapted their systems to automatically generate CVN, and 51 public funding calls use CVN as the standardised CV submission format (36 as a mandatory format and 15 as an optional one.

Editorial quality assessment systems

FECYT Scientific Journals Assessment System

The FECYT plays an important role at the national level in the field of academic publishing through its Scientific Journals Assessment System,[201] as it provides Spanish

[200] https://www.aneca.es/

[201] https://evaluacionarce.fecyt.es/Publico/index.aspx

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journals with a set of best practices criteria accepted worldwide. The evaluation process has been developed since 2008 and is carried out through biennial calls. Its main objective is to assess the quality of Spanish scientific journals through a series of indicators related to editorial processes and scientific quality.

Key features of the FECYT journal evaluation process include:

- Geographical delimitation to journals published in Spain.
- No delimitation of the thematic area of evaluated journals.
- Voluntary evaluation.
- Journals that successfully pass the evaluation process receive the FECYT Quality Seal, valid for one year, and are automatically renewed without undergoing any process.
- The system provides both quantitative and qualitative evaluation of journals:
    - Quantitative indicators assess the composition of the journal, editorial processes, and the design and implementation of editorial policies.
    - The qualitative part is based on a panel of experts who evaluate the scientific content of the publication and its scientific trajectory based on their knowledge in a specific scientific area.

Through eight calls conducted until 2024, more than 2,000 applications corresponding to over 1,200 unique titles have been evaluated. Of these, 634 currently hold the recognition of the Quality Seal.

Spanish journals in numbers

A quick overview of Spanish journals, including data from FECYT (1,275), DOAJ (986), Sherpa/Romeo (552), Core Collection of WoS (745), and Scopus (736), indicates that there is a total of 1,880 journals.

The total number of journals with the FECYT seal is 1,179. Among them, Spanish open access journals number 1,132 (96.01%), of which 92.67% are diamond journals, and 7.33% are open access journals that charge APCs.

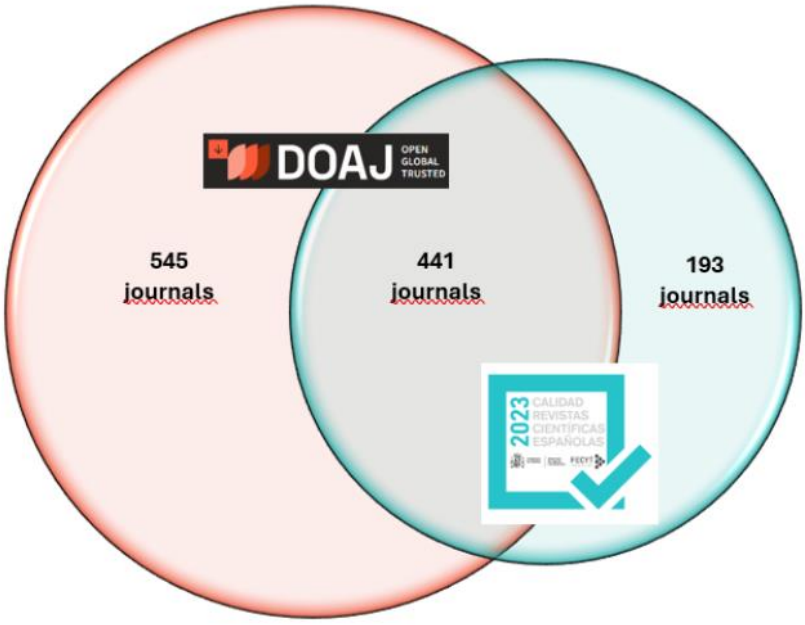

Figure 58. Spanish journals in DOAJ and journals with FECYT quality seal

In Spain, according to data analysed by FECYT, 73.43% of publishers are Institutional. Social Sciences have a significant presence in this sector, reaching 30.07%, while Experimental Sciences, Natural Sciences, and Health Sciences, although less represented, contribute with percentages between 1.28% and 2.87%. Commercial publishers have a representation of 15.20%, while scholarly societies account for 11.37%.

To establish the type of publishing entity, the classification used is the one adopted by Sanz-Casado et al. in "Impact and visibility of Norwegian, Finnish and Spanish journals in the fields of humanities" (2021):[202] (1) Institutional: Includes journals published by entities belonging to the Public Administration, Study Centres, Institutes, Higher Council for Scientific Research, and Universities, (2) Societies/Academic Associations, Professional Colleges, and Foundations, and (3) Commercial Publishers.

Analysing the policy of charging APCs, it can be observed that the majority of journals maintain an open access approach without APCs. Diamond journals represent a high percentage in various areas, such as Social Sciences, Experimental Sciences, Natural Sciences, Health Sciences, and Humanities, where they reach percentages of 91.17%, 85.19%, 100%, and 100% respectively.

Among commercial journals, 98.13% do not charge APC fees. Only in the field of Social Sciences (5.41%) are publication charges recorded.

Journals published by scholarly societies also show a trend towards open access without APCs, with 93.01% being diamond journals.

[202] https://link.springer.com/article/10.1007/s11192-021-04169-6

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Organisation	% of the total
Institutional	**73,43%**
Social Sciences	30,07%
Experimental Sciences	2,87%
Natural Sciences	1,81%
Health Sciences	1,28%
Humanities	37,41%
Commercial	**15,20%**
Social Sciences	7,44%
Experimental Sciences	0,64%
Natural Sciences	0,96%
Health Sciences	1,91%
Humanities	4,25%
Scholarly Societies	**11,37%**
Social Sciences	3,93%
Experimental Sciences	1,17%
Natural Sciences	0,11%
Health Sciences	5,63%
Humanities	0,53%
Total	**100,00%**

Organisation	% Diamond	APC%
Institutional	**91,75%**	**8,25%**
Social Sciences	91,17%	8,83%
Experimental Sciences	85,19%	14,81%
Natural Sciences	100,00%	0,00%
Health Sciences	100,00%	0,00%
Humanities	92,05%	7,95%
Commercial	**98,13%**	**1,87%**
Social Sciences	94,59%	5,41%
Experimental Sciences	100,00%	0,00%
Natural Sciences	100,00%	0,00%
Health Sciences	100,00%	0,00%
Humanities	100,00%	0,00%
Scholarly Societies	**93,01%**	**6,99%**
Social Sciences	87,14%	12,86%
Experimental Sciences	100,00%	0,00%
Natural Sciences	100,00%	0,00%
Health Sciences	100,00%	0,00%
Humanities	97,50%	2,50%
Total	**92,67%**	**7,33%**

Figure 59. Spanish journals classified by disciplines and based on APC charging (Source: FECYT)

CEA-APQ Seal for monographs

The CEA-APQ quality seal for monograph collections promoted by Union of Spanish University Publishers (UNE),[203] endorsed by ANECA and FECYT, is a certification that acknowledges the editorial and scientific quality of scientific monograph collections published in Spain.

To obtain this seal, monograph collections must meet a series of established criteria, including aspects such as editorial quality, scientific relevance of the content, rigour in selection and review of texts, and compliance with ethical standards and academic integrity.

The evaluation of these publications is carried out through annual calls that have been held since 2017. To date, 63 collections and 35 individual monographs have received this recognition.

Open access: requirements, incentives, and barriers

The SECTI is distributed across all administrative levels. Most of the R&D funding and assessment agencies operate under the national government. For coordination

[203] https://www.une.es/

purposes, the Council for Science, Technology and Innovation Policy is the entity attached to the MICIU for fostering cooperation and coordination of scientific and technical research public policies among the national government and the CCAA.

- At the national level the MICIU has promoted the Science Law, the Committee for Open Science (COS)[204], the reform of the university system through the Spanish Organic Law 2/2023, of March 22, on the University System (LOSU)[205], and the National Open Science Strategy (ENCA).
- At the regional level, open access policies have also been developed by Madrid, Asturias and Catalonia through their regional funding agencies. These policies are aligned with the national and the EU mandates.
- At the institutional level, there are 44 research institutions that have developed their own open access policy, either as an institutional declaration, as a recommendation, or as a mandatory requirement.

The MICIU is the highest level body responsible for promoting the development of research and innovation through the design, formulation, coordination, implementation and evaluation of policies, plans and programs for Science, Technological Development and Innovation. It is also the body in charge of coordinating the operation of all the agents that make up the SECTI.

The Science Law, establishes the governance and operation of the SECTI, the group of public and private agents that carry out financing, execution or coordination functions in it, as well as the set of relationships, structures, measures and actions that are implemented to promote, develop and support research, development and innovation policy in all fields of the economy and society.

The Science Law has been designed to promote research and innovation through the allocation of public funds and the promotion of collaboration among different actors in the R&D&I system.

One of the premises for achieving open science is that the results of scientific research are openly accessible. For this reason, the main research funding bodies, both at the national and regional levels, require that publications resulting from research funded by these bodies and the data necessary to validate them be deposited in open access repositories.

In the Science Law, this aspect is worded as follows: art. 37.2. "Public sector research staff or whose research activities are mainly funded with public funds and who choose to disseminate their research results in scientific publications must deposit a copy of the final accepted version for publication and the associated data in institutional or thematic open access repositories, simultaneously with the publication date."

204 https://dadun.unav.edu/bitstream/10171/64573/1/2022_10_26_Acciones_FECYT_ciencia_abierta_UNAV_PilarRico.pdf

205 https://www.boe.es/buscar/act.php?id=BOE-A-2023-7500

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The Science Law promotes open access to scientific literature and transparency in the scientific process, focusing on funding management to define objectives and priorities related to open access and open science. This implies the creation of specific programs and funds to support open access publishing and promote open practices in research.

An increasing number of universities and research performing institutions have developed their own open access institutional policies, aligned with the national and the European mandates. Whether it be in the form of institutional declarations, recommendations or mandatory requirements, institutions are taking determined steps towards open access, 44 institutions in Spain have published their open access policy in ROARMAP.[206]

The LOSU addresses academic production, open access, and open science in "On University Research" (Title III) and in "On Knowledge Transfer and Innovation" (Title IV), promoting knowledge generation through university research and its dissemination in society. The LOSU includes articles related to academic and scientific activity regulation, such as guidelines for publishing, research quality evaluation criteria, and ethical research conduct measures.

Transformative agreements in Spain

Currently, transformative agreements in Spain are under renegotiation. The ESAC Transformative Agreement Registry[207] lists all signed agreements. The Conference of Rectors of Spanish Universities (CRUE)[208] and the Unit of Scientific Information Resources for Research (URICI)[209] at CSIC, are main signatories of these agreements on behalf of Spanish researchers from universities and CSIC.

The CSIC has been dedicated to promoting open access to its research output since 2008. This commitment has resulted in approximately 60% of CSIC researchers' articles being available in open access formats. As part of its efforts to further open access, CSIC has entered into transformative agreements with publishers like the Royal Society of Chemistry, Cambridge University Press, and Oxford University Press. These agreements, operating under the "Read & Publish" model, enable CSIC authors to publish open access articles in hybrid journals at no cost to them. These transformative agreements signify CSIC's proactive approach to advancing open access in scholarly publishing.

In light of the negotiations conducted between CRUE and publishers like ACS Publications, Elsevier, Wiley, and Springer Nature, Spanish researchers will have access to reading and downloading scientific articles from subscribed journals, and will be able to publish more articles in open access, at no additional cost.

[206] https://roarmap.eprints.org/
[207] https://esac-initiative.org/about/transformative-agreements/agreement-registry/
[208] https://www.crue.org/proyecto/acuerdos-con-editoriales/
[209] https://bibliotecas.csic.es/acuerdos-transformativos

The most notable features of these agreements are:

- ACS Transformative Agreement:
  - Duration: Four years
  - Provides access to ACS's Read and Publish program
  - Total of 2,665 OA credits awarded
  - Aim to publish a high percentage of CSIC articles as open access

- Elsevier Transformative Agreement:
  - Duration: Four years
  - Aims to achieve over 80% open access publishing by 2024
  - Subsidies over €65M for open access publishing
  - Includes moderated annual price adjustments and a drawdown pot mechanism for APCs

- Wiley Transformative Agreement:
  - Establishes a partnership between Wiley, CRUE, and CSIC
  - Terms include access to Wiley's electronic products and services
  - Provides the right for authors to publish articles on an open access basis
  - Outlines definitions, fees, mutual obligations, and termination terms

- Springer Nature Transformative Agreement:
  - Provides access to SN journals and publishing services to Eligible Institutions in Spain
  - Offers individual Compact Licence Agreements
  - Includes periodic reporting on collaboration progress
  - Emphasises no creation of specific legal rights or obligations for Eligible Institutions

Table 24. Data on transformative agreements signed in Spain. Period 2021-2023. The indicated costs of these agreements cover the full 4-year period.

	ACS	Elsevier	Springer	Wiley
Agreement	**9,141,273 €**	**75,756,846€**	**18,564,892€**	**22,932,240€**
Papers (hybrid)		17,771		5,673
Papers (gold)		1,381	452	452
Published papers (total)	**1,926**	**19,152**	**5,897**	**6,125**

In October 2022, the CRUE organised a workshop titled "Transformative Agreements II: One Year Later".[210] This event gathered the main experiences of the entities affected by these agreements after one year of operation. A look at the sessions and the conclusions of the meeting allows us to better understand the experiences of the institutions.

[210] https://repositoriorebiun.org/handle/20.500.11967/1157

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Open Science initiatives

Spain has a strong representation in the EOSC initiative[211]. Regarding the Member States' representation within the EOSC partnership, MICIU has a seat in the EOSC Steering Board.

Regarding the stakeholders' representation within the EOSC partnership, there are 31 national institutions in the EOSC Association: 1 mandated organisation, 15 members, and 15 observers. Spain is also represented in the Board of Directors.

Spanish institutions participate as coordinators and partners in key INFRA-EOSC projects of H2020 and Horizon Europe projects, such as EOSC Synergy, SCAPE, EOSC Future, DICE, EGI-ACE, RELIANCE, Skills4EOSC, EOSC Focus, AI4EOSC, RAISE, FAIR-IMPACT, etc.

Spain has an OA mandate at the national level based on the Science Law, whose content compels grantees of public R&D funding to immediately archive in an open access repository those peer-reviewed scientific outputs relating to their results upon publication, with no embargo period. Beneficiaries (or authors) must retain sufficient intellectual property rights to comply with the open access requirements. Research data, code and methodologies are also included in the scope of the mandate.

Besides, the regulation for PhD official training programs (Royal Decree 99/2011) compels PhD candidates to archive an open access electronic copy of their approved doctoral thesis in the corresponding institutional repository.

A Steering Committee was set and chaired by FECYT in 2015 to guide and to monitor the level of compliance with the OA mandate at the national level, and to produce compliance recommendations for policymakers, RFOs, RPOs and researchers.

Open Science infrastructures

Regarding academic publishing, FECYT brings support to national based academic journals and institutional publishing services. A call for scientific and editorial quality assessment is launched every other year. National journals apply to be evaluated on a voluntary basis to get a quality seal (Journal evaluation system, as explained in the previous section).[212]

FECYT is a public foundation attached to the MICIU that works to strengthen the link between science and society through actions that promote open and inclusive science, culture and scientific education, responding to the needs and challenges of the Spanish

[211] https://eosc.eu/
[212] https://calidadrevistas.fecyt.es/

system of science, technology and innovation, working to design and implement the National and the European open access and open science policies for them.

FECYT contributes as in-house open science expert in the writing process of legal, strategic and planification official documents such as: EECTI, PEICTI, the National legal framework affecting open access and open science, and the ENCA.[213]

FECYT provides specific open science services to the national research community:

- Manages the national harvester for OA repositories RECOLECTA
- Manages the Open Science National Funding Call "María de Guzmán" (3M€)
- Provides training services to the national community through regular workshops, seminars, and conferences, both face-to-face and online, for researchers, support staff, librarians, repository managers, and public decision-makers.
- Manages the implementation and dissemination of editorial quality standards.
- Provides support services for academic publishing in open access (RECYT, OJS)

FECYT also supports the correct design and implementation of open access policies in Spain, managing the National Aggregator for Open Access contents (RECOLECTA)[214] service, and representing Spain in several European and international initiatives in the OA field. Since 2021, RECOLECTA has been collected by LA Referencia and OpenAIRE:

- FECYT has been part of OpenAIRE as the Spanish Node since the first edition of the consortium in 2009. Synergies between OpenAIRE and RECOLECTA are very strong in relation with the standardisation of identifiers and the interoperability of open access repositories. FECYT is also the national helpdesk for OpenAIRE in Spain. It provides training and support services to the national research community regarding the OA European mandate. Beneficiaries of these services are researchers, support staff, librarians, repository managers, or public decision-makers.
- Since 2010, FECYT has been a member of COAR and actively participates in its activities and working groups.
- The Federated Institutional Repositories of Scientific Publications Network in Latin American (LA Referencia)[215] is a network of open access repositories national aggregators. It supports national open access strategies in Latin America through a platform with interoperability standards, sharing and giving visibility to the scientific production generated in institutions of higher education and scientific research. Since 2020, FECYT is the Spanish node in LA Referencia. This alliance contributes to increasing the visibility for Spain's scientific production aggregated in RECOLECTA by including it in an aggregator and an international search engine that counts on the presence of 10 countries, more than 100 institutions and gives access to more than 2 Million scientific documents in open access.

[213] https://www.ciencia.gob.es/en/Estrategias-y-Planes/Estrategias/ENCA.html#:~:text=The%20National%20Open%20Science%20Strategy,Spanish%20Science%2C%20Technology%20and%20Innovation
[214] https://www.recolecta.fecyt.es/
[215] https://www.lareferencia.info/es/

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The level of compliance of the open access national mandate is controlled by FECYT using RECOLECTA as the data source.

RECOLECTA is an open platform based on DNet open-source software that gathers all the national scientific repositories together in one place and guarantees that all open access repositories are interoperable among them. RECOLECTA acts as a service provider to the national community of open access repositories:

- **Validator:** The RECOLECTA validator allows every repository to self-scan as often as needed their compliance level with national and international OpenAIRE based interoperability guidelines related to metadata formats, as well as with the OAI-PMH protocol operation. It also facilitates a clear identification of records with errors. Those repositories that do not comply with RECOLECTA-OpenAIRE interoperability guidelines are removed from RECOLECTA. Thus, a common quality standard is guaranteed for the National open access repositories community.
- **Harvester:** RECOLECTA harvests monthly metadata from scientific open access repositories that are compliant with the RECOLECTA-OpenAIRE interoperability guidelines and that request their inclusion in the RECOLECTA platform. For doing so, RECOLECTA uses the OAI-PMH protocol of their data provider.
- **Search engine:** RECOLECTA provides direct and free access to the entire Spanish scientific production archived in open access repositories through a single interface. In addition, FECYT has a search engine for funded R&D&I projects. Currently, the project search engine has information on 24 funding agencies (from the National Government and the Autonomous Regions) since 2004. The search interface of RECOLECTA provides access to more than 2.5M documents collected from the 173 data providers indexed in the platform.
- **Erich metadata services:** RECOLECTA provides a public access REST API (application programming interface) for repositories to fill in the funding project information of their research outputs.
- RECOLECTA as a source of information: Since 2021, RECOLECTA has been collected by OpenAIRE and LA Referencia.
- **Dissemination activities:** News spread, organisation of activities and help desk support through training activities.

The Spanish Repository of Science and Technology (RECYT)[216] is a platform for managing, editing, and accessing the content of high-quality Spanish scientific journals. The repository includes:

- A list of journals, a public section that displays the journals included in the repository, providing visibility and access to their content through this platform.
- User access, a private section for direct use of the tool that facilitates electronic management and comprehensive editing of the journal. This section also allows access to users who register as readers and authors of the journals.

[216] https://recyt.fecyt.es/

- The possibility of registering new users, where they can register in the desired journal as a reader or author, depending on the permissions granted by the journal.
- A search tool in the Search section to locate the contents of the journals.
- A help manual for OJS editing in the journal's Help section.

Each journal decides the degree to which they wish to make use of RECYT. In this way, the electronic editing tool can be used without the need to publish the issues on the platform or publish the journal on the platform without using the comprehensive management service.

The tool allows editors to reduce the time and energy traditionally dedicated to journal publication. Additionally, it improves the quality of publications from many perspectives: making publication policies more transparent, improving article indexing, etc.

National Open Science Strategy (ENCA)

At the end of 2018, the MICIU established the COS under the direction of the General Secretariat for Research and with the coordination of the FECYT. The main mission of this committee was to define, through a participatory process, the principles and objectives that would guide the ENCA or National Open Science Strategy.

The National Open Science Committee included a group of relevant stakeholders and key decision makers: AEI, ANECA, MICIU, CSIC, ISCIII, Alliance of Excellence Research Institutions and Research Units (SOMMa),[217] and CRUE, were brought together at the beginning of 2019 by FECYT to work on the design of an adequate open science policy, which allowed for its optimal implementation under the leadership of the MICIU. ENCA is based on actions and commitments adopted by those agents of the Spanish scientific system and on regulations such as the aforementioned Science Law and LOSU. ENCA is also supported by the PEICTI and the EECTI.

The vision of ENCA for the year 2027 is that the processes of funding, execution, communication, and evaluation of scientific research in Spain incorporate the principles of open science. This implies that processes are more open and transparent, based on criteria of scientific and social impact, and that public infrastructures for communication, access, and preservation of research results are strengthened. In addition, it seeks to open up spaces for society's participation in research activities, including citizen science and free access to publicly funded scientific results.

ENCA aims to promote a cultural change in the SECTI and encourages a debate with external agents, such as publishers and distributors of scientific information, to find alternatives to the current academic communication system. It aims to position Spain

[217] https://somma.es/

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as a leader in open science, promoting the adoption of open and transparent practices in all areas of scientific and technological research.

The strategy acknowledges the concept of open science and knowledge in its entirety, embracing all dimensions it entails. However, specific measures are outlined to achieve the following strategic objectives:

- Ensure the existence of interoperable digital infrastructures robust enough to absorb the impact of implementing a national open science policy and facilitate integration into the international ecosystem and, when appropriate, into the European Open Science Cloud (EOSC).
- Promote proper management of research data generated by the national R&D&I system through the FAIR principles (Findable, Accessible, Interoperable, Reusable) to enhance their discoverability, accessibility, interoperability, and reusability.
- Implement open and free access by default to publications and scientific results funded directly or indirectly with public funds.
- Establish new research evaluation mechanisms and a system of incentives and recognitions aimed at promoting open science practices, while also providing training to all personnel (researchers, managers, funders, evaluators) to align their professional performance with the principles of open science.

The strategy will be implemented through specific measures aimed at ensuring effective involvement, awareness, training, and capacity building of the personnel who will be the architects of this cultural change: researchers, support staff, management, and citizens. The axes upon which it is structured are as follows:

A. Digital infrastructures for open science.
B. Management of research data following FAIR principles.
C. Open access to scientific publications.
D. Incentives, recognition, and training.

Data management

The CSIC incorporates an open access mandate for publications and research data as part of its institutional strategy[218], providing data management services through Digital CSIC. Likewise, Spanish universities and other research institutions are advancing in data management strategies by developing policies, enhancing infrastructure, creating new services for researchers, and promoting capacity building among librarians.

There are 50 data repositories in Spain indexed at the re3data.org database.[219]

[218] CSIC Institutional OA Mandate: https://digital.csic.es/handle/10261/179077
[219] https://www.re3data.org/

Consorcio Madroño[220] consolidates its research data-related services through its website, InvestigaM, where a DMP tool named Pagoda and its data repository, e-Ciencia-datos, are located. Similarly, the Consortium of University Services of Catalonia (CSUC)[221] has developed a tool to aid in creating DMPs called Pla de Gestió de Dades de Recerca, along with a separate set of guidelines to support researchers.

National and international research infrastructures based in Spain are collecting and archiving datasets, including data processing centres like the Barcelona Supercomputing Center, an international reference centre providing services related to open science. In some cases, these centres successfully address challenges in open science, such as data protection issues at CRG-Center for Genomic Regulation and the European Genome-Phenome Archive at the CRG.

Institutional publishing

In Spain, academic publishing is predominantly managed by universities and the CSIC. A significant portion of the publishers affiliated with these institutions are part of the Union of Spanish University Publishers (UNE), a key entity in the institutional publishing landscape that brings together 73 publishers and publication services (university presses + research institutes)[222] from Spanish universities and other research centres. The UNE associates collectively publish 993 journals in open access, and they possess 78,698 ISBNs, which represent 8% of Spanish academic book publishing.

Among its primary objectives, UNE aims to represent, manage, promote, and safeguard the interests of Spanish university publishing. It also strives to contribute to the dissemination and promotion of its member's publications, organise training programmes, advocate for university publishing to public administrations, and foster coordination of editorial activities among its members. In essence, UNE coordinates editorial initiatives among its affiliates, facilitating collaboration and promoting the dissemination of each member's publishing resources.

Spanish journals. Survey data

The survey sent by DIAMAS, which served as the basis for the Landscape Report,[223] was sent to the complete database of FECYT journals (nearly 1,700 titles) and to the 73 members of the UNE. It was indicated that the questions were aimed at IPSPs to avoid responses from journals that are part of a group with multiple titles published by any institution, noting that mono-journals (publishers of a single title) should respond to the survey.

[220] https://www.consorciomadrono.es/
[221] https://www.csuc.cat/es/sobre-nosaltres
[222] https://www.une.es/asociados
[223] Institutional Publishing in the ERA: Results from the DIAMAS survey: https://zenodo.org/records/10022184

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After an analysis of emails, it was determined that the 1,700 journals that are part of the FECYT database belong to a total of 124 editorial entities, including universities, CSIC, and scholarly societies. It has not been possible to determine how many of these publishers are associates of the UNE. A total of 74 responses can be considered valid once analysed and refined.

Table 25. Number of institutional publishers (IPs) and service providers (SPs) in Spain. Source: DIAMAS survey

Type of IPSP	n	%
IP	70	94.6
SP	4	5.4

** N=74 of 74; single answer question; Source: DIAMAS survey - Q8 (Spain, all)*

Of these, 4.5% are considered SPs and 95.4% self-classify as IPs. 5% indicate that their activities generally revolve around providing editorial services, with a focus on production and communication, in addition to carrying out administrative services.

General features of publishing in Spain

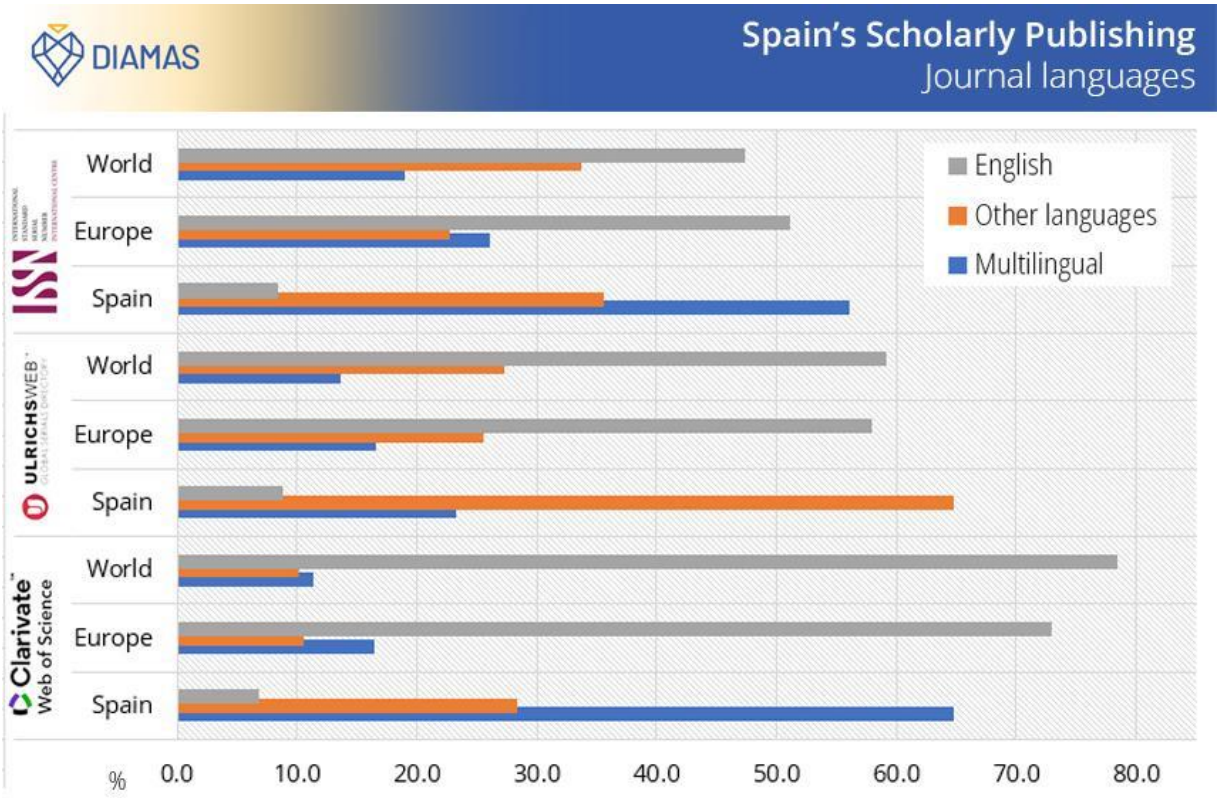
According to the data from the survey, Spanish is the primary language of scholarly publishing (98.6% of the survey participants publish in this language), although many IPSPs also publish their papers in Catalan (41.4%). Publishing in other languages of Spain, such as Galician (8.6%) and Basque (5.7%), may be considered marginal, but it remains a factor to take into account.

Table 26. Languages Used by IPs in Spain: Source: DIAMAS Survey

Publication language	n	%
Basque	4	5.7
Catalan	29	41.4
English	65	92.9
French	27	38.6
Galician	6	8.6
German	5	7.1
Greek	1	1.4
Italian	13	18.6
Portuguese	26	37.1
Russian	1	1.4
Spanish	69	98.6

** N=70 of 74; multiple answer question; Source: DIAMAS survey - Q8 (Spain, all)*

The second most commonly used language for publishing in Spain is English (according to 92.9% of the survey participants). Interestingly, nearly all publishers who publish in both Spanish and Catalan also offer their papers in English. Spanish academic publishers also publish scientific outputs in French, Italian, Portuguese, German, Greek, and Russian. The prevalence of some of these languages is much lower.



Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	Spain	Europe	World	Spain	Europe	World	Spain	Europe	World
English	285	26,665	77,372	112	16,584	34,172	49	8,298	17,155
Other languages	1,204	11,866	55,140	820	7,315	15,756	205	1,202	2,231
Multilingual	1,898	13,629	30,977	294	4,733	7,860	467	1,881	2,500

Figure 60. Comparison of the languages in which journals are published

Most of the surveyed publishers state that they do not belong to any association, organisation, or coalition, although they are clear (56.5%) that they are part of a larger parent organisation (such as a university publishing department, for example). More than 70% are part of a public entity, and just 28.4% are part of a private non-for-profit entity.

More than 82% dedicate themselves to editorial and production tasks, 71% claim to perform communication duties, nearly 60% also handle administrative tasks, and 42.5% provide training, support, and/or advice.

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Table 27. Type of legal entity of IPSP or parent organisation

	n	%
Public organisation	52	70.3
Private not-for-profit organisation	21	28.4
Other	1	1.4

** N=74 of 74; single answer question; source: DIAMAS survey - Q6 (Spain, all)*

The majority of respondents' state that they are directly involved in the editing of the journals they publish, while some are also (or only) involved in service provision. Of these, just over 60% are editors in Social Sciences, 54.8% are editors in Humanities, 47.9% consider themselves multidisciplinary, and nearly 29% edit journals in Natural Sciences. Only 13% publish journals in Agricultural Sciences.

Table 28. Disciplines covered

	n	%
Agricultural sciences	10	13.7
Engineering and technology	19	26.0
Humanities	40	54.8
Medical and health sciences	15	20.5
Multidisciplinary	35	47.9
Natural sciences	21	28.8
Non-academic	9	12.3
Social sciences	44	60.3

** N=73 of 74; multiple answer question; source: DIAMAS survey - Q10 (Spain, all)*

Among the 74 IPSPs surveyed, only a small fraction of 2.7% claimed to offer a complete editorial workflow, while the vast majority, accounting for 97.2%, provide additional technical services such as hosting, software, metadata, and quality control. Internal management of services and technical infrastructure was reported by all respondents, with external contracting being less common. Regarding publishing software, 5.4% mentioned customization or in-house development, while the majority (83.7%) use OJS, either exclusively or in combination with other systems.

Approximately 79.9% of respondents stated the use of identifiers, with CrossRef-DOI, ISSN, and ISBN being the most common. Licensing under CC-BY or CC-BY combined was prevalent among 90.6% of respondents, while 5.4% published their content under CC0. PDF was the primary format for content publication, according to all 74 IPSPs.

The vast majority (91.9%) of respondents reported having an archiving policy, with the Public Knowledge Project. Preservation Network (PKP PN) being the most utilised among 21.6% of them. When discussing communication, 10.8% state they have newsletters, while 22.9% did not offer any public measurements, and 2.7% lacked information on the matter. The majority reported satisfaction with the level of content inclusion in academic indexes and search engines.

Gender and language equity were the main focus areas of Equity, Diversity, Inclusion, and Belonging (EDIB) for approximately 30-40% of respondents. Accessibility measures were implemented by 43.2% of IPSPs, with a notable mention of Royal Decree 1112/2018 compliance.

Funding and sustaining IPSPs

According to the survey data, 79.5% of the surveyed publishers have an approved annual budget, with the majority concentrated in ranges between €11,000 and €50,000 (19.0%) and €1,000 to €10,000 (13.8%). Only 1% claim to have over 1M per year.

Additionally, 79.5% of these publishers formally monitor and/or manage their annual income and expenses, covering various aspects such as facilities, technology, human resources, and salaries, with only 2.7% stating they do not justify those expenses because they are not asked. 6.8% voluntarily monitor their annual income and expenses, as they are not obligated to do so.

Regarding the outsourcing of services, 76.7% of academic journal editors in Spain outsource services, with higher prevalence in production (68.6%) and technology services (46.2%). It is also observed that 77.3% of publishers pay the salaries of permanent staff, while 40.9% pay those of temporary staff.

Table 29. Annual income and expenses monitored and/or formally administered

	n	%
No, this is not obligatory	2	2.7
Not applicable	2	2.7
Yes, although it is not obligatory	5	6.8
Yes, partly	3	4.1
Yes, this is obligatory	58	79.5
Don't know	3	4.1

** N=73 of 74; single answer question; source: DIAMAS survey - Q12 (Spain, all)*

Academic journal editors in Spain would be willing to consider collaborations with other organisations in various areas. Mainly, areas such as administrative, legal, and financial services are seen as potential for collaborations, with 17.1% of respondents expressing interest in this area. Additionally, 38.6% would be open to collaborations in communication services, suggesting recognition of the importance of effective communication in the editorial environment.

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Table 30. Areas in which collaboration with other organisations would be considered

	n	%
Administrative, legal and financial services	12	17.1
Communication services	27	38.6
Editorial services	16	22.9
IT services	31	44.3
Production services	30	42.9
Training, support and/or advice on publishing policies and best practice	33	47.1
None	10	14.3
Don't know	9	12.9
Other	2	2.9

** N=70 of 74; multiple answer question; source: DIAMAS survey - Q15 (Spain, all)*

Editorial services (22.9%), production services (42.9%), and technology services (44.3%) also stand out as areas where editors could consider collaborations with other organisations. Furthermore, a high percentage, 47.1%, is interested in collaborations related to training, support, and/or advice on publication policies and best practices.

Regarding funding dependence, a variety of situations are observed among academic journal publishers in Spain. For example, 50.8% indicated that permanent funding from the parent organisation did not apply to them, while 43.9% said the same for collective funding. However, a considerable portion of these publishers do depend on certain funding sources, such as permanent funding from the parent organisation (15.4%) and funding based on voluntary author contributions (14.8%).

This panorama suggests a wide diversity in funding and financial management practices among academic journal publishers in Spain.

Governance

Regarding governance, there is a high level of formalisation and structure. The vast majority of respondents, 78.9%, stated that they have formal documents describing the activities of their institutions, such as statutes, regulations, or articles of association. Additionally, over half, 56.9%, indicated that they have documents that comply with external legislation, requirements, and established policies.

Table 31. Formal documents describing activities - Statutes / by-laws / articles of association

	n	%
Yes	56	78.9
No	10	14.1
Don't know	5	7.0

** N=71 of 74; single answer question; source: DIAMAS survey - Q22 (Spain, all)*

Concerning activity supervision, it is notable that a high percentage, 85.7%, have a board of directors for strategic decision-making, and a significant 74.5% have a management office that coordinates and oversees daily operations. However, a significant percentage of respondents, 61.5%, reported having an external audit of accounts to ensure transparency and accountability.

It is important to note that, although the majority have established these supervision models, 25.0% stated having additional models, suggesting some diversity in governance practices. Additionally, only a quarter of respondents indicated that their governance models include representation from the broader academic community, suggesting an area for improvement in terms of inclusion and participation.

Data from CSIC journals

While the CSIC has responded to the DIAMAS survey, the institution publishes its Annual Report of the CSIC[224] every year, which includes publishing data for both books and journals. Based on this information, we know that in 2022, CSIC published 40 journals (13 in Science and Technology, 21 in Arts and Humanities, and 6 in Social Sciences). Since 2014, all journals have been published in electronic editions in PDF, HTML, and XML-JATS formats.

All journals are published open access through their electronic editions, collectively making available 95 issues containing over 1,000 papers to the public. The CSIC Scientific Journals Platform. Electronic Edition[225] provides free access to more than 40,000 documents.

[224] Annual Report of the CSIC: https://www.csic.es/sites/default/files/2023-10/MEMORIA%20ANUAL%20CSIC%202022.pdf
[225] https://revistas.csic.es/

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Table 32. Presence in international databases of CSIC journals (Source: CSIC)

	Science and Technology	Social Sciences	Arts and Humanities	Total
N of journals	13	6	21	40
WoS SCI	9	-	-	9
WoS SSCI	-	3	1	4
WoS JCR	9	3	1	13
WoS JCI	10	6	21	37
WoS AHCI	-	3	18	21
WoS ESCI	1	1	3	5
WoS Total	10	6	21	37
Scopus	13	6	21	40
ERIH Plus	Not applicable	6	21	27
Sello de calidad FECYT	10	6	21	37

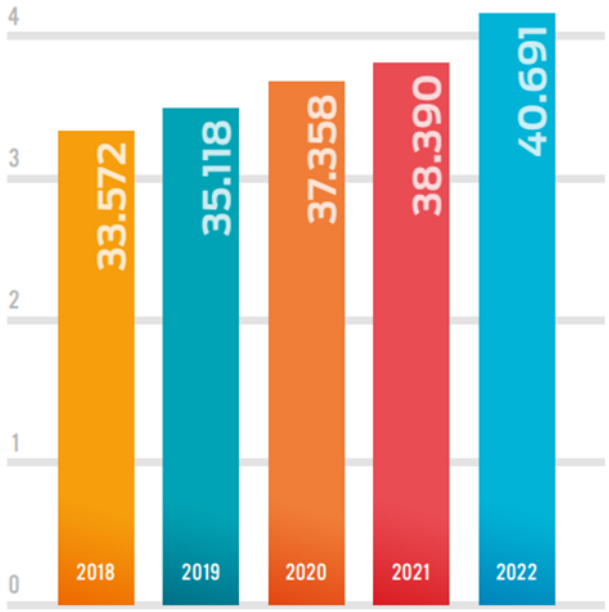

Figure 61. Number of files available on revistas.csic.es (Source: CSIC)

The CSIC's complete catalogue and its updates can be consulted at: editorial.csic.es,[226] libros.csic.es,[227] revistas.csic.es; at the Publications Catalog of the AGE,[228] and on the DILVE platform.[229]

[226] http://editorial.csic.es
[227] http://libros.csic.es
[228] https://cpage.mpr.gob.es/
[229] https://web.dilve.es/dilve/que-es-dilve/

The institution has an active collaboration with several infrastructures aimed at promoting open science, such as arXiv, COAR, DataCite, DOAB/OAPEN, DOAJ, DSpace, OpenCitations, PCI Peer Community In.

Note: The acronyms included in the document correspond to the acronyms used in Spanish and have not been translated for the sake of comprehension.

Conclusion

Spain´s scholarly publishing landscape is linked with the national research framework, overseen by the Ministry of Science, Innovation, and Universities (MICIU). With 89 universities, including key players like the Spanish National Research Council (CSIC), Spain nurtures a robust academic environment. The CSIC, along with other Public Research Bodies (OPIs) such as CIEMAT and ISCIII, drives scientific research and technological development.

The country´s decentralised structure sees R&D&I policies managed both at the national and regional levels, with significant investment in research leading to an increase in scientific output. R&D funding is guided through entities like the Spanish State Research Agency (AEI) and channelled through institutions like the Spanish Foundation for Science and Technology (FECYT), that support initiatives aligned with the State Plan for Scientific and Technological Research and Innovation (PEICTI) and the Spanish Strategy for Science, Technology, and Innovation (EECTI). Its commitment to open science and open access is evident in initiatives such as the National Open Science Strategy (ENCA) and projects like RECOLECTA and RECYT, designed for open access repositories and academic publishing, respectively.

Spain actively engages in the EOSC initiatives and is represented in the EOSC Steering Board by MICIU. Its commitment to data management is reinforced by different institutions and consortia. The endeavour in scholarly publishing, open science, and open access, alongside a robust research infrastructure, position the country as a significant contributor to the global community.

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The United Kingdom

National landscape of scholarly publishing

Introduction

Strong funder policies backed by research institutions, a well-established researcher pool with competitive funding, and a notable presence of large academic publishers characterise the UK scholarly publishing landscape.

While there is no national strategy or funding for supporting journals or publication platforms, since 2003 government and research funders have had a pivotal role in driving the shift towards OA. The Finch Report of 2012 (Department for Business, Innovation & Skills, 2012) committed the UK to OA, with its stated preference for the 'gold route' via the payment of APCs. The Wellcome Trust and Research Councils UK (now UKRI) were the first and largest funders to assert that publicly funded research should be openly accessible, and they provide OA block grants to the majority of research institutions in receipt of their research awards to underpin their OA policies. Following experimentation with offsetting agreements (Earney, 2017), TAs - referred to as transformative agreements outside of the UK[230] - have become prominent since 2020, with the majority of UK-funded articles now published OA under TAs (see the section on the prevalence of TAs in the UK's OA transition).

In addition, institutional OA policies have played a crucial role in advancing OA in the UK. Many universities and research institutions have implemented their own OA policies, complementing and reinforcing the requirements set by funders.

Jisc has been instrumental in supporting the UK's open research objectives, negotiating TAs and other models of OA agreements with publishers on behalf of UK institutions. The collaboration of these stakeholder groups paved the way for meaningful change in the scholarly publishing landscape in the UK, making UK research outputs more accessible and OA more affordable. However, within the current challenging HE economic context, there are concerns about the sustainability of TAs and barriers to OA - see part II on OA requirements, incentives, and barriers.

UK Journals and publishing output overview

Figure 62 shows a large number of, and high level of indexation for, UK journals compared to European averages. Due to the over-representation of English language journals compared to journals in other languages, according to Mongeon and Paul-Hus

[230] Jisc uses the term 'transitional' rather than 'transformative' to emphasise the intended temporary nature of TAs.

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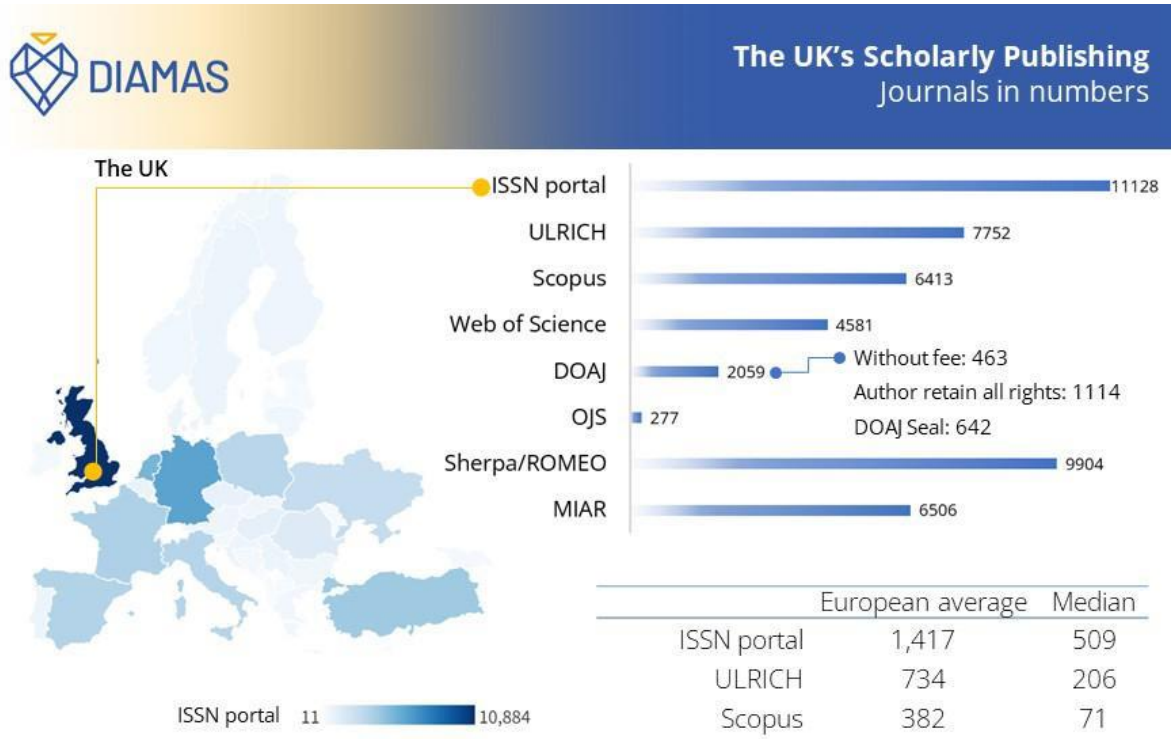
(2016) UK-based journals are more likely to be indexed on platforms such as WoS or Scopus. Of the 11,128 UK titles on the ISSN portal, 58% (6,413) are indexed on Scopus, compared to a 27% European average. Of the 2,056 UK titles listed in the DOAJ only 22% do not require fees to publish, indicating a low level of Diamond publications in the UK. DOAJ data showing that authors retain all rights in over 50% of UK journals suggests the impact of the rights retention movement in the UK (rights retention is a feature of major UK funder OA policies and as of December 2023 over 50 institutions had or were planning to adopt Institutional Rights Retention Policies, see Rights retention section).



	European average	Median
ISSN portal	1,417	509
ULRICH	734	206
Scopus	382	71
Web of Science	279	51
DOAJ	232	72
OJS	157	56
Sherpa/ROMEO	426	72
MIAR	595	140

Figure 62. UK journals in numbers

With a long history of journal publishing (the Royal Society published its first scientific journal in 1665[231]), the UK has the largest volume of titles in Europe and more than double the number of the next country (14,518 peer-reviewed scholarly active journals, Germany by comparison has 5,667). However, when normalised by population size, smaller countries such as Switzerland and the Netherlands outperform the UK in terms of number of indexed peer-reviewed titles per capita (in English and other languages).

[231] https://royalsociety.org/journals/publishing-activities/publishing350/history-philosophical-transactions/

International collaboration

The potential impact of Brexit on the UK's international research collaborations, particularly regarding collaborations with other European countries, has been noted (Highman, Marginson, & Papatsiba, 2023). Although the UK rejoined the EU's Horizon Europe scheme in 2023, there have been concerns about the detrimental effect of prolonged uncertainty and delays.[232] However, it is anticipated that the country's established research networks worldwide will continue to play a significant role in its research publishing landscape. Notably, the country remains involved with the CERN and the European Space Agency (ESA) programmes, and through the UKRI Global Challenges Research Fund (GCRF), UK researchers collaborate with institutions worldwide to tackle global issues such as poverty, inequality, and climate change. The UK's research community and student contingent continues to have a significant international representation, albeit with a declining European representation (Highman, Marginson, & Papatsiba, 2023), (see the UK Research and Higher Education overview section).

Overall, the UK's journal publishing landscape benefits from the international visibility of English-language research, although leaving the EU and the subsequent uncertainty have caused some drawbacks (see the sections on "International collaboration" and "Challenges to the UK's position").

Figure 63 suggests that the UK's distribution of journals by subject follows global and European trends. According to the Ulrichs and WoS data below, the UK's primary subject in volume is social sciences, followed by medical and health sciences, and it is notably ahead of Europe in the proportions of its journals published in these two areas. In part this can be explained by the fact that some of the largest publishers of social sciences, e.g. Taylor & Francis and Sage, are based in the UK, and by the relatively large number of society publishers in specific academic fields in the country, such as the British Medical Association (Medical and health sciences), the Geological Society, the Royal Society and the Royal Society of Chemistry (Natural sciences), and the Royal Academy of Arts (Humanities and the Arts). These societies and their journals benefit from their international memberships and the global prominence of the English language.

[232] Horizon Europe: how the UK's delay in rejoining EU funding scheme is damaging scientific research (theconversation.com)

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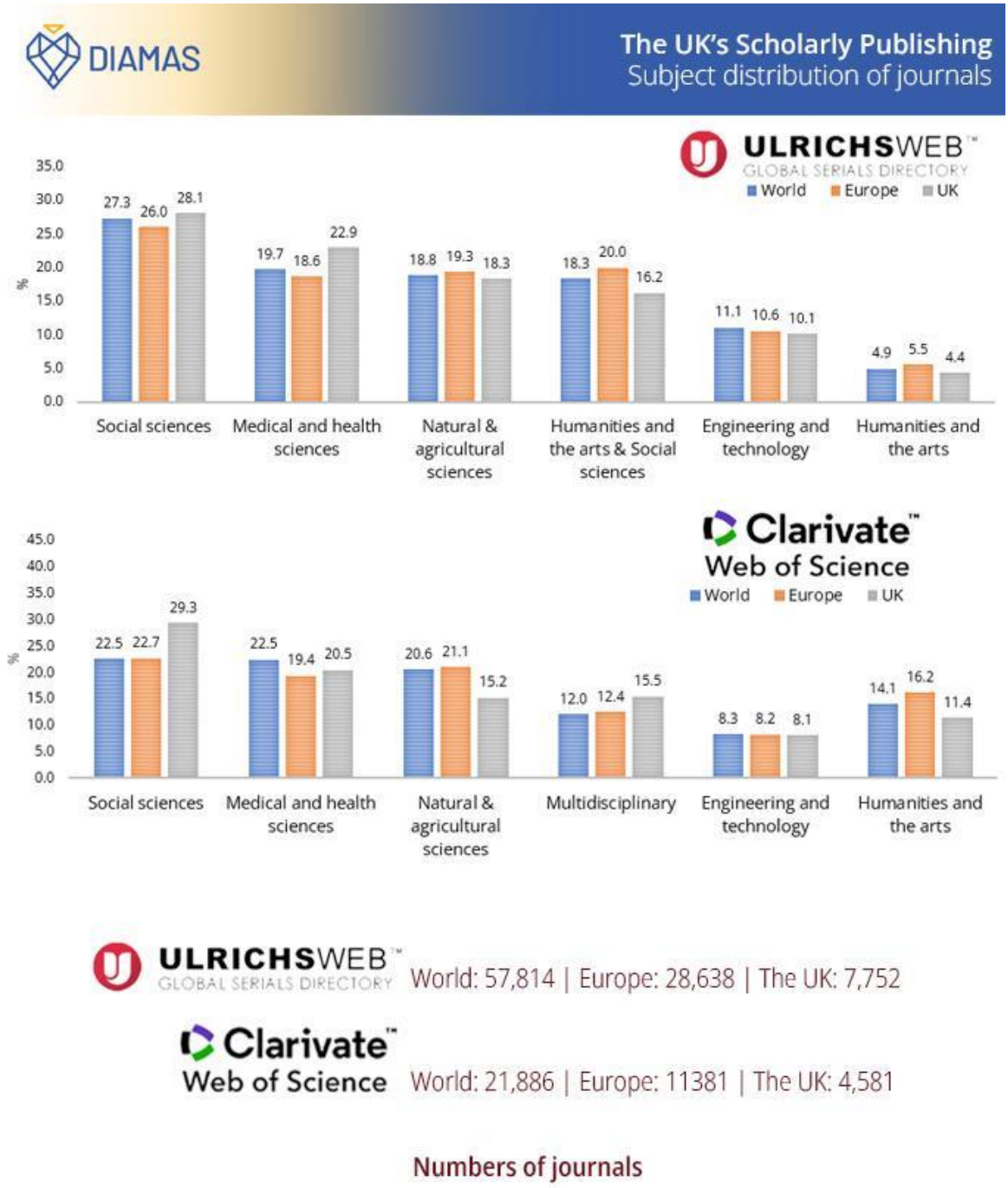

Figure 63. UK subject distribution of journals

UK authors' published output (in all journals, UK and international) contrasts with this picture (Brayman et al., 2024). Medicine is the dominant discipline for publications by UK authors (all articles with a corresponding author affiliated to a UK organisation), comprising just over a quarter of the total output, with engineering being the second-largest field and biological sciences the third-largest. While physical sciences contribute less to the overall output in the UK than globally, social sciences, arts, and humanities have a greater share.

According to Figure 64, the UK ratio of articles published immediately OA through TAs (for the period 2019-2024) is 64.4% (16% in Fully Gold OA outside TAs, and 19% in Hybrid/closed).

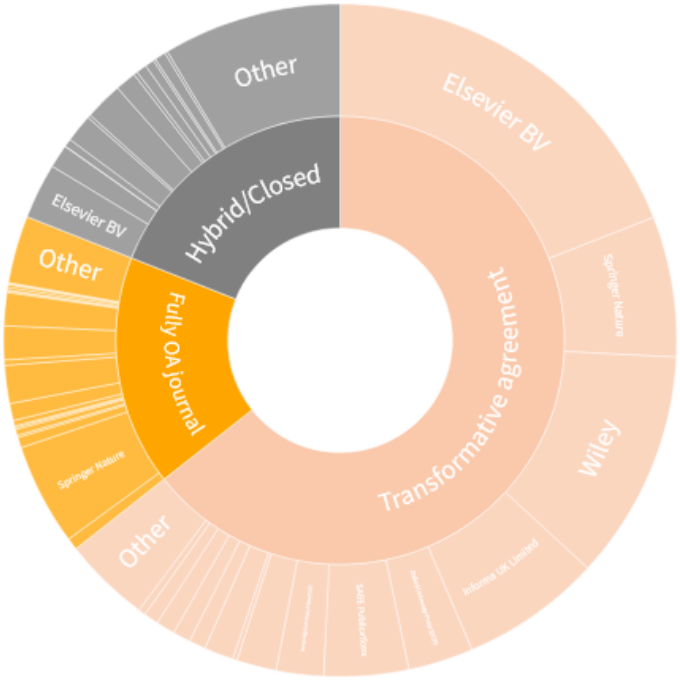

Figure 64. UK breakdown of publishing output by OA route and publisher, source ESAC[233]

A review of transitional agreements in the UK

Jisc's Review of transitional agreements in the UK (for the period 2018-2022) shows that the median OA share within UK fields is close to 40%, exceeding the global median of 33%. UK articles in multidisciplinary journals exhibit the largest OA rate, though a lower proportion of Fully Gold OA compared to global figures (74% for the UK, 87% globally). Environmental sciences exhibit the second highest rate of OA adoption at 63%, followed by biological sciences and agricultural sciences at 53% to 55%. Conversely, disciplines such as dentistry (12%), nursing, history, archaeology (15%), and creative arts (18%) demonstrate the lowest rates of OA uptake. Overall, the UK shows a 13% higher OA uptake than global averages, with exceptions such as health sciences, history, linguistic and cultural studies, and medicine.

The growth in publishing in hybrid journals is a key feature in the UK's transition to OA. Compared to the global picture, there is a more dominant tendency towards hybrid as an OA implementation route in the UK. Although the levels of Open (Fully Gold and Hybrid)

[233] ESAC registry website, analysis by country: https://esac-initiative.org/market-watch/#country_shares

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articles in 2022 are similar overall (UK: 50%; global: 46%) as seen in Figure 65, the UK's proportion of Hybrid articles is considerably higher (UK: 21%; global: 10%).

Figure 14: number (top) and proportion (bottom) of global (left) and UK (right) articles published by OA status (defined by Unpaywall), between 2015 and 2022.
Data source: Dimensions. Parameters: All (global or UK) articles. All titles for all publishers.

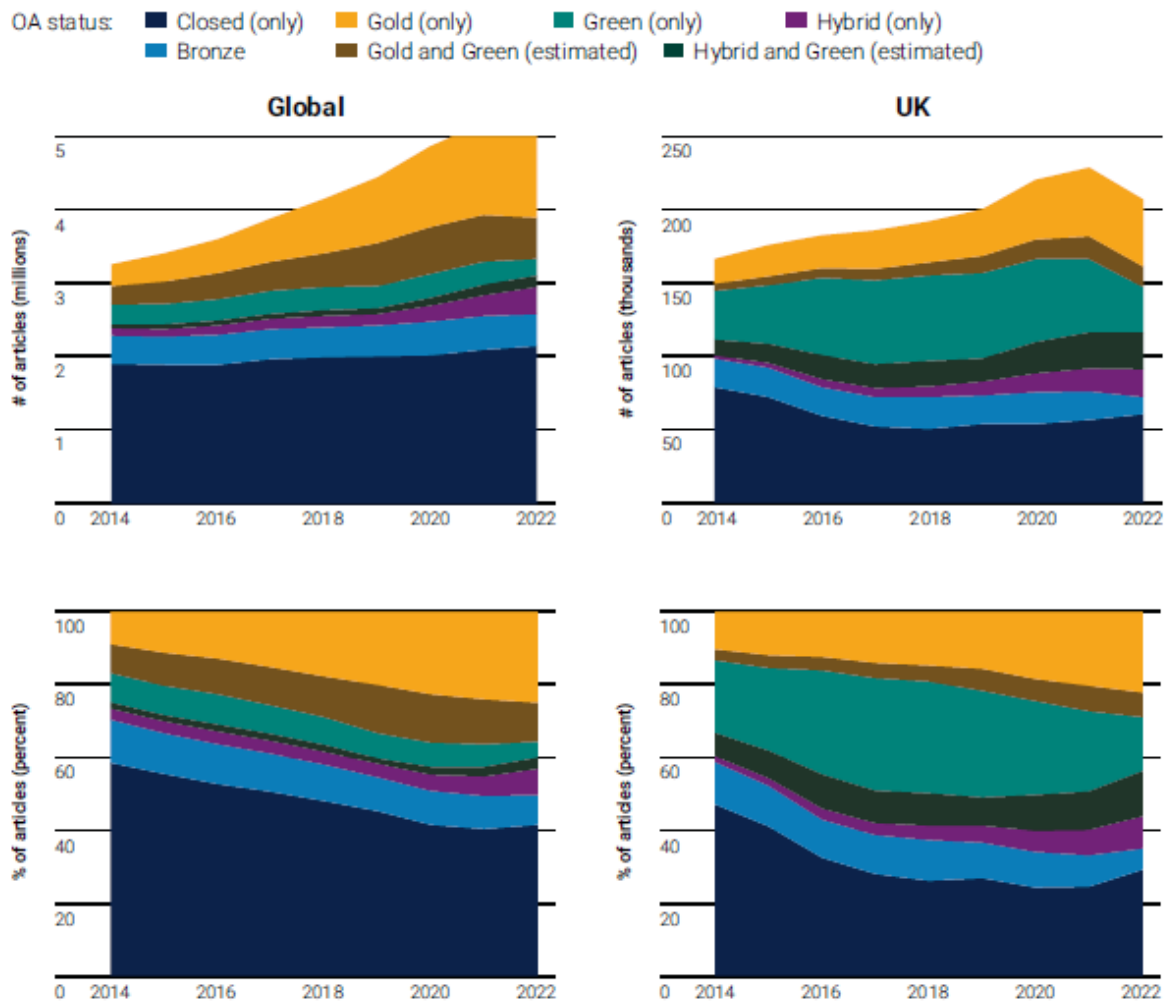

Figure 65. Comparison of UK and Global articles by OA status, source: A review of transitional agreements in the UK by Jisc, available under a Creative Commons Attribution Share Alike 4.0 International at https://zenodo.org/records/10787392

The prevalence of TAs in the UK's OA transition

The number of TAs negotiated by Jisc grew from 1 in 2016 to 44 in 2024. Between 2018 and 2022, 87,000 articles (Brayman et al., 2024) were published OA under Jisc TAs, and in 2022, 48% of all UK corresponding authors' articles were published OA under Jisc TAs. TAs have largely contributed to the transition of articles from closed to open access,

with 30% more Open articles in 2022 than in 2014 (4% more than global articles), and 25% less Closed articles over the same period (15% less than global articles).

An unintended consequence of the adoption of TAs in the UK has been the relative reduction of Green OA articles as the number of Hybrid articles increased. While Closed, Hybrid, and Gold articles have generally increased or remained stable, Green articles have declined, particularly Green only[234] articles, decreasing by approximately 4% annually over the past four years, surpassing the global trend. This decline is partly due to the UK's earlier emphasis on the Green OA route, which related to the OA policy for the 2021 Research Excellence Framework exercise (See Funding and Assessment Systems) and led to a consistently higher proportion of Green articles compared to the global average.

It is worth noting that eligibility to participate in Jisc TAs is limited to Jisc members (typically UK universities and research organisations) and approximately a quarter of UK authors are not affiliated to a Jisc member.

Alternative OA agreements

While TAs are the main OA compliance route for UK funded articles, they are not the only type of OA agreement that Jisc negotiates. In early 2023, 43 TAs made up 56% of Jisc OA agreements, with other types of agreements such as community-based funding pledges, subscribe to open (S2O), or publishing agreements with fully OA publishers. Notably, several innovative OA initiatives and frameworks provide mechanisms for institutions to contribute funds to Diamond OA or APCs for authors based in low- or middle-income countries - i.e. these agreements do not provide services to subscribing institutions but are rather funding pledges in support of global equity in publishing. While current levels of participation and investment in these supporter membership agreements among UK institutions is moderate, the growing number of initiatives from publishers in support of global equity and evolving eligible expenditure criteria for the UKRI block grant is encouraging.

UK Research and Higher Education overview

Figure 66 shows that 99% of UK scholarly publications are in the English language (according to ISSN data), which is to be expected (though some UK titles are published in other languages, notably in Welsh). However, far fewer than 99% of UK researchers (authors, reviewers, editors in the publishing process) are native to the UK.

[234] Green articles include all articles published in green OA, including those also published in Hybrid or Gold OA, while Green-only articles exclude articles which are also Hybrid or Gold OA.

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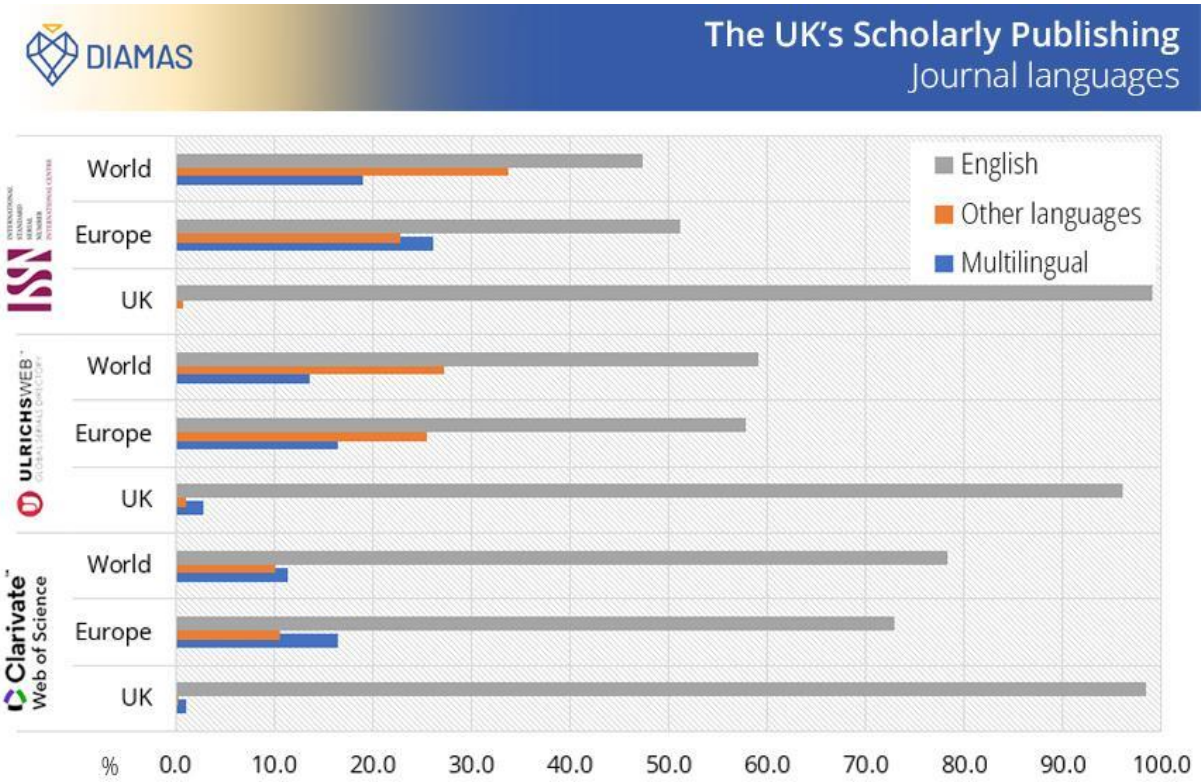


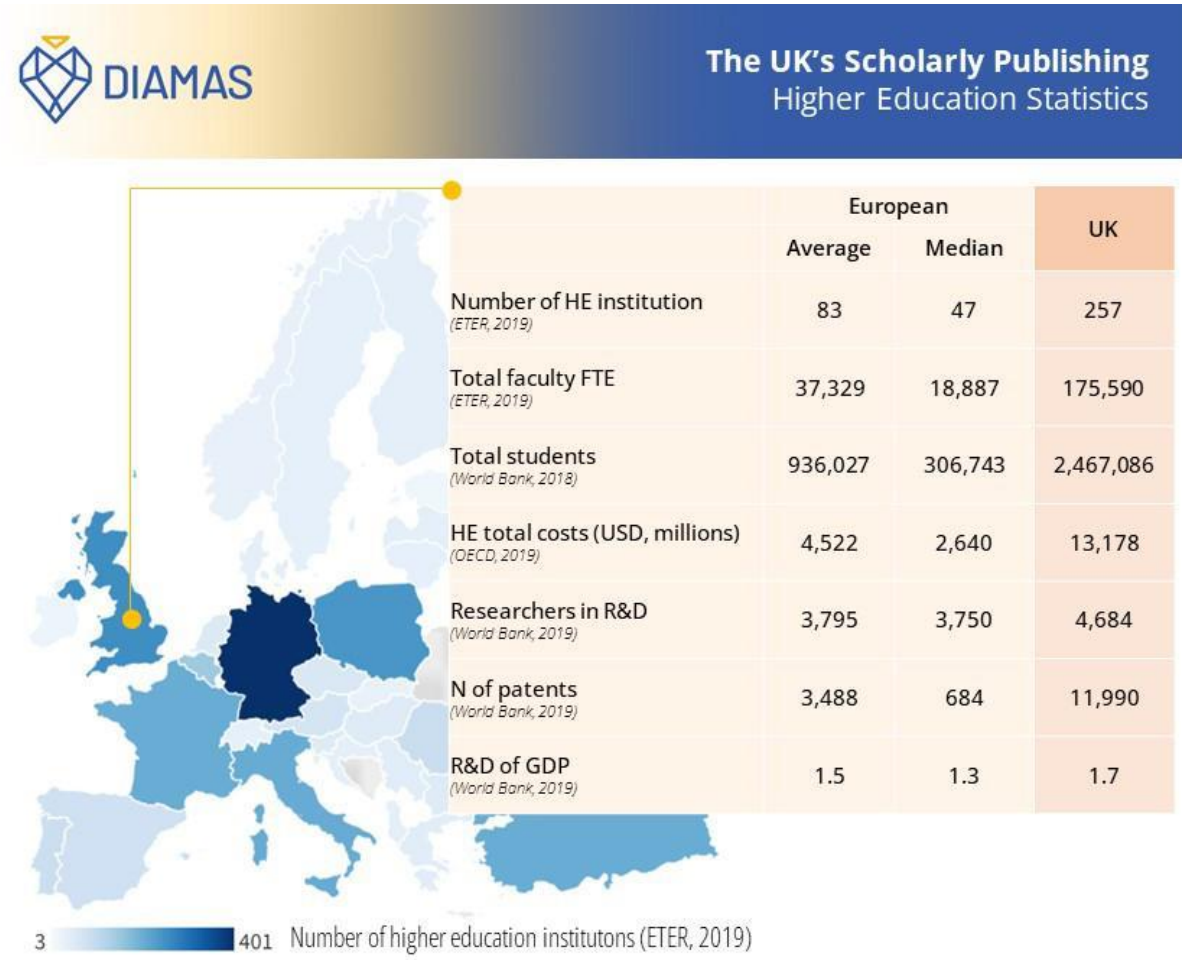
Numbers of journals

	ISSN			ULRICHSWEB			Clarivate Web of Science		
	UK	Europe	World	UK	Europe	World	UK	Europe	World
English	11,028	26,665	77,372	7,450	16,584	34,172	4,510	8,298	17,155
Other languages	89	11,866	55,140	83	7,315	15,756	17	1,202	2,231
Multilingual	11	13,629	30,977	219	4,733	7,860	54	1,881	2,500

Figure 66. UK Journals languages

According to a 2018 study of the research landscape (Royal Society, 2018), international researchers employed at a UK institution constituted 29% of the UK researcher pool in 2018 (17% from the EU, 12% from the rest of the world). In Northern Ireland, the figure was as high as 43% non-UK researchers (32% EU nationals, including from the Republic of Ireland) and in Scotland it was 33%. Many of these international researchers, and others who have been naturalised British, practice and write in English as a second or nth language, and they contribute significantly to research and patents in the UK. According to the Royal Society study (2018), 72% of active UK researchers have trained or worked as researchers abroad. This highlights how internationally embedded the UK research sector is, and how much it benefits from the circulation of its researchers, both UK and non-UK citizens, English speakers, both native and non-native.

Having the highest number of HEIs in Europe (175,590), UK figures are above European averages and medians for all HE statistics presented in Figure 67. However, the UK is behind Germany on all metrics aside from the number of HEIs, and behind several European countries on most metrics. Most notably, the UK ranks 14th for R&D investment as a proportion of GDP, with 1.7%.



	European		UK
	Average	Median	
Number of HE institution (ETER, 2019)	83	47	257
Total faculty FTE (ETER, 2019)	37,329	18,887	175,590
Total students (World Bank, 2018)	936,027	306,743	2,467,086
HE total costs (USD, millions) (OECD, 2019)	4,522	2,640	13,178
Researchers in R&D (World Bank, 2019)	3,795	3,750	4,684
N of patents (World Bank, 2019)	3,488	684	11,990
R&D of GDP (World Bank, 2019)	1.5	1.3	1.7

Figure 67. UK higher education statistics

Challenges to the UK's position

Although historically a global leader in the research and HE sectors, there are indications of challenges to the UK's position in recent years, particularly as the UK economy lags behind most other countries in the G7.[235]

UK HEIs have been grappling with a number of sustainability and financial pressures over the past decade (Universities UK, PwC Report, 2024). The National Audit Office's (NAO) March 2022 report[236] highlighted financial instability due to the Covid pandemic, exacerbated by heavy reliance on international student income. Concerns arose among

[235] How will the UK economy compare to other countries in 2024? - BBC News
[236] https://www.nao.org.uk/reports/regulating-the-financial-sustainability-of-higher-education-providers-in-england/

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university leaders after the Prime Minister's November 2022 announcement about potential restrictions on international student admissions. Universities UK (UUK), the Office for Students, and the Migration Advisory Committee reports underscored HE providers' financial vulnerability owing to the reliance on international student fees.

The Higher Education in Focus report by UUK (Universities UK, PwC Report, 2024) called for a national conversation on university funding, while inquiries from parliamentary committees underscored the need for comprehensive models to address sector-wide challenges. Financial indicators showed increasing deficits among institutions and declining student satisfaction with value for money. The freeze on tuition fees and other financial pressures from the government further strain universities' resources.

UK publishers overview

Figure 68 shows that the share of UK publishers that are OASPA members is relatively high at 60% according to the Ulrichs data, in comparison with the European and global averages (under 40% and under 30% respectively).

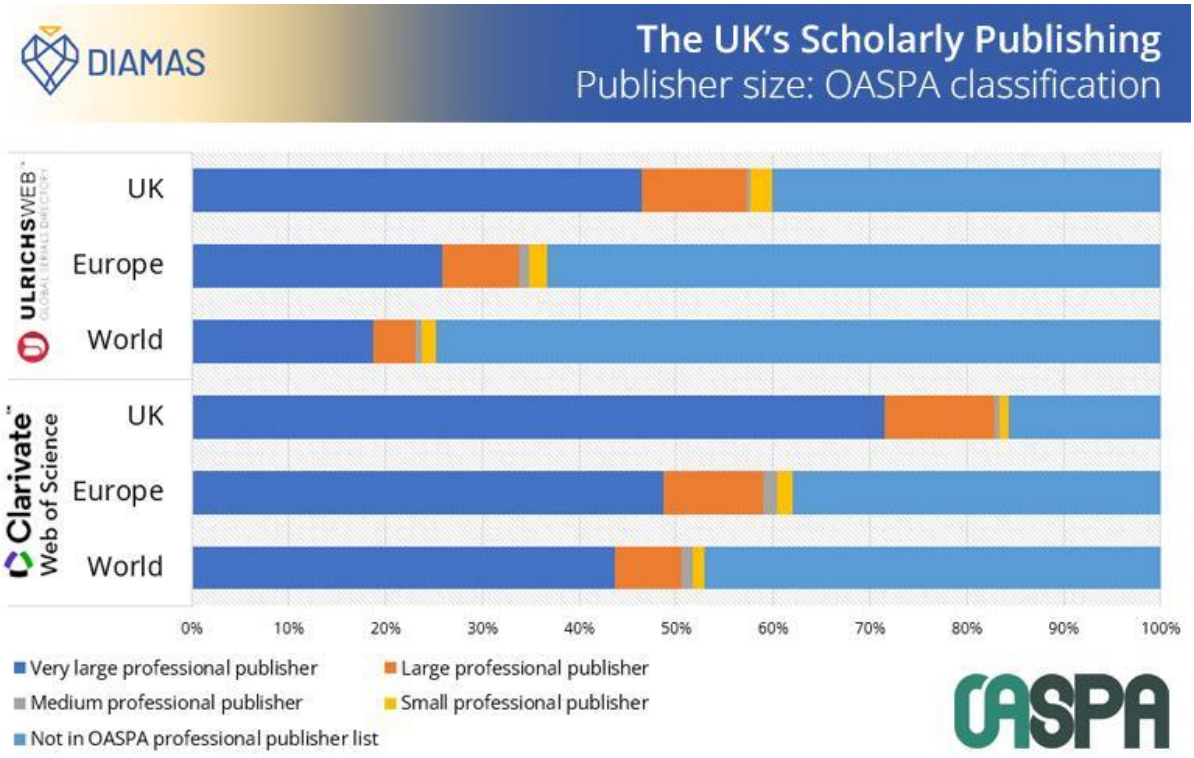

Figure 68. UK publishers' size by OASPA classification

Compared to Europe and the World, the UK seems to show a higher proportion of national publishers to be very large and large professional publishers, with about 57% (about 3% are medium and small professional publishers) according to the Ulrichs data and just under 80% according to WoS data. The global concentration of the scholarly

publishing market in the hands of a few very large organisations is possibly even more acute in the UK, however the proportion of global and European publishers not in the OASPA professional publishers list is too high to draw definite conclusions from this data alone. Although dominated by commercial publishers, such as Taylor & Francis and Sage in the UK, OASPA's 'very large' publisher category also includes (non-profit) university presses, such as the Oxford and Cambridge University presses, which makes it difficult to assess the weight of commercially-oriented organisations in this category. Similarly, the large professional publisher's category includes both society publishers such as BMJ and commercial organisations such as Emerald.

Based on our analysis of DOAJ data[237] almost 80% of journals in the UK may be published by commercial publishers, suggesting a high commercialisation of scholarly publishing in the country. University presses (UPs) and academic-led publishers (ALPs) may represent around 14% of UK journals, while society publishers and other non-profit represent around 3% each.

While both the Ulrichs and the WoS data indicate that the UK presents a higher than average proportion of journals published by professional publishers as seen in Figure 69, we have seen that this category encompasses several different types of publisher, based on the DOAJ commercial/non-profit criteria among others.

Overall, the UK publishing landscape is characterised by a significant presence of large international publishers (whether they are from the UK or have a branch in the UK), alongside a diverse array of small, medium and large national publishers. The proportion of university presses titles in the UK, close to 15%, is slightly higher than the global and European proportion (13.5% and 12.2% respectively), which may be due to the large university presses - Oxford University Press and Cambridge University Press - as well as several smaller presses based in UK universities, including Manchester, Edinburgh and Liverpool.

Another aspect of the relatively high commercialisation of the UK scholarly publishing landscape is the presence of international publishing giants, including Elsevier, Springer Nature, and Wiley, both in terms of local branches or subsidiaries in the country, and the weight they have in the subscription and publishing budgets of UK institutions. For example, Jisc's TAs with Elsevier, Springer Nature, Wiley, Taylor & Francis, and Sage accounted for £112.3m in 2022, which according to the SCONUL 2021/22 expenditure data, nearly a third of the annual TA expenditure.[238]

[237] Disclaimer: the list of publishers for 2,007 UK journals was imported from DOAJ, publisher types were assigned to the 93 publishers in this sample based on criteria including ownership structure, funding sources, organisational mission, and primary focus areas (these classifications are not official, BMJ was assigned society publisher for instance in this sample while it could be considered commercial under certain criteria). Please note that this data seems to include some journals from international publishers outside the UK such as Springer, possibly due to affiliations with UK branches and inter-publishers collaborations.

[238] SCONUL Annual Return 2021/2022. Statement of use: the statistics are copyright of SCONUL, which grants permission to its members to use the statistics within their institution. SCONUL holds the copyright in the text accompanying these statistics.

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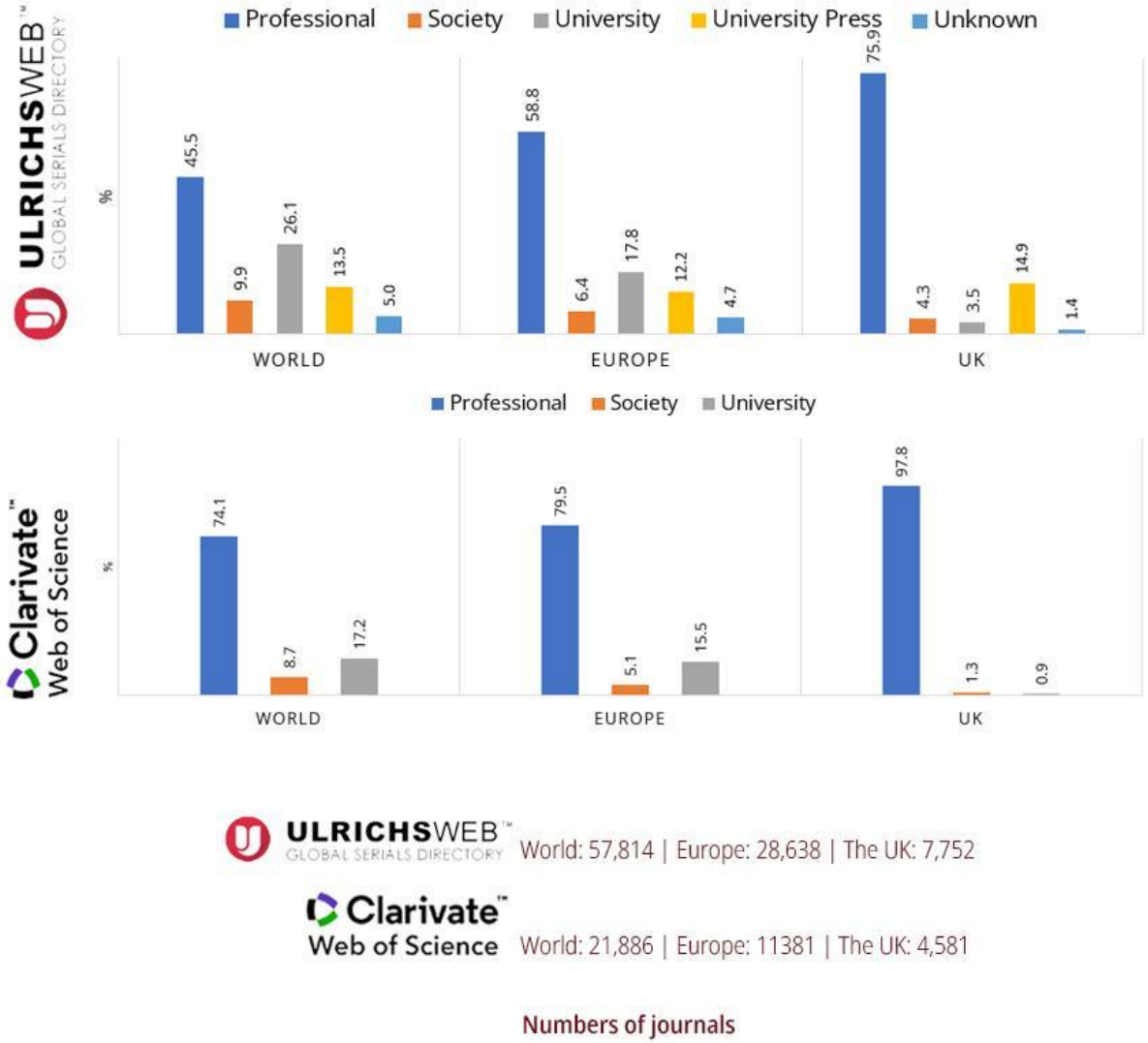

Figure 69. UK publishers by type

The proportion of UK society publishers, as shown in Figure 8, is relatively low at 4.3% (compared to Europe's 6.4% and the World's 6.9%, according to Ulrichsweb data), particularly given the number of society publishers in the country. This stark contrast highlights the large volume of titles published by professional publishers, of which the majority are commercial, as deduced from the DOAJ data analysed above.

Funding and assessment systems

Research funding for UK higher education institutions is allocated via two main funding mechanisms; project-specific grants and strategic institutional funding allocated based

on research and knowledge exchange performance.[239] Research quality is measured in a periodic exercise known as the Research Excellence Framework (REF). The REF exercise takes place every 7 years and its outcomes inform the allocation of approximately 2 billion GBP per year of public funding for research within universities. The next REF is planned for 2029.[240] As part of the initial decisions on REF 2029, the UK funding bodies announced their intention to replace the environment element with People, culture and environment (a proposed 25% weighting) and to replace outputs with Contribution to knowledge and understanding (a proposed 50% weighting). Whilst the element will largely be based on assessment of research outputs, it signals a desire from funders to move further from the assessment of individual researchers and publication-based metrics to an expanded definition of research excellence. Whilst it is likely to still include an assessment of research outputs, it will also require evidence of broader contributions to the advancement of the discipline. This includes greater alignment with the objectives of the CoARA.

While UK universities determine their own academic promotion criteria, international collaboration is recognised as a characteristic of high performing research units (Manville et al., 2015) and submission to the REF is considered an indicator of sustained excellence in research. Over 90 UK HEIs are signatories of the DORA or have made an equivalent commitment to research assessment.

OA requirements were introduced for REF2021 – to be eligible for submission to the REF, journal articles and papers published in conference proceedings with an International Standard Serial Number (ISSN) must have been deposited in a repository (institutional or subject) and accessible within a specified period following acceptance. Deposits of the final accepted manuscript or the published version of record were allowed and specified embargo periods permitted. Funding was not provided to underpin the policy, and the funding councils[241] stated that "institutions can achieve full compliance without incurring any additional publication costs through article processing charges" (Higher Education Funding Council for England, 2016). As of May 2024, Research England is consulting on the OA requirements for the next REF (2029).[242]

Open access - requirements, incentives, and barriers

Funders and OA requirements

UK funders have driven the transition to OA since 2003 when the Wellcome Trust, the UK's largest non-governmental funder, published an economic analysis of the scientific

[239] https://www.ukri.org/publications/explainer-dual-support-funding-for-uk-research-and-innovation/explainer-dual-support-funding-for-research-and-innovation/
[240] https://www.ref.ac.uk/
[241] The four councils, one for each nation of the UK (England, Scotland, Wales and Northern Ireland) were created in the 1990s, providing each country with a relative autonomy in setting policy and the overall regulatory framework for its higher education sector.
[242] https://www.ref.ac.uk/news/the-ref-2029-open-access-policy-consultation-opens/

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publishing market that prompted its public support for publishing the results of scientific research OA (Brayman et al., 2024).

In 2005, Research Councils UK (RCUK, now UKRI), the largest funder of UK research, released a statement asserting that publicly funded research should be made accessible for public use. Through 2011 and 2012, the government initiated a roundtable with key stakeholders of the research and scholarly publishing sector, culminating in the Finch Report, which decisively committed the UK towards OA and which influenced the RCUK OA policy announced in 2012. In 2014 the National Institute of Health and Care Research (NIHR)'s OA policy came into effect and Wellcome led the formation of the pilot Charity Open Access Fund with five other medical charities. Wellcome and UKRI (both Plan S signatories) award block grants to the majority of HEIs carrying out funded research to cover the costs of OA publishing in accordance with their OA policies and eligible costs criteria. While policies have evolved, the funders have facilitated compliant OA options with the majority of publishers preferred by their researchers[243] and the block grants have supported high levels of compliance with funder policies - as of December 2023 over 93% of UKRI-funded articles had a compliant OA route (Brayman et al., 2024), with 63% achieving compliance through a Jisc-negotiated TA. Although funder policies have included green OA as a route to compliance, Jisc found that only 12 of the publishers with Jisc TAs in 2022 offered compliant green OA terms outside of a TA.

[243] During 2022 and 2023, Jisc contacted 416 publishers to discuss compliant OA routes for UKRI-funded researchers.

Table 33. Major UK funders with OA policies and influential stakeholders

Funder/parent organisation	Open Access Requirements, financial support, links to OA policy web pages	Annual Budget	Year of First OA Policy
UK Research and Innovation (UKRI)	Research articles, 2 routes: VoR immediately OA in journal or publishing platform under a CC BY licence, or AAM deposited in a repository at the time of final publication. Compliance with the policy is monitored Provides block grants Research articles from April 2022; monographs, book chapters, and edited collections from January 2024.[244]	£7.9 billion (2022/23)	2005 (RCUK)
Wellcome	Publications must be deposited either AAM or VoR on Europe PubMed Central under CC BY or CC-BY-ND license. Preprints encouraged, but required during public health emergencies. Embargoes of up to 6 months allowed for monographs and book chapters. Provides block grants[245]	£1.7 billion (2022/23)	2005
National Institute for Health Research (NIHR)	Research articles (incl. reviews and conference papers) only to be made immediate OA via deposit on PubMed Central and Europe PMC, under CC BY or CC BY-ND licences. Articles must include a data sharing statement and NIHR acknowledgment. NIHR covers reasonable fees, including APCs, and is currently exploring TAs.[246]	£1.3 billion (2022/23)	2013
British Heart Foundation	Applies to peer-reviewed primary research papers and non-commissioned review articles funded in whole or in part by BHF. These outputs must be made OA in PubMed Central within six months of publication. Provides block grants.[247]	£440 million (2022/23)	2013
Cancer Research UK	Research articles only (excluding reviews), AAM must be published OA: AAM, or VoR if Gold/hybrid route, deposited on Europe PubMed Central, with a CC-BY 4.0 licence unless otherwise agreed, and acknowledge CRUK funding. Data availability statements and patient data citations required. Preprints strongly encouraged. Provides block grants.[248]	£415 million (2022/23)	2007

[244] https://www.ukri.org/publications/ukri-open-access-policy/uk-research-and-innovation-open-access-policy
[245] https://wellcome.org/grant-funding/guidance/open-access-guidance/open-access-policy
[246] https://www.nihr.ac.uk/about-us/who-we-are/our-policies-and-guidelines/open-access-policy-review.htm
[247] https://www.bhf.org.uk/for-professionals/information-for-researchers/managing-your-grant/open-access-policy
[248] https://www.cancerresearchuk.org/funding-for-researchers/applying-for-funding/policies-that-affect-your-grant/policy-on-open-access

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In addition to funders, several influential actors shape the research sector in the UK. These include groups such as UUK, an advocacy organisation representing the interests of universities in the country. It serves as a collective voice for universities, engaging with policymakers, stakeholders, and the public on issues affecting HE.

The Royal Society and The Royal Academy of Engineering are some of the largest learned societies in the UK. They often house non-profit publishing arms with international reach. The British Academy, the national academy for humanities and social sciences, supports research and scholarship in these fields. The Alan Turing Institute, as the national institute for data science and artificial intelligence, fosters collaboration between academia, industry, and government to advance research in these fields and address societal challenges. Together, these organisations and institutions contribute significantly to shaping the research landscape in the UK, in particular the OA transition, providing funding, support, and advocacy across various disciplines.

The UK's OA policies are driven by strong mandates, supportive funding, and proactive institutions. Challenges remain in monitoring compliance and ensuring equitable access to OA publishing.

Jisc TA requirements have been instrumental in setting new national standards for the UK scholarly publishing landscape

Jisc's TA requirements[249] align with the OA2020 goals[250] and are mandated by the UK's HE and research sector. They have evolved to reflect developments and support authors in complying with their funder's OA policy, while providing clear guidance to publishers in transitioning their UK customers' subscriptions to mixed or fully OA models. Eligibility to receive payments from the UKRI block grant is determined by TAs being 'Jisc approved'. As of October 2023, to meet Jisc's TA requirements, publisher proposals must: reduce and constrain costs, offer a choice of OA publishing options to authors and institutions, demonstrate a commitment to a rapid and equitable global transition to open access, provide transparency, and promote simplicity, efficiency, and reduced bureaucracy.

On behalf of its members, Jisc evaluates TA proposals against these requirements, reports to its strategic groups[251] (members include Pro-Vice-Chancellors for research and library directors) and to the sector (via consultations with institutions for instance) and ensures transparency by publishing details of agreements on its website and in the ESAC registry. These strict requirements and the multi-level consultation and governance framework have allowed Jisc to successfully implement improvements and key practice changes from publishers, including simplifying and standardising workflows and reporting.

[249] https://www.jisc.ac.uk/our-role-in-open-access
[250] be informed – OA2020
[251] https://www.jisc.ac.uk/get-involved/jiscs-negotiation-and-licensing-strategic-groups

Pricing barrier to OA persists in the UK

Higher price increases projected for the UK in 2023 compared to other regions in Figure 70 can be attributed to several factors. EBSCO notes that currency fluctuations have a significant impact on prices for libraries outside of the US, and approximately 50 to 60 % of content spent in the UK is priced in local currency. UK libraries are therefore exposed to more significant currency fluctuations, which poses challenges for their budget management. Additionally, the continuing trend towards electronic resources and OA models, which are increasingly differentiated from print versions with higher pricing, may contribute to higher price increases for print versions in the UK compared to electronic resources. Finally, the overall inflation rates and post-pandemic effects, coupled with persistent supply chain issues, contribute to the higher projected price increases in the UK.

Billing Currency*	Journals Priced by Publishers in U.S. Dollars %	Journals Priced by Publishers in British Pounds %	Journals Priced by Publishers in Euros %
Australian dollar	9 to 10	-6 to -5	-1 to 0
British pound	17 to 18	3 to 4	5 to 6
Canadian dollar	7 to 8	-9 to -8	-7 to -6
Euro	15 to 16	1 to 2	3 to 4
New Zealand dollar	16 to 17	2 to 3	4 to 5
South African rand	13 to 14	-1 to 0	1 to 2
U.S. dollar	3 to 4	-13 to -12	-11 to -10

Figure 70. Projected Price Increases by Customer Billing Currency, EBSCO 2023 Serials Price Projection Report (EBSCO, 2023)

Consequently, libraries may cancel some of their smaller agreements to accommodate larger publishers' agreements with high yearly price increases in their reduced or stagnating budgets. Other small universities without historic subscriptions with some publishers are deterred from joining agreements due to high new subscriber prices and no additional budget available.

The issue of VAT on OA publishing in the UK

The impact of Value Added Tax (VAT) on the cost of OA has been highlighted since policy development discussions in the 2000s. While electronic journals' subscriptions have been exempt from VAT since 2020, this exemption applies to fees related to reading only and does not cover OA publishing charges, including APCs and the Publish fee portion of Read and Publish agreements, which are still taxed at 20%.

This VAT anomaly risks making the practice of opening up access to research more costly than the equivalent fees to subscribe to the same content via paywalls (Brayman et al., 2024) and the additional cost of the VAT on increasing OA publishing fees within mixed models could present challenges for some institutions in their transition to OA. A

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cross-sector group wrote to the UK government in 2023 to highlight the impact of the VAT treatment on institutions' ability to afford and transition to OA. However, this issue remains unresolved as of April 2024.

Self-archiving exemptions

UKRI acknowledges rare cases where meeting OA requirements for long-form publications isn't feasible. Exemptions include instances where no suitable publisher offers compliant OA options and when publications arise from UKRI Training Grants, recognising that grant timelines may exceed publication deadlines.

National copyright schemes

There is currently no national funding mechanism for HEIs to purchase licences for the use of copyrighted contents in the UK, besides subscription and Open Access agreements negotiated via Jisc. Licensing bodies and collective management organisations (CMOs) however provide a national mechanism for managing the licensing process for the use of copyrighted content via comprehensive and centralised licences. Non-profit organisations such as the Copyright Licensing Agency (CLA) and the Publishers Licensing Society (PLS), serve as intermediaries between rights holders (authors, publishers and content creators) and users (mainly businesses, public organisations and HE institutions), however they represent the interests of the formers in this interface. The Higher Education License Plus (HE License Plus) (Gadd, Morrison & Secker, 2019) offered by CLA, provides universities with a centralised mechanism to obtain permission to use copyrighted materials, thereby simplifying copyright compliance. Currently, funding for CLA licences, including HE License Plus, primarily comes from institutions themselves. The prices are negotiated between the CLA and user institutions. The 2019 study on the CLA Licence's usage in UK higher education institutions (Gadd, Morrison & Secker, 2019) revealed an inconsistent usage across the sector, with only the top 20 institutions extensively using its digital copying provisions (mainly Russell group well-funded universities). The study also suggests the usage of these licences is declining, at least in part due to the growing accessibility of digital contents via OA. Thus, institutions may become less reliant on these secondary licensing regimes over time.

Rights retention

Whilst Rights Retention (RR) is not a new idea, having first been implemented by Harvard University in 2008,[252] then developed further in the UK with the UK-Scholarly Communications Licence,[253] it is most widely known in Europe through the Rights Retention Strategy[254] component of cOAlition S. As a member of cOAlition S, UKRI's OA

[252] https://osc.hul.harvard.edu/modelpolicy/
[253] https://ukscl.ac.uk/about/
[254] https://www.coalition-s.org/rights-retention-strategy/

policy[255] includes a RR statement as a means to compliance. UKRI funded authors choosing to comply with the policy via Route 2, also known as Green OA, must include the following text in the funding acknowledgement section of the manuscript and any cover letter or note accompanying the submission: "for the purpose of open access, the author(s) has applied a Creative Commons attribution (CC BY) licence to any author accepted manuscript version arising".

Institutional Rights Retention Policies (IRRPs) operate slightly differently, in that an author's institutional policy asserts these rights (to make author accepted manuscripts - AAMs - available in the institutional repository under a CC BY licence without embargo) over all articles produced by all of its researchers, irrespective of funding.

RR has been gaining traction in the UK, and a growing number of UK institutions have introduced new policies since 2021. As of December 2023, 50 institutions had IRRPs in place, or had publicly announced their intentions to adopt one. Jisc requires all TA proposals to be fully compliant with funder policies, e.g., UKRI, and with IRRPs to support author's choice of OA route. This has resulted in several publishers that were previously reluctant to support RR agreeing an exception for UK authors eligible to publish under Jisc TAs as a minimum, in terms of embargos and CC licence for self-archiving the AAM.

Open access-related infrastructures

Repositories

The REF OA requirements (see Funding and assessment systems) have fostered OA as a priority within UK HE, and led to greater engagement with repositories from both senior leadership and researchers. Subsequently, there has been a growth in usage of repositories across the UK.

According to data from OpenDOAR[256] Germany has the most repositories with 304, followed by the UK with 269, Spain with 183 and Croatia with 173.

The increased adoption and growing number of repositories across academic institutions in the UK is likely linked to the REF OA policy. OpenDOAR recorded a jump in the number of repositories indexed in 2019, and the figure has grown +34% between 2018 and 2024 (from 205 in 2018 to 269 in 2024) (Macgregor, 2023). Platforms such as arXiv reported increased submission rates, particularly from 2019 onwards.[257] In recognition of the established culture of sharing pre-prints in some academic disciplines, the funding councils confirmed that deposits to arXiv or similar servers prior to the publication date of the VoR would fulfil the OA policy for the 2021 REF.[258]

[255] https://www.ukri.org/publications/ukri-open-access-policy/
[256] Accessed 10 March 2024: https://v2.sherpa.ac.uk/view/repository_visualisations/1.html
[257] https://info.arxiv.org/help/stats/2021_by_area/index.html
[258] https://2021.ref.ac.uk/publications-and-reports/guidance-on-submissions-201901/index.html

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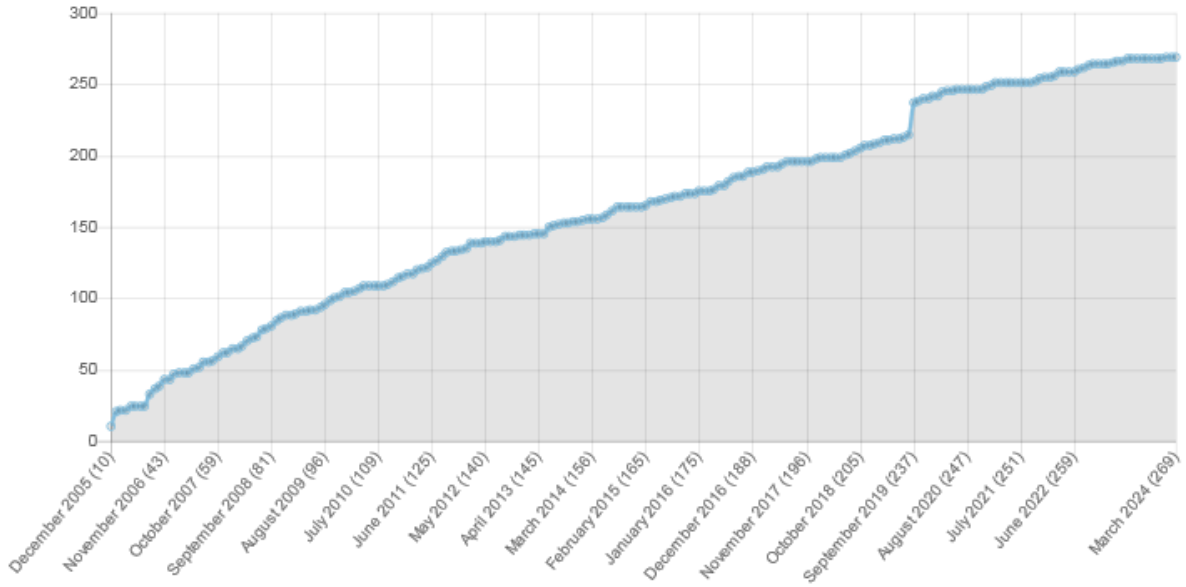

Figure 71. Growth of the number of repositories in the UK as recorded by OpenDOAR[259]

Academic led publishers and open source platforms

The UK has also witnessed the emergence of academic led publishers, with initiatives such as: The University College London Press[260] (launched in 2015), the University of Huddersfield Press (established in 2007), the University of Westminster Press (launched in 2015), and the Birkbeck, University of London Press (established in 2015).

OJS usage has become widespread among academic institutions and organisations across the UK (Alperin, Stranack & Garnett, 2016). There are approximately 277 journals in the UK using OJS,[261] and the majority of OJS journals are OA (Khanna et al., 2022). Many of these use library hosting services and/or are based within academic departments.

New infrastructures for OA monographs

Wellcome extended its OA policy in 2013 to include monographs. This contrasts with wider OA frameworks, infrastructures for research articles and journals, initiatives and infrastructure for OA books publishing which have been developed much more recently, such as the Community-led Open Publication Infrastructures for Monographs (COPIM) and the follow-up Open Book Futures project.

UKRI's 2022 OA policy extends to monographs and book chapters (published from January 2024), allowing a one-year embargo period. This shift towards OA in book publishing has raised concerns about sustainability and funding models (Fathallah, 2022). The COPIM project, whose funders include UKRI, explores collective approaches

[259] https://v2.sherpa.ac.uk/view/repository_by_country/United_Kingdom.default.html
[260] UCL Press is the UK's first fully OA university press
[261] https://rpubs.com/saurabh90/ojs-stats-2021

to OA book publishing, aiming to mitigate competition among publishers and ensure affordability and accessibility. While OA publication aligns with principles of research accessibility and citation benefits, concerns remain regarding financial sustainability, especially in the arts and humanities. Alternative OA publishing models, beyond Book Processing Charges (BPCs),[262] are being explored to address these challenges and promote wider access to scholarly content.

Mounier, Sondervan & Stone (2021) underlined the significance of OA academic books in scholarly communication, especially in the Social Sciences and Humanities and called for action to accelerate OA for academic books in order to better serve research and society's needs. Knowledge Exchange[263] has been actively working on understanding the OA book landscape and identifying gaps in various countries. While the scholarly community's willingness to accelerate OA for academic books, coordinated support from research and funding organisations will be critical to overcome obstacles (such as bibliodiversity vs. scalability) and implement good practices.

Mounier, Sondervan & Stone (2021) also identify three pillars necessary for a well-functioning and sustainable OA book infrastructure: engaging people, sustaining technology, and gathering knowledge. The challenges faced in transitioning to OA for academic books include bibliodiversity versus scalability (the diversity, locality, and multilingual nature of the book publishing industry pose challenges in terms of scalability), lack of knowledge and awareness (of authors on OA for instance), insufficient support for OA book services, and lack of interoperability across the system. Although initiatives like the OA Books Network (OABN) exist, they are constrained by limited resources and volunteer-led efforts. To address these challenges and build a sustainable system, Mounier, Sondervan & Stone (2021) advocate for investment and alignment of stakeholders, strengthening infrastructure and supporting decentralised initiatives.

Important infrastructures for OA monographs include Thoth and the Thoth Archiving Network, and the Open Book Collective. Thoth[264] is a non-profit, open metadata management and dissemination platform. Its software is open source, tailor-made for Open Access book metadata, and the multiple output formats and specifications for more than a dozen platforms are all CC0-licensed. Thoth Archiving Network, which supports academic led publishers with preservation of OA books via institutional repositories (Barnes, Cole, & Steiner, 2023). The Open Book Collective (OBC)[265] which gives a potential library funding mechanism to publishers that fulfil the OBC criteria (Mackay, 2022) – Jisc has just announced an OBC agreement available via its Licensing Subscription Manager platform and University of London Press are one of the latest to join.

[262] Open Access Book Models by OAPEN (2021): retrieved from Open Access Book Models by OAPEN (2021). | Download Scientific Diagram (researchgate.net)
[263] https://www.knowledge-exchange.info/event/open-access-monographs
[264] https://thoth.pub/
[265] https://openbookcollective.org/

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Institutional publishing

DIAMAS WP2 survey findings in the UK summary

In the UK, journal publishing has long been dominated by a handful of large publishers, with the five largest commercial publishers accounting for a significant portion of institutional spending, as shown in the section UK Publishers overview above. While compliance with OA policies for UKRI-funded research articles reached 96.1% in July 2023, concerns persist regarding the long-term sustainability and equity implications of the commercial strategies employed by major publishers, particularly in terms of accessibility for less well-resourced countries or institutions.

Over the past decade, there has been a notable emergence of new university presses and scholar-led publishers in the UK, embracing the Diamond OA model from their inception. Additionally, the country hosts several service providers operating within UK institutions, offering Diamond OA publishing or related services, often facilitated through OJS servers managed by libraries. These developments reflect a diversification of the scholarly publishing landscape, offering alternative avenues for academic dissemination beyond traditional commercial publishers.

In response to these trends, the Open Institutional Publishing Association (OIPA) was established by new university presses, aiming to serve as a community of practice for new university presses, library publishing initiatives, and departmental publishing ventures across the UK. OIPA seeks to foster collaboration, share best practices, and address common challenges faced by emerging players in the OA publishing ecosystem. The country has 115 institutional publishers in DOAJ (via GOA8), 101 of which publish diamond journals.

Twenty responses were collected from UK Institutional Publishers and Service Providers (IPSPs). The majority of IPSPs were affiliated with UK universities, with four solely serving their parent institutions. There was also a standalone journal under a community network and a learned society. Regarding services offered, IPSPs generally provide communication, editorial, IT, production, and training support, with additional services such as curation, preservation, and journal setup. While most IPSPs publish in English, one IPSP also publishes in Welsh, and four IPSPs offer other languages.

The survey revealed fluid definitions of Institutional Publishing (IP) and Service Providers (SP). While all SPs provide services for academic journals, one also publishes them. Notably, nearly 80% of UK IPSPs publish between two and 20 titles, with the majority of academic publishers publishing between 1-10 titles annually. Over half of the IPSPs publish 100% of their scholarly journals on OA, and just under half publish all of their books on OA. Most IPSPs do not rely on Article Processing Charges (APCs) or print sales. There was a mixed response regarding governance models, but a clearer trend emerged regarding governing boards, with 14 IPSPs having them. Several IPSPs follow their parent institution's open science/open access policy, with others following their own policy or

considering implementing open peer review. While all IPSPs offer technical services, more awareness may be needed regarding metadata release, as nine IPSPs did not know if they released metadata openly. Challenges such as financial constraints and compliance with indexing criteria are significant concerns for IPSPs. Finally, while most IPSPs have data protection policies, there is a need for increased understanding among some IPSPs, as made apparent by the survey, particularly regarding EDIB policies and support, which may see improvements with the launch of OIPA in the UK.

Funding and sustaining IPSPs

In the UK, as in most of Europe, national-level funding plays a crucial role in supporting scholarly journals, especially amid the transition to OA publishing. However, Laakso and Multas (2023) underline that the involvement of public funds introduces complexities beyond purely economic considerations, requiring to strike a balance between top-down policies and bottom-up practices to ensure the continued vitality and autonomy of scholarly publishing. In Western Europe, particularly in the UK, Germany, and the Netherlands, there is a notable presence of journals published by large publishers. However, unlike some other European countries (Austria, Belgium, France), there is a lack of dedicated public funding sources specifically aimed at supporting journals as made evident by Laakso and Multas (2023). For example, in Belgium, the Fund for Scientific Research provides annual calls for journal publishers, granting subsidies for up to three-year periods. The absence of direct public financial support for non-commercial journals in the UK raises sustainability concerns for IPSPs, especially considering the profitability and continued consolidation of commercial scholarly publishing (Crotty, 2023).

Despite the absence of dedicated public funding to support existing OA journals published by IPSPs in the UK, efforts are being made to promote OA publishing. As developed in earlier sections, UKRI has played a critical role in the country's transition via its block grants (of which a large portion has been spent on TAs) and OA policies. However, the lack of a centralised national funding remains a gap in the infrastructure, potentially hindering the sustainability and reach of scholarly journals for IPSPs.

Jisc has led efforts since 2022 to negotiate and support TAs with the long tail of small and non-profit publishers with UKRI funded output, thereby promoting bibliodiversity in its OA offering to UK institutions. Jisc also continues to explore and broker agreements with full and native OA publishers, making available innovative and equitable OA initiatives to the UK sector. However, if these initiatives are welcomed by libraries, allocated funds for these smaller and more inclusive deals must be found by institutions within their own individual resources. There is a notable lack of national funds solely dedicated to fully OA publisher deals and innovative and equitable OA models.

The Open Access Community Framework (OACF), launched in 2022, offers a centralised mechanism for Jisc member institutions to support not for profit publishers or initiatives based on the Diamond OA model. Jisc has invited mission-based and diamond publishers to apply to participate in the OACF and, similar to the Lyrasis Open Access Community Investment Program (OACIP), required the provision of detailed information about their

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journal or initiative and their funding target from UK HE institutions. Despite limited library budgets, many UK institutions recognise the importance of supporting Diamond OA and mission-driven initiatives, and are exploring ways to allocate funds accordingly.[266]

Collaboration between publishers and service providers (or other types of collaborations with funders, sponsors, donors)

In their landscape study of new university presses (NUPs) and academic-led presses (ALPs) emerging in the UK, Adema and Stone (2018) highlighted the need for guidelines and frameworks to foster a robust and inclusive publishing ecosystem through collaborative efforts and tailored support mechanisms.

Jisc's OACF is one possible funding solution, aligning particularly with the need expressed by ALPs for grant schemes targeted at small scale or one-off (book) projects or publishing infrastructures. The call to support alternative marketplaces points to the "perceived need among academic-led presses to move away from dominant commercial solutions" (Adema and Stone, 2018).

Brun, Pontille & Torny (2024) found that while IPSPs present various funding models, they predominantly rely on parent organisations and local funders for support, and they face challenges such as budget management, due notably to the need to negotiate resources with various institutions and the burden of managing time-limited grants. While some IPSPs aim to upscale, others seek to maintain their current size, depending on their funding models. Certain IPSPs mix subscription fees or APCs with Diamond funding streams. Parent organisations play a vital role, providing basic support and in-kind contributions such as personnel and services. Local funders, including public bodies and research funding organisations, predominantly support IPSPs.

Budget management is less critical for IPSPs compared to commercial publishers, with only a minority having financial buffers or approved budgets. Grant dependency poses challenges, as IPSPs must manage searching for funding, administration, and reporting. The UK focus group notably highlighted that a considerable minority of participants are actively engaged in seeking financial resources, a task fraught with contractual and administrative challenges. This pursuit of funding and subsequent financial management escalates the workload, depending on the number of partners and types of contracts (with a UK respondent even stating that its workforce was dedicated to fundraising half of the time). Workforce dynamics are central to sustainability, with a mix of voluntary, in-kind, and paid work contributing to IPSP operations.

Collaboration is asymmetrical, primarily involving IPSPs with local service providers, parent organisations, or infrastructures. IPSPs identify challenges such as resource

[266] https://www.jisc.ac.uk/blog/a-new-approach-to-supporting-scholarly-communications-announcing-the-open-access-community-framework-oacf

constraints, personnel instability, and reliance on parent organisations. They advocate for more financial resources, primarily to invest in personnel for expanding services. Future sustainability relies on rejecting author-pays models, reinforcing current funders, and involving research funding organisations for stable, long-term support. Collaboration and shared infrastructures are crucial for scaling up the IPSP ecosystem.

Instances of peer-to-peer collaboration were rare. These collaborations often manifest in three forms: coalitions, educational material circulation, and direct peer collaboration, with cost-saving being a common motive, particularly for smaller-scale IPSPs. Survey data revealed potential areas for collaboration, ranging from administrative and legal services to IT support, indicating a desire for more consolidated efforts and efficiencies within the IPSP workflow.

Conclusions

The UK's transition to OA has been driven by strong funder policies, backed by research institutions and structured by the national consortia. The scholarly publishing landscape in the UK has become notably diverse over the last decade as new university presses and scholar-led publishers that offer Diamond publishing or related services have emerged on the scene. Academic institutions and their libraries are the most prevalent Diamond journal publishers. However, the scholarly publishing market is dominated by medium and large professional publishers (with a notable presence of international commercial vendors), who are mainly focused on Gold and Hybrid. If major funders and associated block grants have favoured gold OA in the early 2010s, Hybrid OA has developed here more than elsewhere, propelled by the proliferation of Transitional Agreements since 2019. A recent rebalance of policies has given more weight to Green OA. Whilst Diamond centred national initiatives and service providers have flourished in the last ten years, it is for now a minority model in the national landscape and dedicated public funding for IPSPs and Diamond OA journals and books would be needed to expand their reach.

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Consortium overview

AMU	UNIVERSITÉ D'AIX MARSEILLE	FR
CNR	CONSIGLIO NAZIONALE DELLE RICERCHE	IT
CNRS	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	FR
DOAJ	INFRASTRUCTURE SERVICES FOR OPEN ACCESS C I C	UK
EIFL	STICHTING EIFL.NET	NL
EKT	ETHNIKO KENTRO TEKMIRIOSIS KAI ILEKTRONIKOU PERIECHOMENOU	EL
ESF	FONDATION EUROPÉENNE DE LA SCIENCE	FR
EUA	ASSOCIATION EUROPÉENNE DE L'UNIVERSITÉ	BE
FECYT	FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y LA TECNOLOGIA, F.S.P., FECYT	ES
FFZG	SVEUČILIŠTE U ZAGREBU FILOZOFSKI FAKULTET	HR
IBL PAN	INSTYTUT BADAŃ LITERACKICH POLSKIEJ AKADEMII NAUK	PL
JISC	JISC LBG	UK
LIBER	STICHTING LIBER	NL
OASPA	STICHTING OPEN ACCESS SCHOLARLY PUBLISHERS ASSOCIATION	NL
OPERAS	OPEN ACCESS IN THE EUROPEAN RESEARCH AREA THROUGH SCHOLARLY COMMUNICATION	BE
PVM	PROTISVALOR MEDITERRANEE SAS	FR

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SPE	STICHTING SPARC EUROPE	NL
TSV	TIETEELLISTEN SEURAIN VALTUUSKUNNASTA	FI
UB	UNIVERSITAT DE BARCELONA	ES
UGOE	GEORG-AUGUST-UNIVERSITAT GOTTINGEN STIFTUNG OFFENTLICHEN RECHTS	DE
UiT	UNIVERSITETET I TROMSØ - NORGES ARKTISKE UNIVERSITET	NO
UniZD	SVEUČILIŠTE U ZADRU	HR
UU	UNIVERSITEIT UTRECHT	NL