

2019 Big Deals Survey Report

An Updated Mapping of Major Scholarly Publishing Contracts in Europe

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Preface

This second EUA Big Deals Survey Report is published at a time when the world of scientific publishing is undergoing substantial changes driven by two major trends.

The first trend is the acceleration towards the immediate publication of research results in Open Access. Several research funding agencies launched “cOAlition S” and became signatories of “Plan S”, supported by the European Commission. They have agreed to move towards the immediate Open Access publication of all scientific articles resulting from projects funded by these same agencies by 1 January 2020. This initiative will certainly have a significant impact on the development of the main routes towards Open Access, such as “Gold” or “Green” Open Access, the underlying publication models and on subscription and publishing expenditures.

The second trend is a new type of contract between publishers and consortia called „Publish and Read“ agreements. These are currently being introduced by several national “Big Deal” negotiating consortia in Europe. This new contract model is based on a more global approach to contractual expenses, including both fees to publish and fees to read. Researchers covered by such contracts can freely and immediately publish their articles in Open Access. At the same time, researchers also maintain access to the content of a specified list of journals (reading access).

In this context, the EUA Big Deals Survey Report looks at contracts with five of the most important international publishers and allows us to better understand the stakes involved in finding publication models at a lower cost and to develop free access to scientific publications. Indeed, the amount paid in Europe for accessing scholarly publications is impressive: more than one billion euros per year for all types of resources (journals, e-books and publication databases),

and more than 720 million euros for periodicals alone. The second EUA Big Deals Survey Report contains input from 31 negotiating consortia, providing unique and important figures from Europe. It informs the debate within the scientific community, as well as among laboratory heads, rectors and policy makers.

EUA's work on Big Deals over the years has resulted in evident progress towards the transparency of the content of negotiations and agreements: openness is not only being achieved in the results of science, but also in increasing awareness about the cost of science management.

Knowing the precise expenditures of research labs, universities and researchers in publishing articles in open access (Gold route) is a challenge, as also indicated in the [2017-2018 EUA Open Science Survey Results Report](#) published in April 2019. There is thus an urgent need for universities and all research organisations to monitor and leverage this data.

I would like to warmly thank the EUA Board and Council, as well as the EUA Secretariat for supporting this work with enthusiasm and determination. I would particularly like to thank the EUA team: Rita Morais, Lennart Stoy and Lidia Borrell-Damián, for completing the second edition of this important and original survey. I would like to thank the academic experts and librarians who steered this work and contributed to the interpretation of the results. Finally, I am pleased to acknowledge the engagement and to thank the members of the High-Level Group on Big Deals, the associated group of negotiators and all experts who contributed to the success of this initiative.

Prof Jean-Pierre Finance

Chair of the EUA Expert Group on Science 2.0/Open Science

1 Introduction

In the first EUA Big Deals Survey Report in April 2018, we noted that “Open science, in particular open access to research publications, is a multifaceted area evolving at high speed.”¹ Little did the authors know, exactly how quickly the debate on Open Access would evolve just a few months later, in September 2018.

The announcement of Plan S and its goal that “After 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms,”² has sparked a fierce, global debate about the paths to full open access to scholarly resources. Created by a coalition of European research funders, Plan S continues to captivate all of the actors with a stake in scholarly publishing, from researchers to policy makers.

EUA is not alone in calling for more transparency and greater sustainability in the scholarly publishing system. The European Commission Expert Group on the Future of Scholarly Publishing and Scholarly Communication recently formulated a vision in which “costs, price settings and revenues would all be transparent, along with the financial flows between all parties” and where universities “choose platforms using free or open source software, offering open data via an open license, and leveraging open standards where possible”.³

In late 2018, on behalf of the EU member states, the European Research Area and Innovation Committee also joined in and endorsed a report calling for “full transparency for terms and conditions of subscription agreements and Open Access deals” and recommending that “infrastructures, processes and workflows underpinning the European research system adhere to and adopt open standards”.⁴ We can expect a reinforced mandate for Open Access publishing of research outputs under Horizon Europe, the successor to the Horizon 2020 programme due to launch in 2021.

EUA is pleased that these initiatives broadly follow the principles and actions stipulated in the May 2016 Amsterdam Call for Action on Open Science, and that EUA’s advocacy for transparency resonates with others and results in improved open access policies.

Information collected by EUA through the Big Deals Survey is thus crucial to inform the current debate. Findings from the first EUA Big Deals Survey heightened concerns about the dominance of commercial publishers and the possible dysfunctionality of the scholarly publishing market. Due to this, EUA asked the European Commission to investigate a lack of competition, in parallel with another group of researchers.⁵ Moreover, following the first edition of the EUA Big

1 Morais, R., Bauer, J., & Borrell-Damián, L. (2018). EUA Big Deals Survey Report - The First Mapping of Major Scientific Publishing Contracts in Europe. <https://eua.eu/resources/publications/321:eua-big-deals-survey-report-the-first-mapping-of-major-scientific-publishing-contracts-in-europe.html>

2 Coalition S (n.d.). 10 Principles. <https://www.coalition-s.org/10-principles/>

3 Expert Group to the European Commission on the Future of Scholarly Publishing and Scholarly Communication (2019). Future of scholarly publishing and scholarly communication. Report of the Expert Group to the European Commission. <https://doi.org/10.2777/836532>

4 ERAC Standing Working Group on Open Science and Innovation (2018). Recommendations on Open Science and Innovation. ERAC 1216/18. <http://data.consilium.europa.eu/doc/document/ST-1216-2018-INIT/en/pdf>

5 See European University Association (2018). Scholarly publishing: EUA asks European Commission to investigate lack of competition. <https://eua.eu/news/188:scholarly-publishing-eua-asks-european-commission-to-investigate-lack-of-competition.html> and Tennant J., & Brembs, B. (2018). RELX referral to EU competition authority. <http://doi.org/10.5281/zenodo.1472045>

Deals Survey, the increasing importance of the transparency of costs and conditions in contracts with publishers, and the strengthening of the Open Access movement, the EUA Council agreed to conduct a second survey, also upon the recommendation of the EUA High-Level Group on Big Deals.

The need for a second EUA Big Deals Survey stemmed from a series of developments, namely the process of building trust amongst the members of the EUA High-Level Group and Big Deal negotiators who participated in the first survey. This process enabled and encouraged members to share more information. In addition, the benefits of the data collection gathered in the EUA Big Deals Survey extend beyond supporting universities and national rectors' conferences. They also give an advantage to many other institutions that are often members of negotiating consortia, such as research institutes and university hospitals.

In this context, the EUA Big Deals Survey contributes to increasing the transparency of contract costs and conditions, to identifying the main challenges in the scholarly publication system and to supporting a variety of institutions in becoming more knowledgeable and actively engaged in negotiations with scientific publishers. Other bottom-up projects, such as the Efficiency and Standards for Article Charges (ESAC) Initiative and its registry for transformative agreements, are also important tools for information sharing on Big Deal agreements at the European level.⁶

The first survey presented many of the challenges associated to data collection on a sensitive topic, as many contracts are still subject to non-disclosure agreements. The second survey, conducted in 2017-2018, gathered data from 31 consortia covering an unprecedented 167 contracts with five major publishers in a much shorter timeframe. Readers will discover that the total costs reported by the participating consortia exceed one billion euros for periodicals, databases, e-books and other resources – mainly to the benefit of large, commercial scholarly publishers. EUA hopes that this work creates more transparency, raises awareness of the need for more sustainable market conditions and continues to support members in their negotiations with major scholarly publishers.

The report itself should not be read in isolation. The 2017-2018 EUA Open Access Survey Results, assembled in parallel to this report, focuses on the institutional dimension of Open Access to scholarly publications at universities. It complements the Big Deals Report with information on how universities design, implement and monitor open access policies. Both publications complement each other.

Data was collected between August and November 2018 and will continue to serve as the basis for EUA positions and activities to support transparent, sustainable scholarly publishing. The data presented has been anonymised and aggregated in line with the survey's confidentiality policy.

This report is organised in eight chapters. The first and second chapters introduce the report, describe the methodology and participant consortia. The third chapter provides an overview of Big Deal negotiations across Europe, focusing on topics such as the organisation of negotiations, provisions on Open Access and transparency of contracts and costs. Chapter four offers information on consortia and chapter five focuses specifically on periodical Big Deal contracts with the five large publishers selected for this survey (Elsevier, Springer Nature, Taylor & Francis, Wiley and American Chemical Society). Chapters six and seven address the cost levels of Big Deal contracts. The final chapter outlines the main conclusions and policy recommendations on the negotiation of Big Deal contracts.

LOOKING AHEAD

Following two years of important contributions to transparency in the scholarly publishing market, EUA will continue to advocate openness, transparency, and fair prices. The results of this report underline crucial trends such as the desire for open access publishing provisions, the need for greater transparency and the importance of cost control.

⁶ More information at <https://esac-initiative.org/about/transformative-agreements/share/>.

Given the significance of this subject, EUA has also decided to commission an in-depth study of the implications of publish-and-read agreements at European level.⁷ Meanwhile, as not all contracts change every year, EUA will use 2019 to reflect on the Big Deal survey and the data needed to monitor Big Deal agreements, considering the emergence of transformative agreements and changes to publishers' business models. EUA will continue to work with the corresponding consultation bodies and the EUA Expert Group on Science 2.0/Open Science to provide a platform for dialogue on Big Deal negotiations and the exchange of good practices, to increase efficiency and transparency in scientific publishing.

7 EUA (2019). Call for Tenders: Study on Scholarly Read & Publish Agreements. <https://www.eua.eu/118-uncategorised/744-call-for-tenders-study-on-scholarly-read-publish-agreements.html>

2 Methodology and Participants

The questionnaire of the second survey was reviewed in the light of lessons learned from the first survey, while the essential topics and questions remained similar. The EUA Council approved the data collection and analysis methodology.

The first EUA Big Deals Survey focused on data collected in 2016-2017 and its respective report, the "[EUA Big Deals Survey Report: The first mapping of major scientific publishing contracts in Europe](#)", was published in April 2018. Following EUA Council approval of the survey and its methodology, the EUA Secretariat invited National Rectors' Conference members to take part in the Big Deals Survey by naming national scientific publisher negotiations experts, many of which were re-appointed from the first survey. As in the first Big Deals Survey, data was collected in two stages. Firstly, national representatives completed a structured online survey, this was followed by a 60-minute online interview to review responses and gather further input. The data was collected between August and November 2018. Respondents then also took part in two Brussels workshops, to discuss survey outcomes and approve data for publication.

The second Big Deals Survey covered 31 consortia in 30 European countries negotiating on behalf of the university sector and other higher education and research organisations, including research institutes and hospitals. The data was anonymised and aggregated in line with the survey's confidentiality policy, and to avoid the identification of individual consortia. Most data concerned Big Deal contracts from 2017 and 2018.

The survey gathered comprehensive information and data about electronic journal Big Deals and bundles' procurement processes and costs. It concentrated on five large scientific publishers: Elsevier, Springer Nature, Taylor & Francis, Wiley, and the American Chemical Society. Examples of topics addressed include: internal consortia organisation and purchasing model types (negotiation frameworks, decision making processes, sources of funding, stakeholders involved). Questions about the inclusion of Open Access to research publications in negotiations, university/research centre leadership involvement in negotiations, the calendar of contractual and negotiation periods, the financial outlay and the specific rights acquired were also addressed.

Readers should note that, unlike the first EUA Big Deals Survey, which gathered data on periodicals, databases and e-books, this survey exclusively focused on periodical Big Deals with five large publishers defined a priori. This procedure was established to try and create a more comparable framework across different consortia. Moreover, these five large publishers generally represent the vast majority of periodical Big Deal contracts in Europe.

Readers should note that the data contained in this report may not be representative of the Big Deal landscape in a particular country, or at European level, and that contracts and collections involving the same publisher may not cover the same journals in all countries. The survey focused on periodical Big Deals with five large publishers, meaning that costs for other contracts (for example, databases, e-books), with smaller publishing houses, and other publishing costs (for example, APCs) are not covered. Legal constraints were also taken into consideration. Different countries and different confidentiality laws resulted in different levels of data disclosure, particularly for costs.

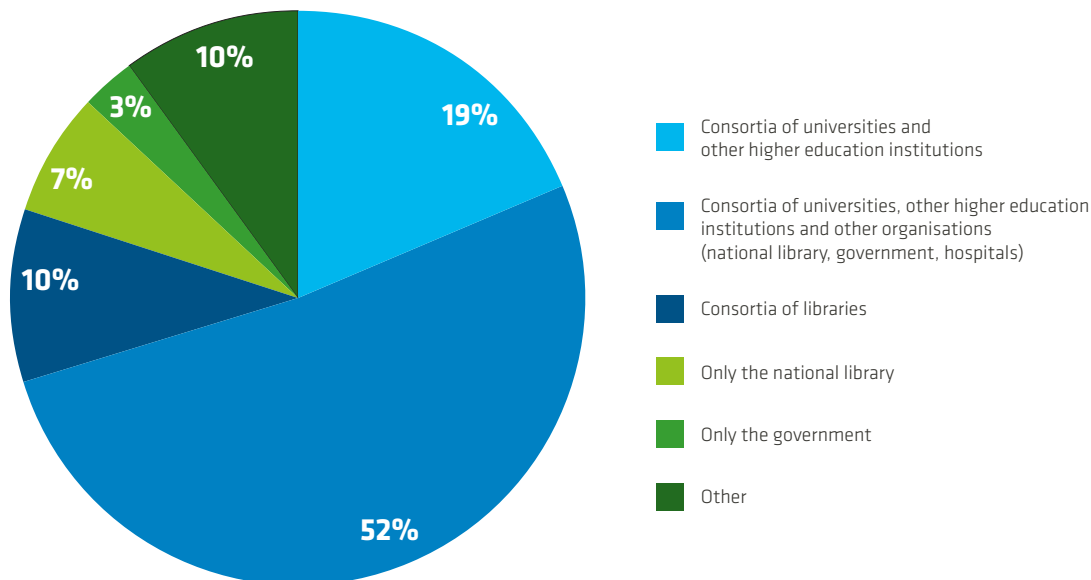
3 Big Deal negotiations: overview

This section provides general information about how Big Deal negotiations are organised at national level, open access contract terms, the level of contract transparency and their costs across Europe.

3.1 BIG DEAL NEGOTIATIONS AT NATIONAL LEVEL

Figure 1 shows that the organisations involved in negotiating Big Deals in most of the countries surveyed (52%) are consortia of universities, other higher education institutions (HEIs) and other organisations including the national library, the government and hospitals. Negotiations only involve consortia of universities and other HEIs in 19% of cases. The 'Other' category mostly represents situations in which different organisations are involved in negotiations with different publishers or when different parties negotiate smaller and larger Big Deals.

Figure 1. Organisations involved in negotiating Big Deals at national level



Number of respondents: 31/31.

In 48% of cases, a national steering committee oversees the policy on electronic documentary resources, as shown in Figure 2. Additionally, 58% of consortia indicated that university leadership was involved in publisher negotiations (Figure 3). Which means that university leadership does not have a role in the negotiation process in the considerable proportion of 42% of cases.

Figure 2. Existence of a national steering committee overseeing policy on electronic documentary resources

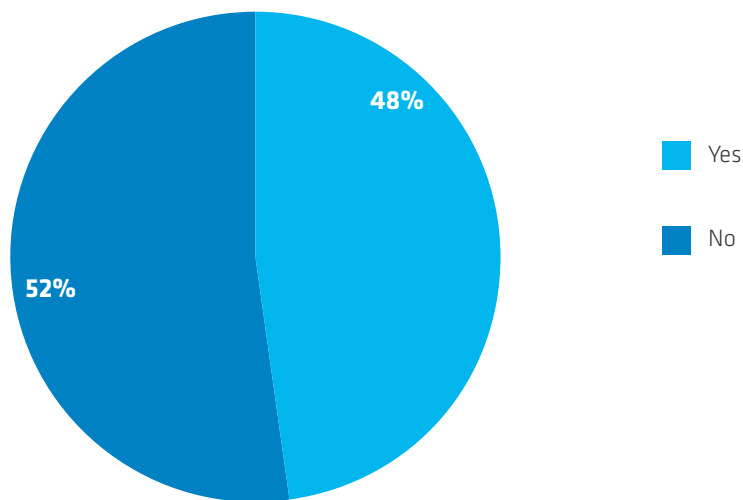
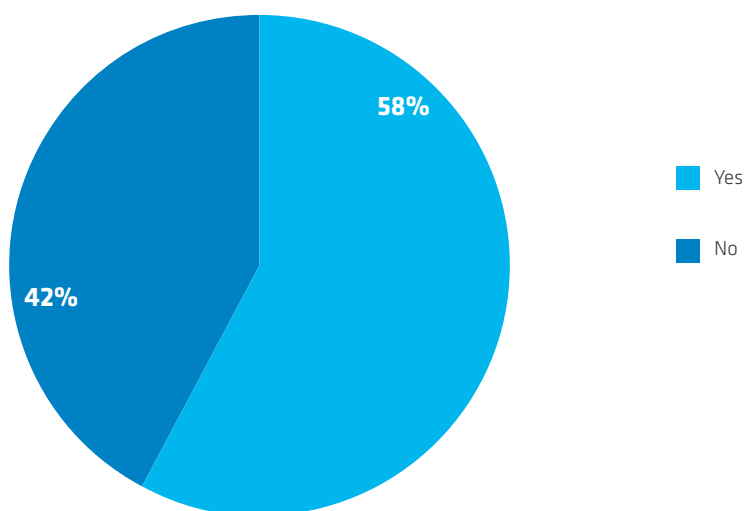


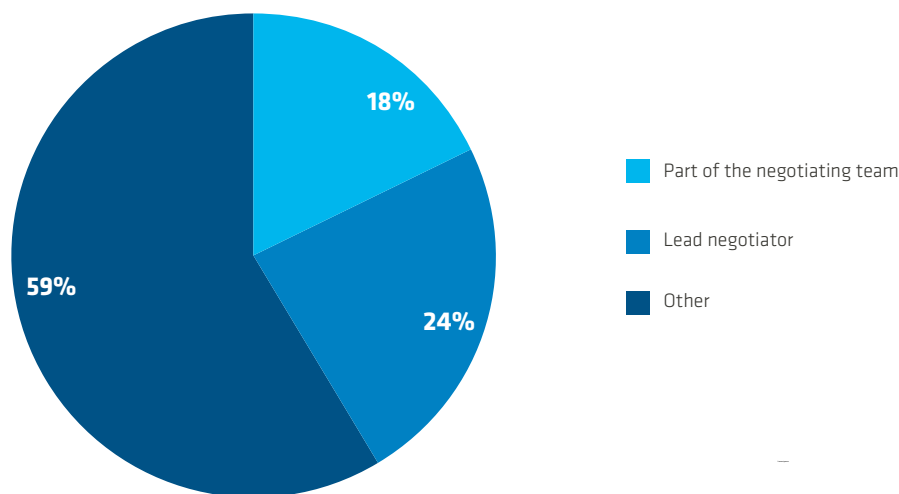
Figure 3. University leadership involvement in Big Deals negotiations



Number of respondents: 31/31.

In consortia where university leaders are involved in negotiations (Figure 3.1.), they act as the lead negotiator only 24% of the time. Most cases reported under 'other' involve situations in which university leadership (together with other partners) is involved in defining the negotiation strategy but is not directly involved in negotiation meetings. But this category also covers situations in which university leadership is only involved in negotiating Big Deals with large publishers (not smaller contracts).

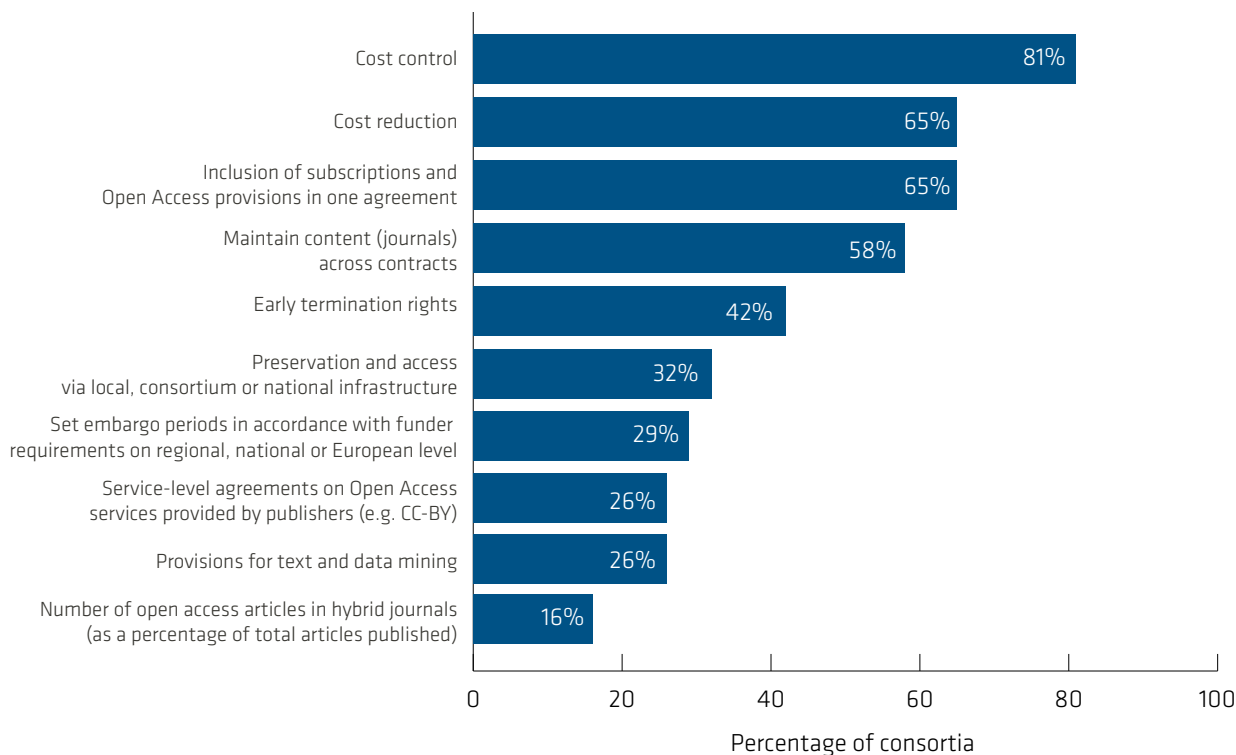
Figure 3.1. The role of university leadership in Big Deals negotiations



*Note: this question only applied to respondents who answered Yes under Figure 3.
Number of respondents: 17/18.*

Consortia were asked to identify the main higher education and research institution concerns in the negotiations. The results are presented in Figure 4 and show that restraining costs, cost reductions and the inclusion of both subscriptions and open access in the same contract were the most frequent such issues. On the other hand, including provisions for Text and Data Mining (TDM) in Big Deal contracts was only a major concern for 26% of the consortia.

Figure 4. Main points of concern in the negotiation process for higher education and research institutions

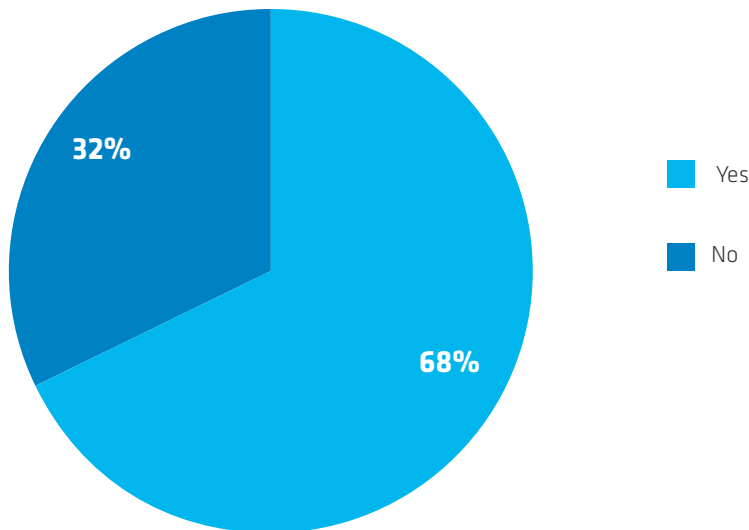


Number of respondents: 31/31. Multiple-choice question.

3.2. OPEN ACCESS, ARTICLE PROCESSING CHARGES AND MONITORING MECHANISMS

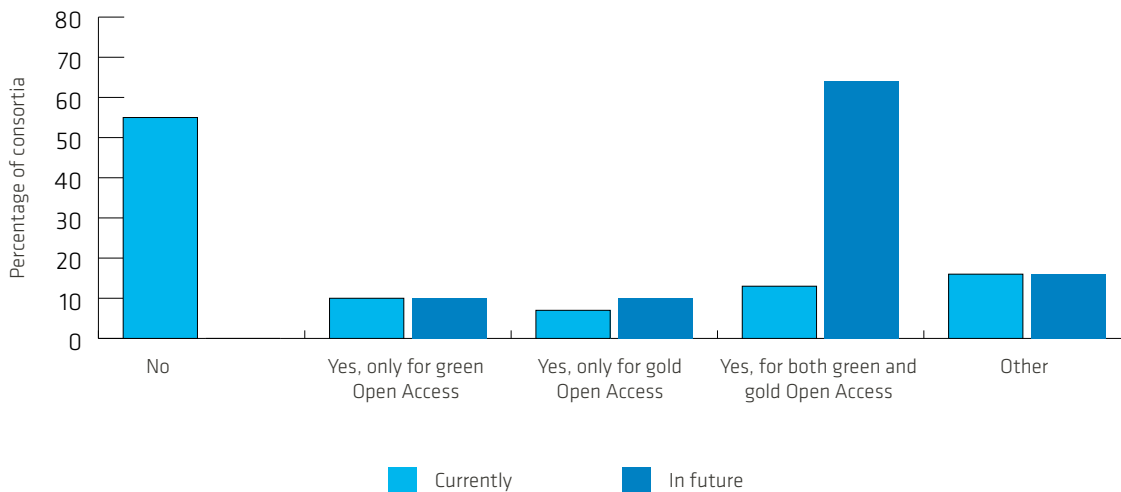
Most of the European countries surveyed have a national Open Access strategy or policy, as shown in Figure 5. However, 55% of the current Big Deal contracts reported do not include any specific Open Access provisions (see Figure 6). All of the consortia surveyed plan to change this situation in future contracts (no-one answered 'No' regarding future contracts).

Figure 5. Existence of a national Open Access strategy or policy



Number of respondents: 31/31.

Figure 6. Inclusion of Open Access provisions in Big Deal contracts



Number of respondents: 31/31.

Most consortia are planning to include both green and gold Open Access provisions in future contracts (64%). Only a minority (10%) are only planning to do so for either green or gold Open Access. The 'Other' category for current contracts covers situations in which provisions were only established for either gold or green Open Access in a limited number of contracts. In future contracts, the 'Other' category was mostly used to describe situations in which countries had not yet decided if they would include provisions for only green, gold Open Access, or both.

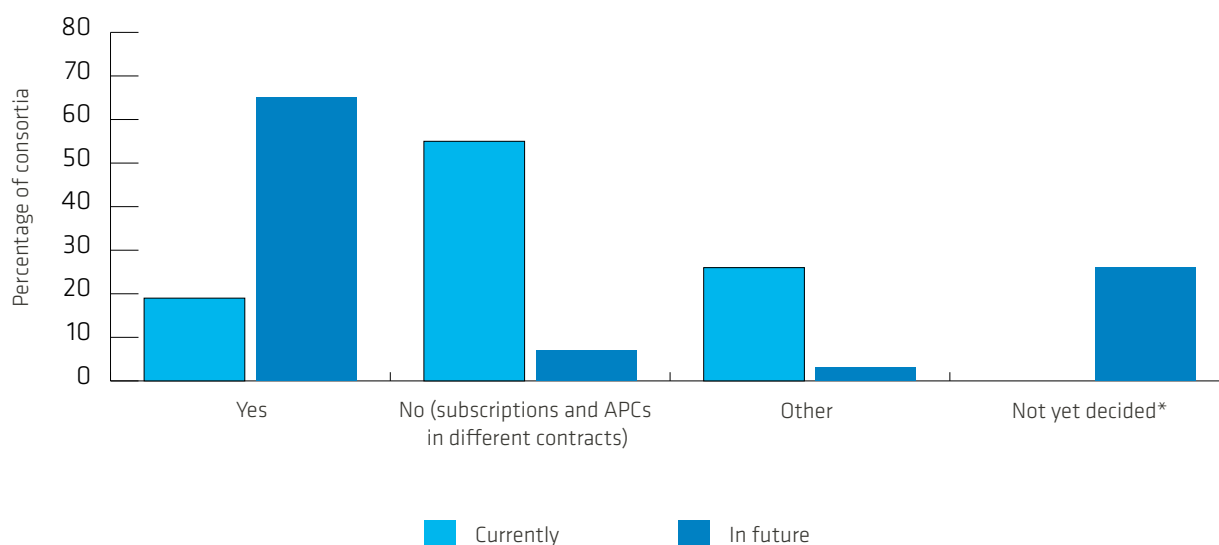
Consortia were further asked whether their publisher contract expectations and negotiations had changed in the light of the increasing importance of Open Access in recent years. A majority of 87% indicated that their expectations, negotiation strategy and negotiation processes had indeed changed, while 13% reported no changes. Most of the changes in expectations and negotiation processes reported by consortia focused on:

- Increasing awareness of Open Access and the notion of a paradigm shift:
“Awareness on both sides has increased.” “Change of mindsets – national momentum for establishing an Open Access policy.”
- Creating more transparency and openness in the negotiation process:
“More openness in the negotiation process.” “More transparency.”
- Expectation that the price of subscriptions would decrease, given the increasing number of articles published in Open Access:
“We insist on having a clear and up-to-date view of the increase in content available in OA and on obtaining subscription prices in line with this evolution.” “We expect transparency about the percentage of Open Access articles in our subscription content and a proportional reduction in subscription costs.”
- Expectation that subscriptions and Open Access would be included in the same contract:
“Expectations have shifted from the right to read only (i.e., subscriptions) to the right to read and publish in open access.”
- Increased university leadership and other partners’ (for example, research funders, researchers, governments) involvement in negotiations:
“University rectors are now involved in negotiations.” “It has become much more important to directly involve scientists in the negotiation process.”
- Increasing the political visibility of Open Access:
“Involving the political level [politicians] in negotiations”
- Increased professionalisation of negotiating consortia, related to the increasing need to gather, compile and leverage relevant data for negotiations:
“Negotiation preparations have changed: a knowledge of the institutions/country publications is very necessary. There is more data collection and analysis.” “We have become more careful in checking the dynamics of the increase in spending and the content publishers provide, both for a fee and free of charge.” “We no longer accept publishers’ narratives, but preparation for negotiations requires even more groundwork in terms of use, publication, and citation analytics, and to integrate the demands of consortium member institutions.”
- More complex and longer negotiation processes:
“Negotiations are longer and more complex. New people/roles are involved on both sides of the table.”

3.3 BRINGING SUBSCRIPTIONS AND ARTICLE PROCESSING CHARGES UNDER THE SAME CONTRACT

Consortia were also asked whether subscriptions and Article Processing Charges (APCs) were included in the same contractual framework (Figure 7). Currently, the majority of consortia did not include APCs and subscriptions in the same contract, only in 19% of cases did this occur. However, in future, 65% of consortia would like to have both subscriptions and APCs covered by the same contract. Importantly, 26% of consortia indicated that they had not yet decided whether they would try to get APCs and subscriptions under the same contract. This is because they are waiting for the outcomes and experience of other countries that included subscriptions and APCs under the same contract, or because they were still unsure of the sustainability, economic advantages and disadvantages of this option.

Figure 7. Inclusion of subscriptions and Article Processing Charges in the same contractual framework



Note: *This answer option was only available for the question “In future”. Number of respondents: 30/31.

Most (67%) of the consortia that have included subscriptions and APCs under the same contract included provisions to prevent double-dipping (see Table 1). However, the large majority of consortia currently do not combine subscriptions and APCs under the same contract - of these only 31% have a monitoring system in place to assess APC costs. This means that nearly 70% of consortia currently lack a structured way of monitoring APC spending. It is also important to mention that several consortia noted that individual universities sometimes monitor APC costs, but that this information is not relayed and aggregated at consortium level. In addition, consortia also indicated that many universities find it very difficult to monitor APC spending, as they use different accounting codes for APCs, or as information is not collected or available at department or institutional level.

Table 1. Article Processing Charges (apc) monitoring systems

	APCs and subscriptions included in a single contract	APCs and subscriptions covered by different contracts
Provisions to prevent ‘double-dipping’		Existence of monitoring systems to assess funds spent on APCs
Yes	67%	31%
No	33%	69%

Number of respondents: “APCs and subscriptions included in a single contract” 6/6; “APCs and subscriptions covered by different contracts” 16/17.

Consortia were also asked about the advantages and disadvantages of including subscriptions and APCs in the same contract. The following benefits (Table 2) and drawbacks (Table 3) were identified:

TABLE 2. BENEFITS OF COMBINING SUBSCRIPTIONS AND APCS IN THE SAME CONTRACT FRAMEWORK

- More controlled or even reduced costs
 - Better control over publication costs (both subscriptions and APCs).
 - Ability to reduce the total cost of publications.
 - APC discounts.
- Contributes to accelerating the transition to Open Access
 - More Open Access publications on the market.
 - Promoting the growth of Open Access to research.
 - More incentives to convert subscription journals to Open Access.
 - Increased visibility of Open Access.
 - Increased pressure on publishers to make Open Access 'the norm'.
- Improves administrative procedures
 - A better overview of publishing costs ("full oversight of the total value of expenditure").
 - Increased administrative efficiency. This includes the ease of managing costs under a single contract, and the easier management and monitoring of APCs and other publication and licensing costs ("Introduction of oversight of total level of spend, service levels, licence arrangements, compliance with funder mandates").
- Improves negotiations
 - Ability to leverage existing negotiation arrangements.
 - Development of new pricing models ("migration away from legacy business models like the historical print spend").
 - Increased transparency.
 - Better results for Open Access clauses.
- Reduces or avoids double-dipping, with some restrictions
 - Theoretically avoids double-dipping. However, "Contracts of this type can differ significantly and, in some cases, reduce this advantage."
- Researcher benefits
 - Ensuring researchers can publish in their preferred journals ("Recognition of author desire to publish in journals they perceive to be attractive").
 - Researchers will continue to be able to publish in existing journals.

TABLE 3. DRAWBACKS OF COMBINING SUBSCRIPTIONS AND APCs IN THE SAME CONTRACT FRAMEWORK

- May create more expensive publisher contracts

“Currently, publishers are reluctant to conclude a contract that covers both the right to read and APCs. When they do agree, the addition of APCs significantly increases the contract value in comparison with a contract covering only the right to read.”

- Maintaining publisher dominance and the status quo
 - Universities continue to depend on major publishers to access and publish articles.
 - Universities continue to be subject to the conditions publishers impose for publishing and reading.
 - Maintenance of the current publishers’ status quo and the “status of legacy publishers”.
 - The system continues to reinforce publishers’ profits.
 - Potential to create lock in to publishing in existing journals, dominated by large publishers.

- Contributes to maintaining the hybrid model and double-dipping. It also supports the growth of hybrid journals at the expense of gold journals

- Validates the APC-based business model, which is not supported by all countries

“We see APCs as a threat to the quality of scientific publication, since it paves the way for publication by payment not by merit.”

- Creates obstacles to the development of different publishing models

- Impedes innovation in new publishing and research dissemination approaches. (“Perpetuates the lack of a properly functioning market for scholarly output.”)

- May make negotiations more complex and create additional challenges when it comes to managing consortia with many different members

- Negotiations become more complex.
- “It may be more difficult to manage consortia with many different members.”

- Perpetuates the “journal brand as a signifier of quality”

- May further distort the development of a competitive market for APCs

3.4. BIG DEAL CONTRACT TRANSPARENCY AND COSTS

A total of 71% of consortia (Figure 8) noted that national laws or regulations facilitate transparency in publisher contracts (for example, by requiring all contracts involving public funding to be made public, and national provisions overruling publisher non-disclosure agreements, NDAs). Freedom of Information (FOI) laws were part of this national legal framework in 74% of cases (Figure 9).

Figure 8. National laws/regulations facilitating contract transparency

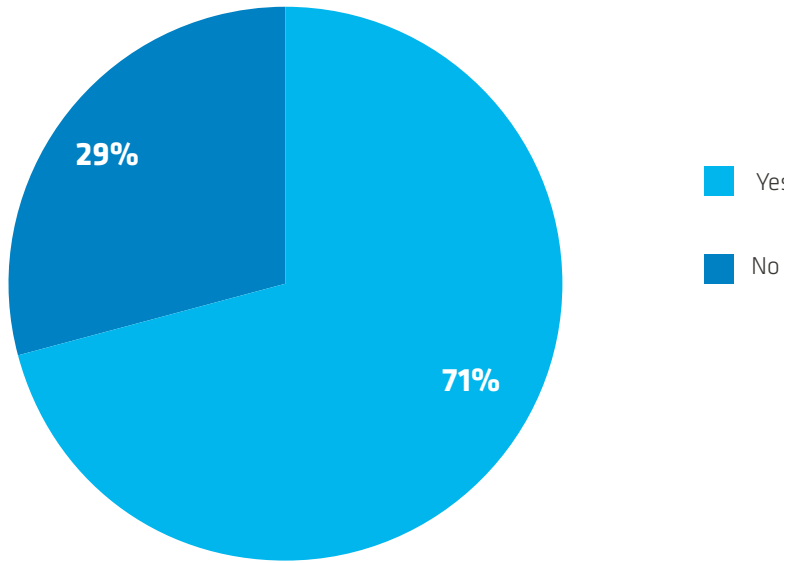
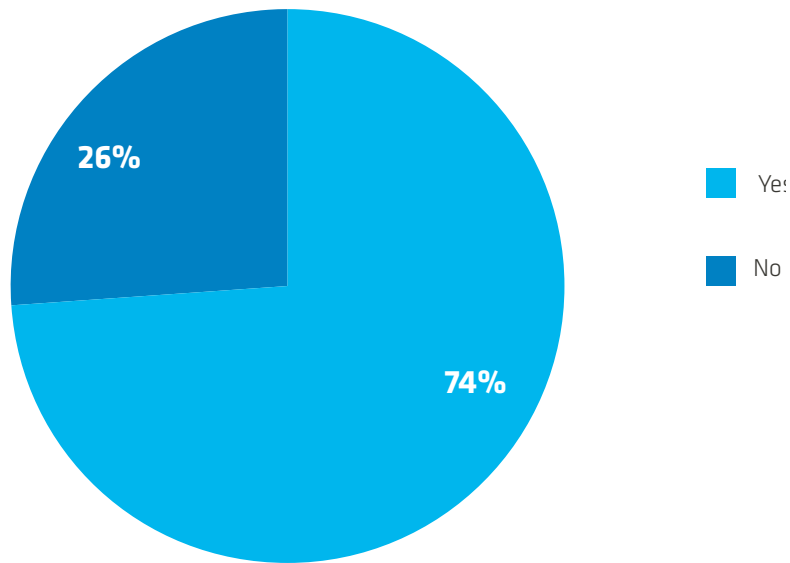


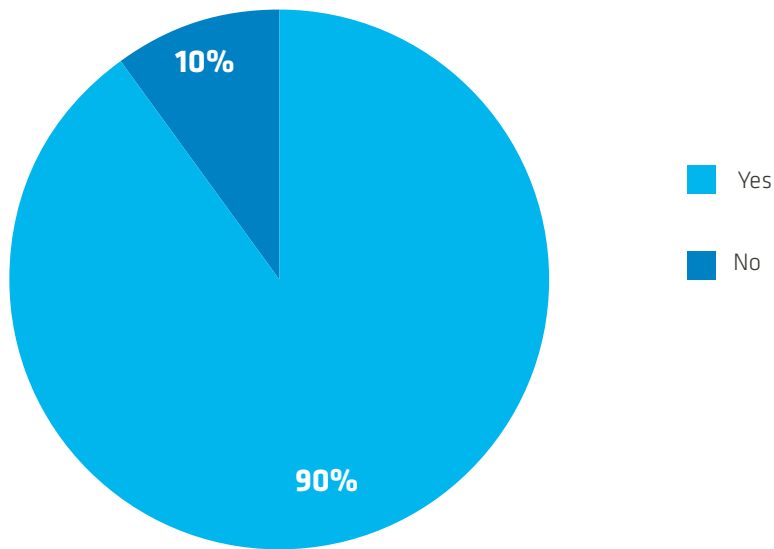
Figure 9. Existence of Freedom of Information (FOI) laws



Number of respondents: 31/31.

Nine out of ten consortia indicated that they were aware of the overall number of Big Deal contracts in their country, including periodicals, databases and e-books (Figure 10). The reader should note that this does not mean that this information is publicly available, only that the surveyed consortia are aware of this information.

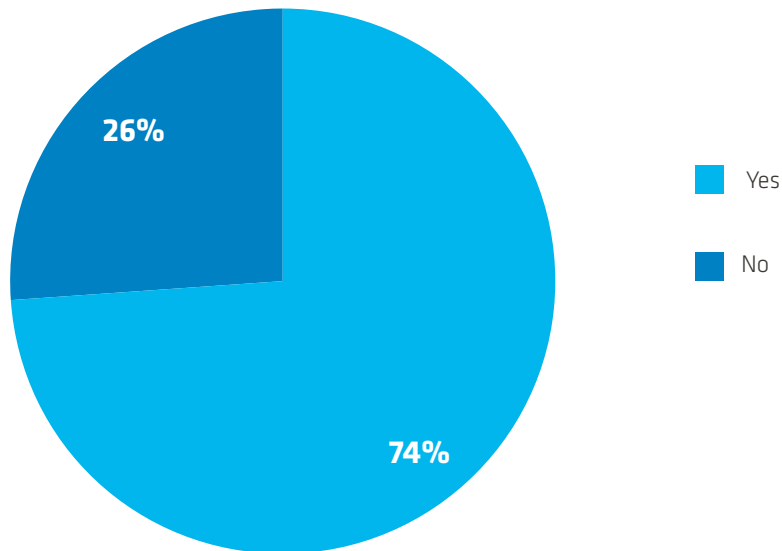
Figure 10. Overview of the number of Big Deal contracts in the country



Number of respondents: 31/31.

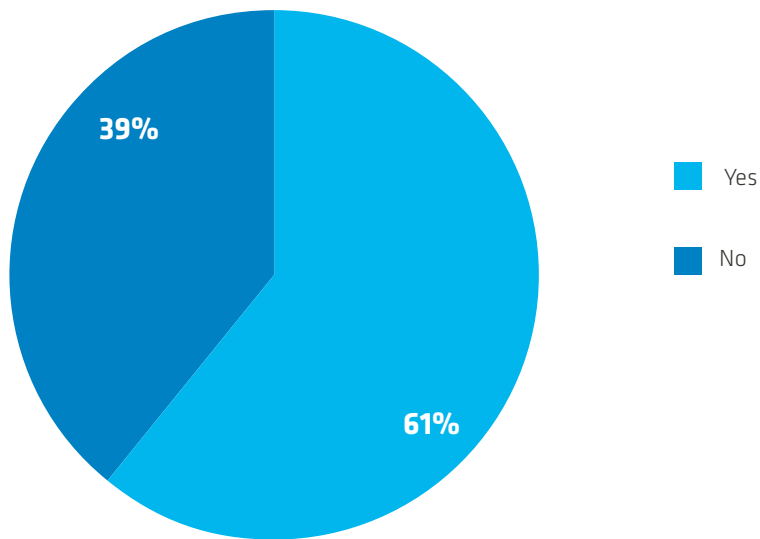
Of the consortia surveyed, 74% also indicated that a national organisation is responsible for collecting Big Deals data (Figure 11). However, information about university and other HEI Big Deals expenditure is only publicly available in 61% of cases (Figure 12).

Figure 11. Existence of a national organisation that collects publisher contract information



Number of respondents: 31/31.

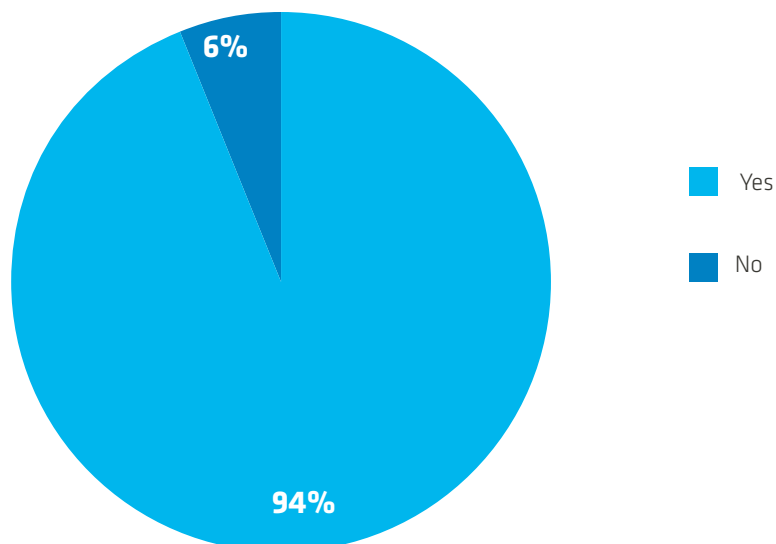
Figure 12. Public availability of studies/surveys/reports on university and other higher education institutions' expenditure on electronic documentary resources



Number of respondents: 31/31.

Consortia were also asked whether they had access to information concerning the approximate total annual spend on Big Deals for all electronic resources (including periodicals, databases, e-books and other resources). As Figure 13 shows, over 90% of consortia indicated this to be the case. However, this does not necessarily indicate that most European countries know exactly how much is spent on electronic resources every year, as in several cases, the country has more than one Big Deal consortium and information is not aggregated at national level.

Figure 13. Knowledge of the approximate total annual Big Deals spend

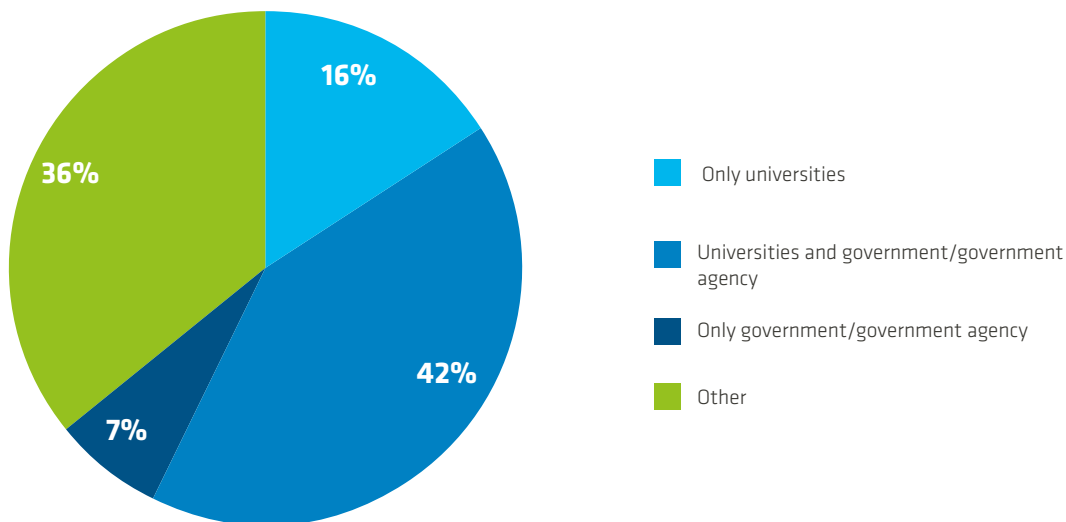


Number of respondents: 31/31.

The 31 consortia surveyed represent 30 European countries and reported an approximate annual electronic resources (including periodicals, databases, e-books and other resources) spend of **€1,025,253,055**. Most of the data reported was from 2017 or 2018. The reader should note this is a conservative figure, as it does not include APCs, amounts paid by smaller consortia that did not take part in this survey, or the cost of individual university or research organisation publisher contracts.

Consortia were also asked about the national source of funding for most of their Big Deal contracts (including periodicals, databases and e-books). As shown in Figure 14, universities, either individually or in conjunction with government agencies, finance most of these costs. The 'Other' category covers situations in which universities cover these costs together with other stakeholders, such as hospitals, research organisations, other consortium members, and European funds.

Figure 14. Origin of funding for most Big Deals at national level



Number of respondents: 31/31.

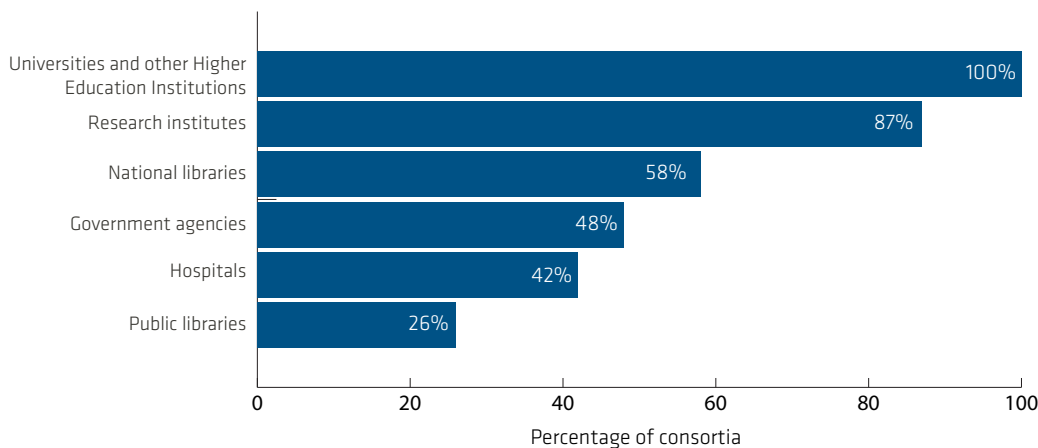
4 Consortia

This chapter covers information related to the organisation and functions of the negotiating consortia.

Of the 31 consortia surveyed, 19 (61%) indicated that only one national consortium was responsible for Big Deal negotiations. The vast majority of cases where more than one consortium is involved represent situations involving regional or specialist consortia (for example, by publisher, or by organisation type).

As Figure 15 shows, all of the consortia surveyed acted on behalf of universities and other Higher Education Institutions. More than eight out of ten consortia also represented research institutes. Hospitals and public libraries were least represented in the consortia surveyed.

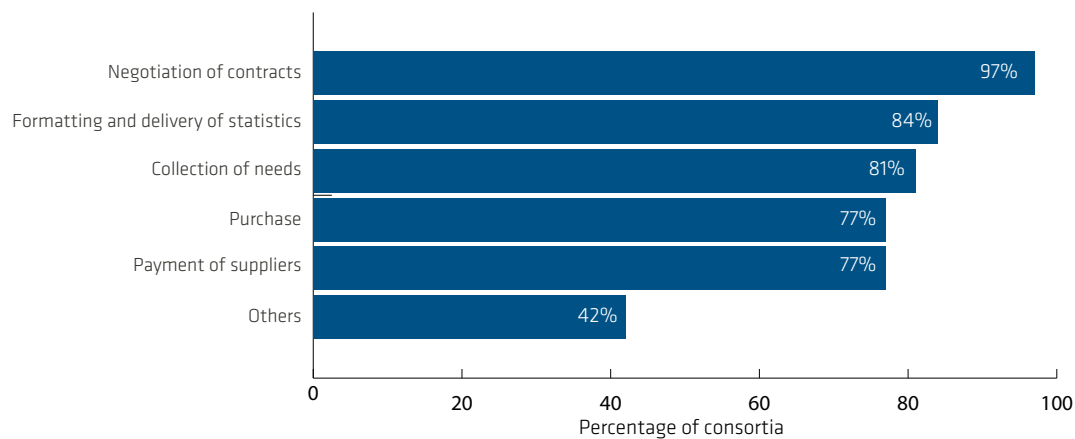
Figure 15. Scope of the consortia



Note: multiple-choice question. Number of respondents: 31/31.

Almost all consortia surveyed were responsible for negotiating Big Deal contracts (Figure 16). Consortia activities also covered the other functions listed in Figure 16, including needs collection and contract procurement. The 'other' category included a variety of situations, including organising training and workshops, acting as a helpdesk, applying for funding or organising tendering processes, maintaining databases, and providing support for technical infrastructure.

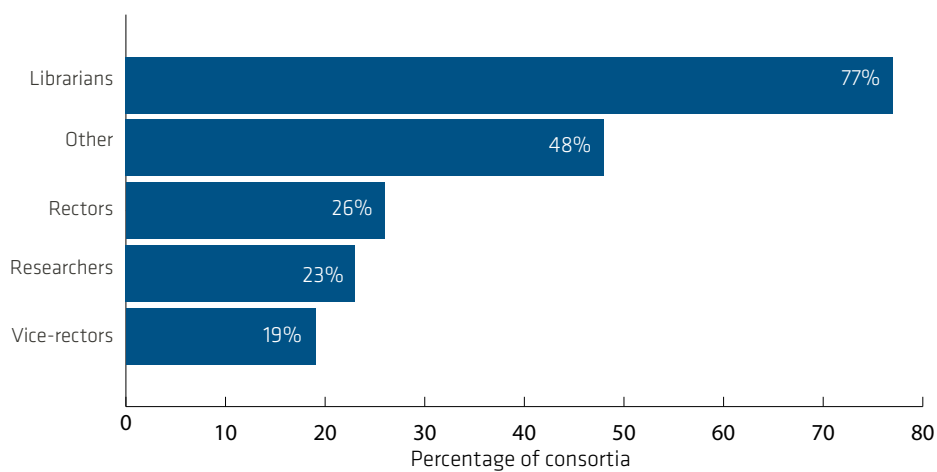
Figure 16. Consortia functions



Note: multiple-choice question. Number of respondents: 31/31.

In most consortia, librarians were most often responsible for deciding which products to buy from publishers (Figure 17). The ‘other’ category covers situations in which either steering committees, the ministry, librarians in conjunction with university boards or advisory bodies were responsible for product selection. High-level university leadership was only directly involved in product choice in 19% (vice-rectors) and 26% (rectors) of cases.

Figure 17. Decision-makers responsible for selecting publications purchased

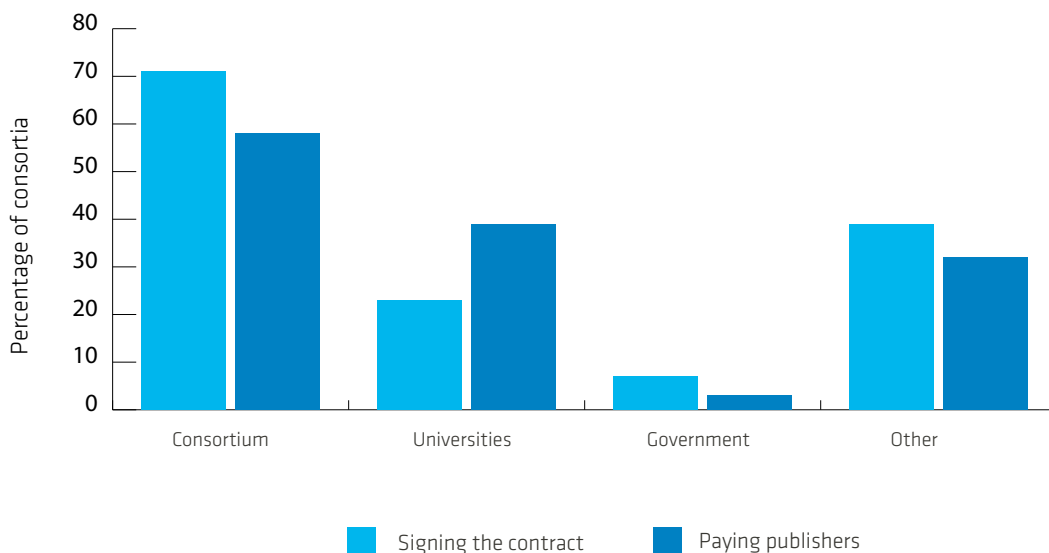


Note: multiple-choice question. Number of respondents: 31/31.

It is also important to note that 84% of the consortia surveyed indicated that resources and negotiations objectives were established bottom-up.

Consortia were most frequently responsible for contract signature (71%) and publisher payments (58%), as shown in Figure 18. The 'Other' category almost always covered cases in which the national library and, less frequently, the National Rectors' Conference (only 1 consortia), acted as the contract signatory. When it came to paying publishers, the 'Other' category was mainly used to describe situations in which the national library, research institutions, individual universities or the National Rectors' Conference were responsible for paying publishers.

Figure 18. Stakeholders responsible for contract signature and publisher payments



Note: multiple-choice question. Number of respondents: 31/31.

5 Periodicals Big Deals

As indicated in the methodology, the second EUA Big Deals Survey focused exclusively on periodicals contracts with five major scientific publishers: Elsevier, Springer Nature, Taylor & Francis, Wiley, and the American Chemical Society. For Elsevier, specific questions were included about Cell Press and the Freedom Collection (or other major resources provided by Elsevier). For Springer Nature, specific questions were included about Nature journals and other Springer products. Although an individual publisher's specific resources (for example, collections, the number of journals included in the deal) may vary between countries, this survey aimed to obtain a general picture of their largest contracts.

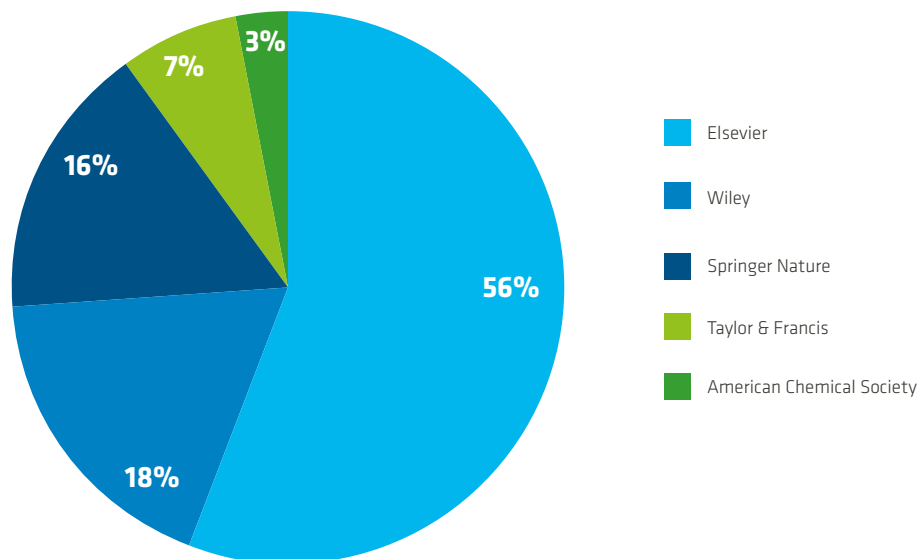
The 31 consortia reported a total of 167 contracts for the five big publishers analysed. Table 4 shows the number of contracts per publisher.

Table 4. Number of contracts reported per publisher

Publisher	Number of contracts reported
Elsevier	
Cell Press	12
Freedom Collection or other Elsevier product	29
Springer Nature	
Nature	20
Springer	30
Taylor & Francis	23
Wiley	29
American Chemical Society	24

An estimated **€475,267,400** is spent annually on Periodicals Big Deals with these five major publishers alone (data from 29 consortia). Figure 19 shows an overview of how these costs break down per publisher.

Figure 19. Overview of expenditure per publisher

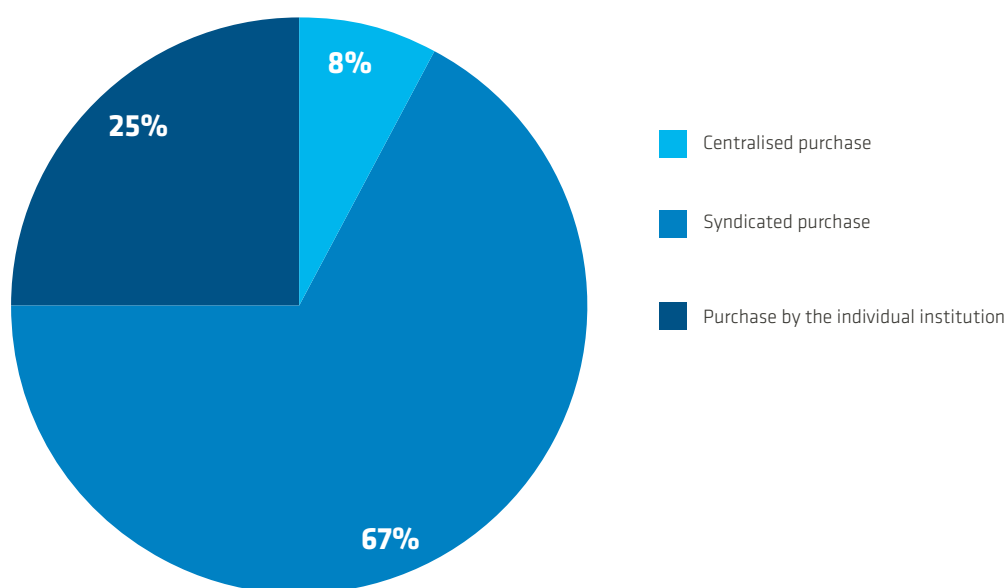


Note: Data for 29 consortia.

5.1. ELSEVIER – CELL PRESS

All of the Cell Press contracts reported covered subscriptions. Most of these purchases (67%) were syndicated, meaning that the consortium purchased the contract on behalf of its institutions and then recouped these costs from the institutions themselves (Figure 20).

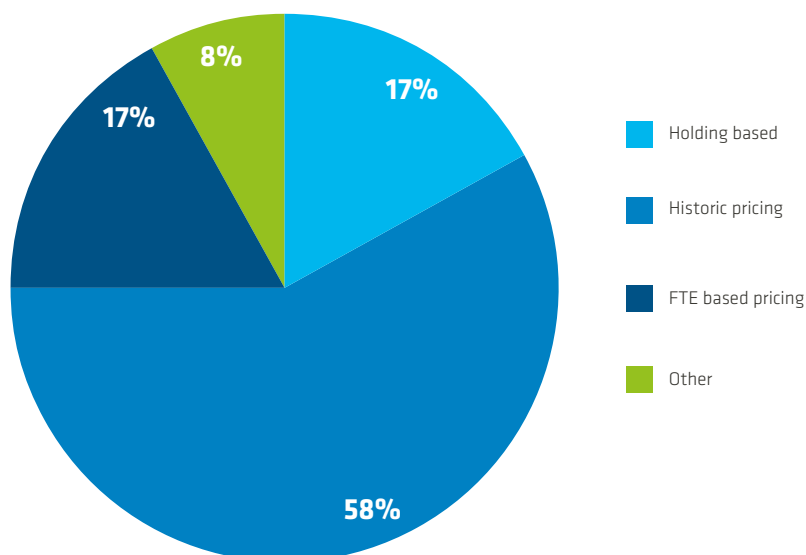
Figure 20. Cell Press purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 12/12.

Most contracts reported using historic pricing (58%), which is based on the previous year or contract price, plus a percentage increase (Figure 21).

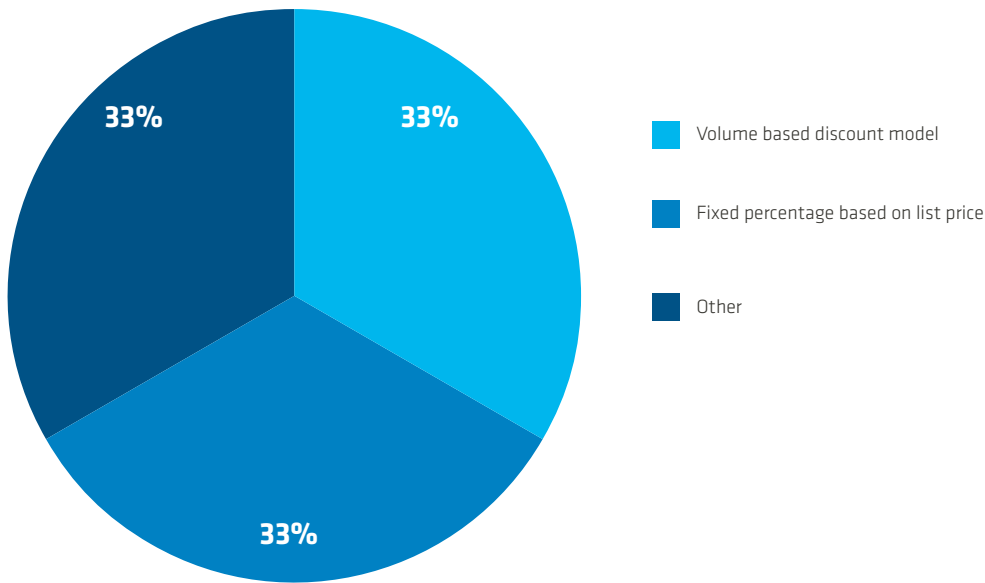
Figure 21. Cell Press pricing model



Notes: holding based is defined as being when the price of an eJournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an eJournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an eJournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an eJournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 12/12.

The discount model for Cell Press contracts was evenly distributed across the different answer options. Volume based discounts were used as frequently as a fixed percentage discount based on list price.

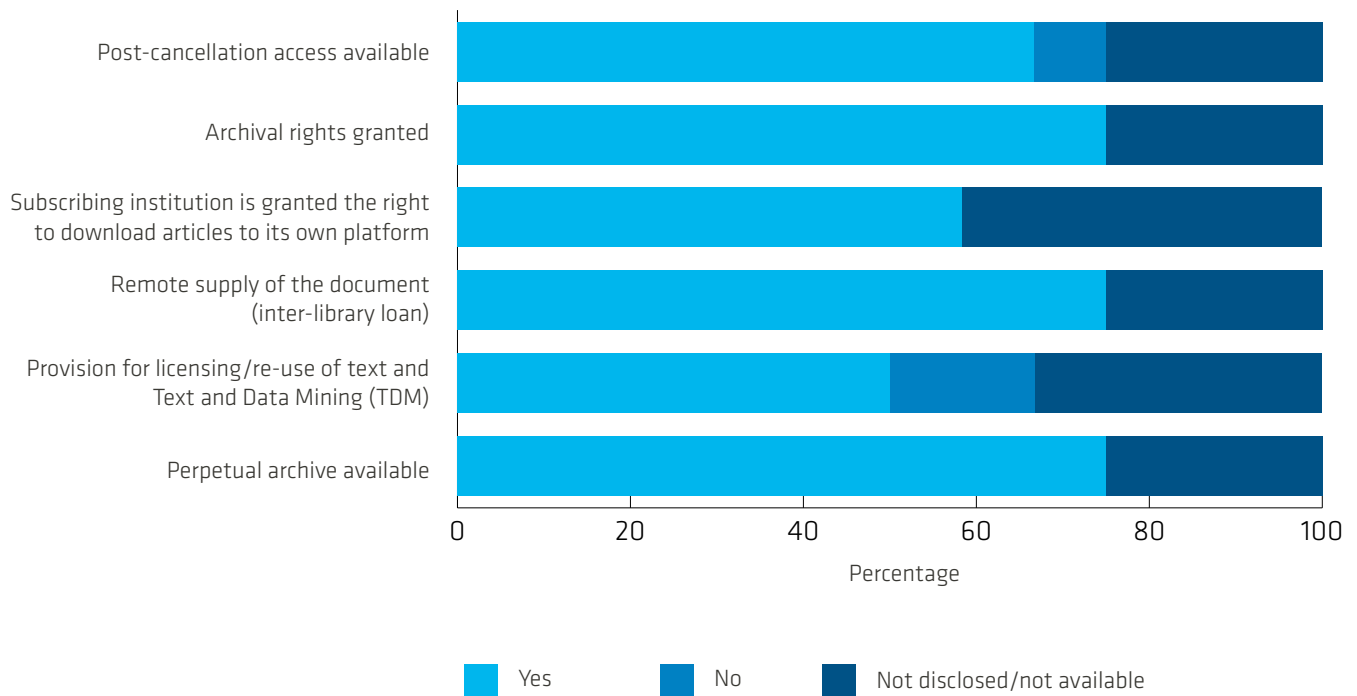
Figure 22. Cell Press consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 9/12.

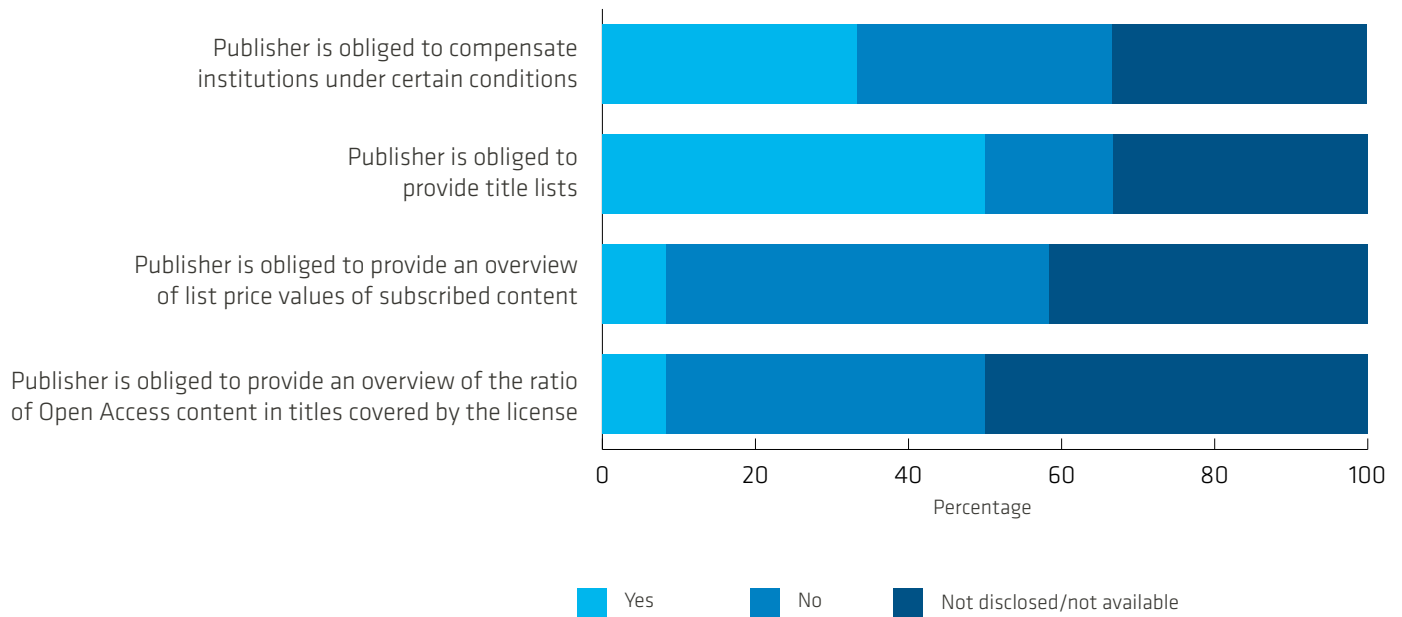
Most Cell Press contracts included all of the (associated) rights listed in Figure 23. Text and TDM licensing provisions were least frequently included in Cell Press contracts (50%). Figure 24 shows the publisher obligations: providing title lists was the most frequently reported obligation (50%).

Figure 23. Cell Press associated rights granted



Number of contracts: 12/12.

Figure 24. Cell Press publisher obligations

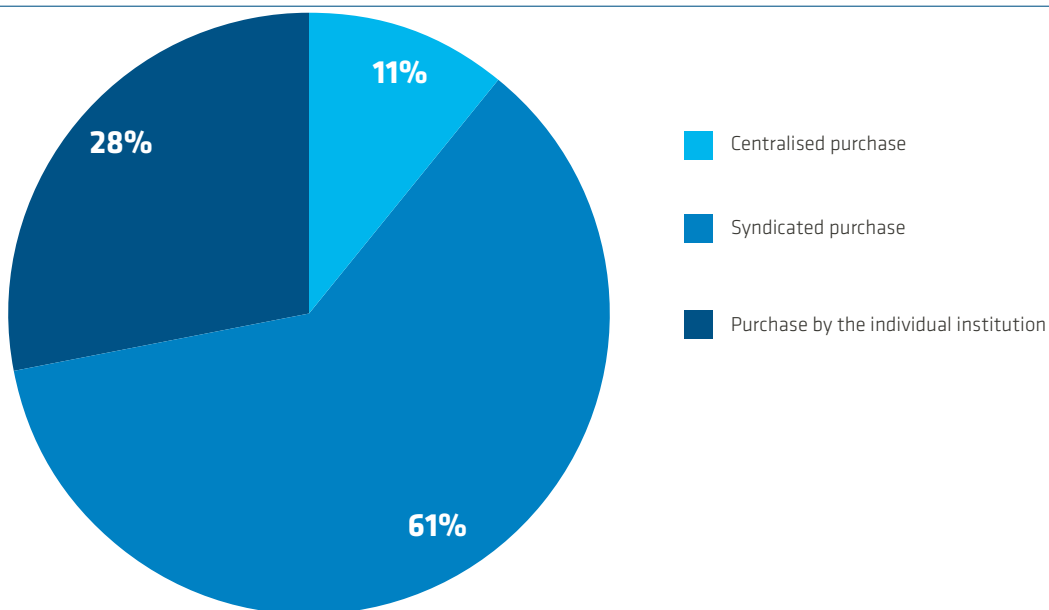


Number of contracts: 12/12.

5.2. ELSEVIER – SCIENCE FREEDOM COLLECTION AND OTHER PRODUCTS

Of the 29 contracts reported for the Elsevier Science Freedom Collection (or other major Elsevier contracts), three were a combination of subscription and Open Access elements, typically an APC discount. All of the remaining contracts (26) were subscriptions. Syndicated purchases were reported in 61% of cases and individual institution purchases in 28% (Figure 25).

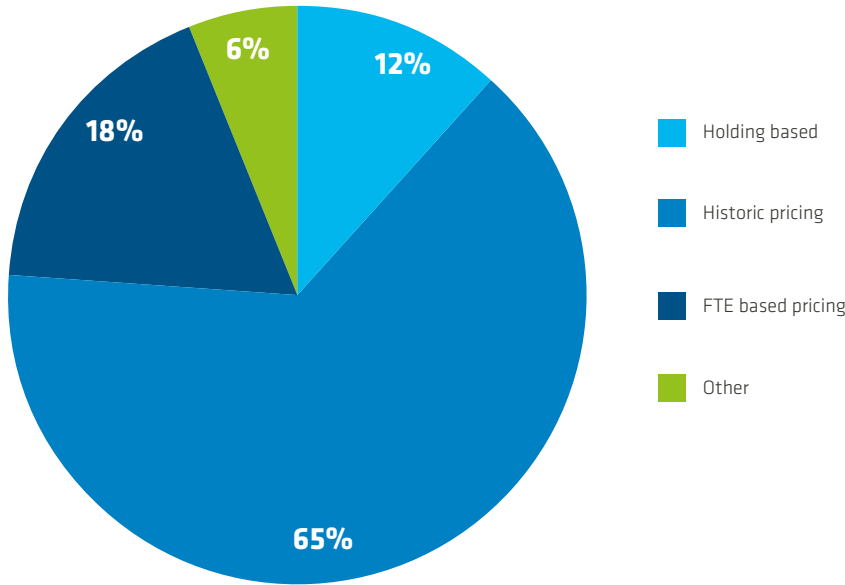
Figure 25. Science Freedom Collection purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 18/29.

Historic pricing was used in just over six out of ten contracts. FTE based and holding based pricing were used in 18% and 12%, respectively (Figure 26).

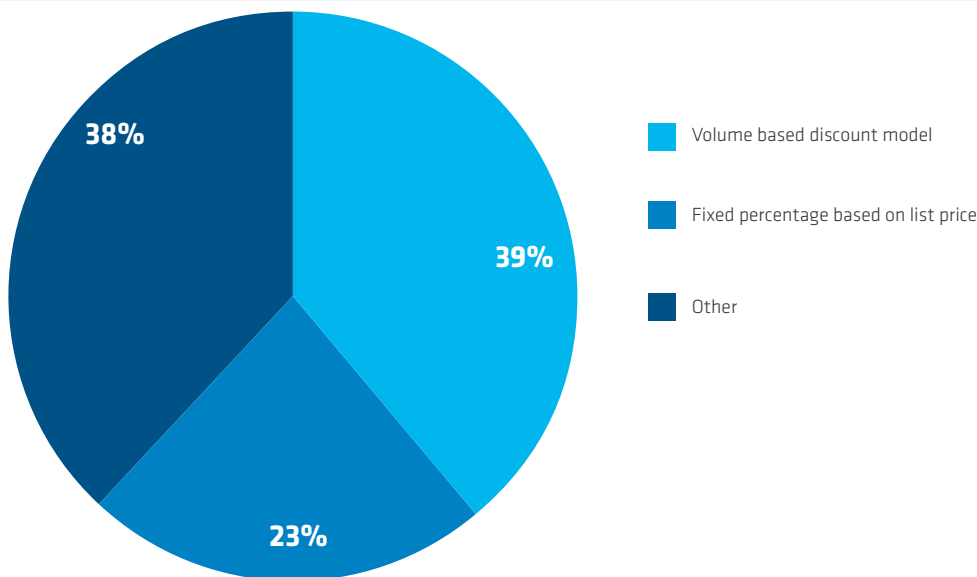
Figure 26. Science Freedom Collection pricing model



Notes: holding based is defined as being when the price of an eJournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an eJournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an eJournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an eJournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 17/29.

The most frequently used discount model was based on volume (Figure 27). The 'Other' category generally covered a mix of volume discounts and fixed percentage discounts based on list price.

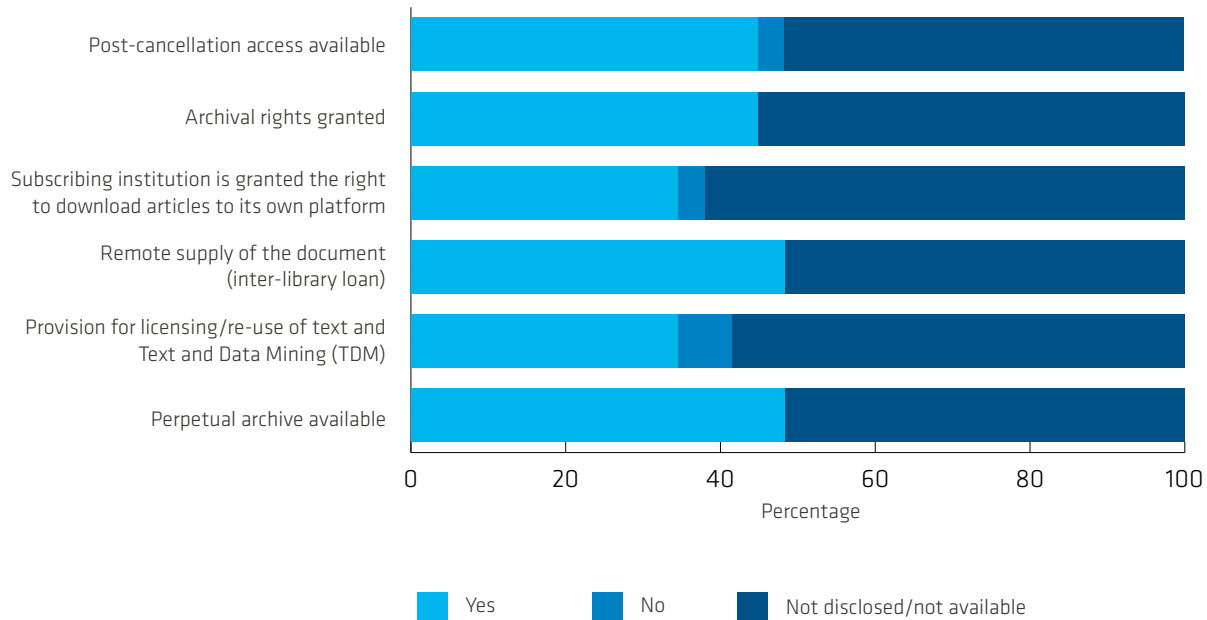
Figure 27. Science Freedom Collection consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 13/29.

The most common associated rights granted under Science Freedom Collection contracts were inter-library loans (48%) and the availability of a perpetual archive (48%) as shown in Figure 28. It is also relevant to note that over half of the survey respondents did not disclose, or could not provide this information.

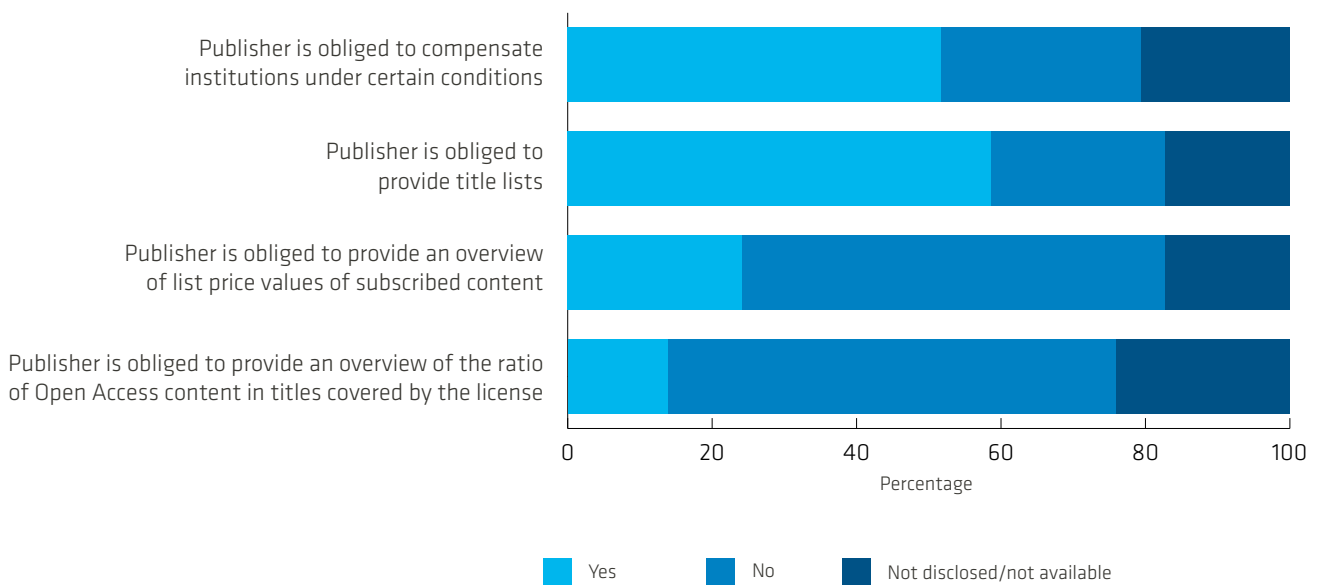
Figure 28. Science Freedom Collection associated rights granted



Number of contracts: 29/29.

Figure 29 describes the publisher obligations. The most common commitments were to provide title lists (57%) and to compensate institutions in specific circumstances (52%), usually relating to down time or service interruptions.

Figure 29. Science Freedom Collection publisher obligations

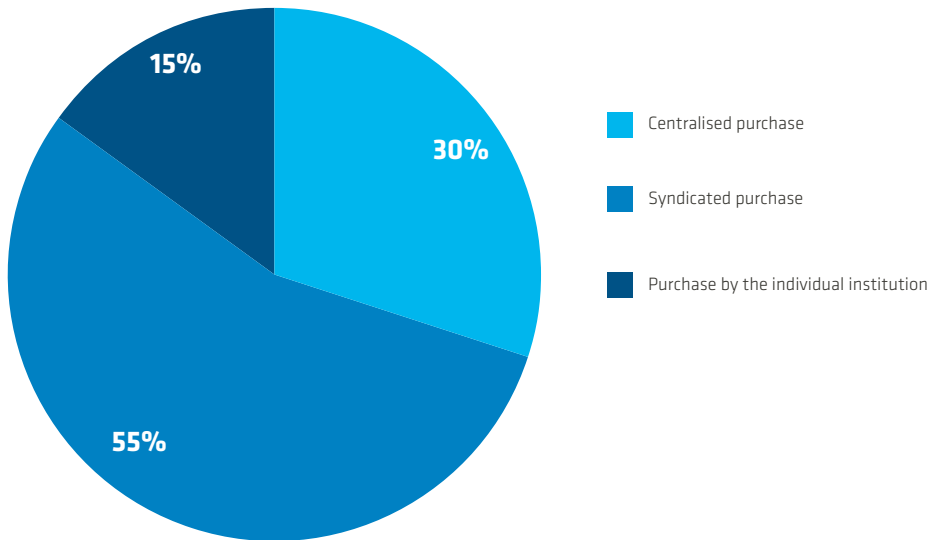


Number of contracts: 29/29.

5.3. SPRINGER NATURE – NATURE JOURNALS

All reported Nature journals contracts covered subscriptions. Syndicated purchases (55%) were the most frequent purchasing model used, followed by centralised purchases (30%), shown in Figure 30.

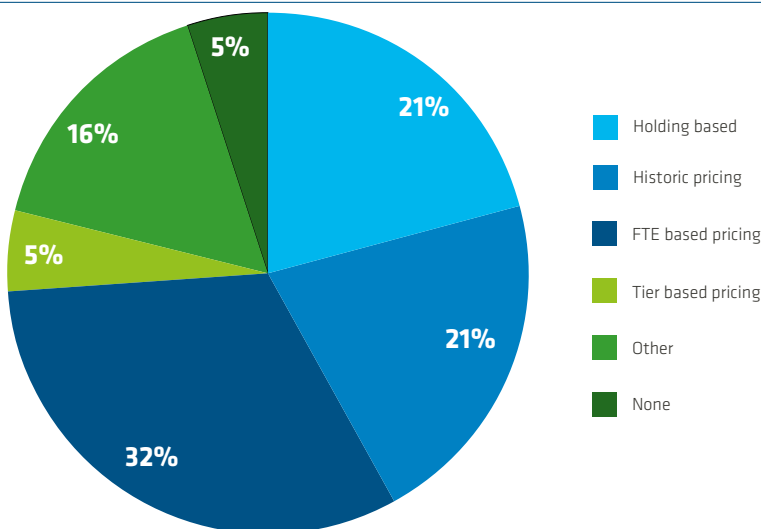
Figure 30. Nature journals purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 20/20.

Nature journals pricing models were more heterogeneous than the previous resources analysed. FTE based pricing was most frequently applied, (32%), while holding based and historical pricing were used in 21% of cases (Figure 31).

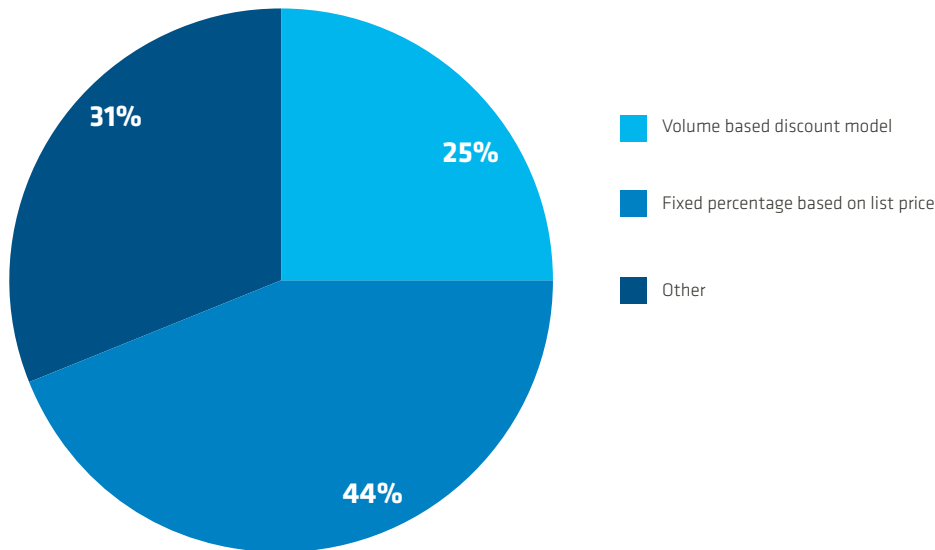
Figure 31. Nature journals pricing model



Notes: holding based is defined as being when the price of an ejournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an ejournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an ejournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an ejournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 19/20.

Figure 32 represents the discount models used for Nature journals. Most contracts used a discount based on a fixed percentage (44%). The 'Other' category represents situations in which a flat fee was negotiated for the entire consortium, or in which the discount was based on a mix of different criteria (for example, FTE, number of institutions, use, cost per download).

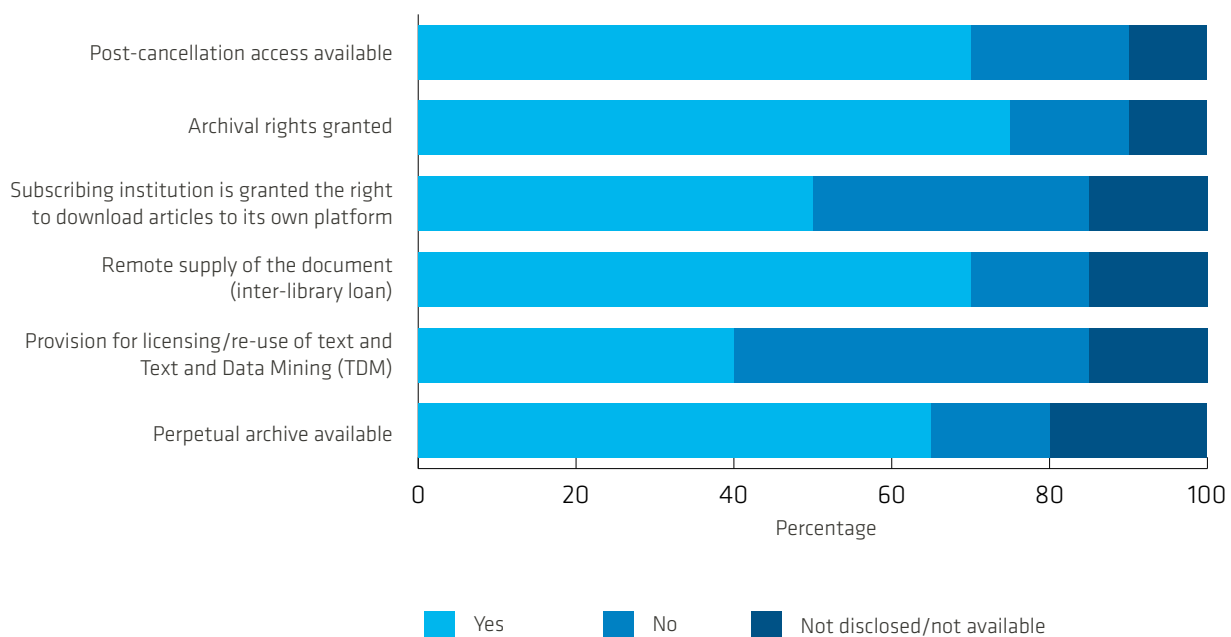
Figure 32. Nature journals consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 16/20.

The most common associated rights granted for Nature journals included post-cancellation access, archival rights, inter-library loan and perpetual archive, which were all reported in over 65% of contracts (Figure 33). TDM provisions were only included in 40% of contracts.

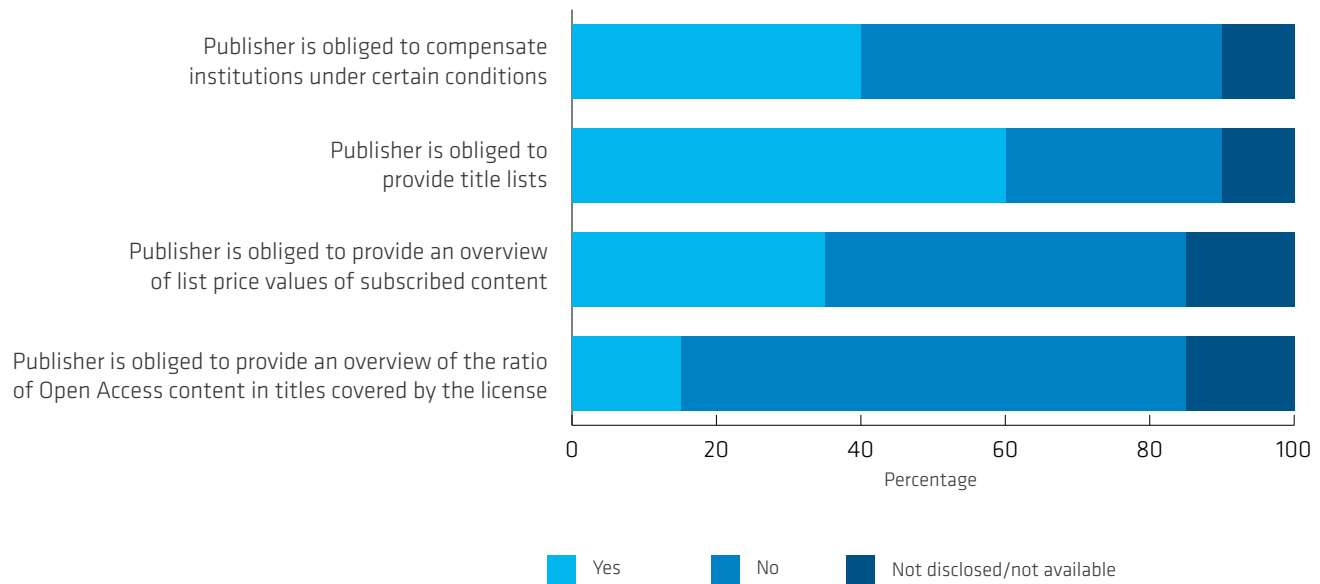
Figure 33. Nature journals associated rights granted



Number of contracts: 20/20.

As with the resources analysed above, the most common Nature journals publisher obligations were to provide title lists and to compensate institutions in specific circumstances (usually down time), as shown in Figure 34.

Figure 34. Nature journals publisher obligations

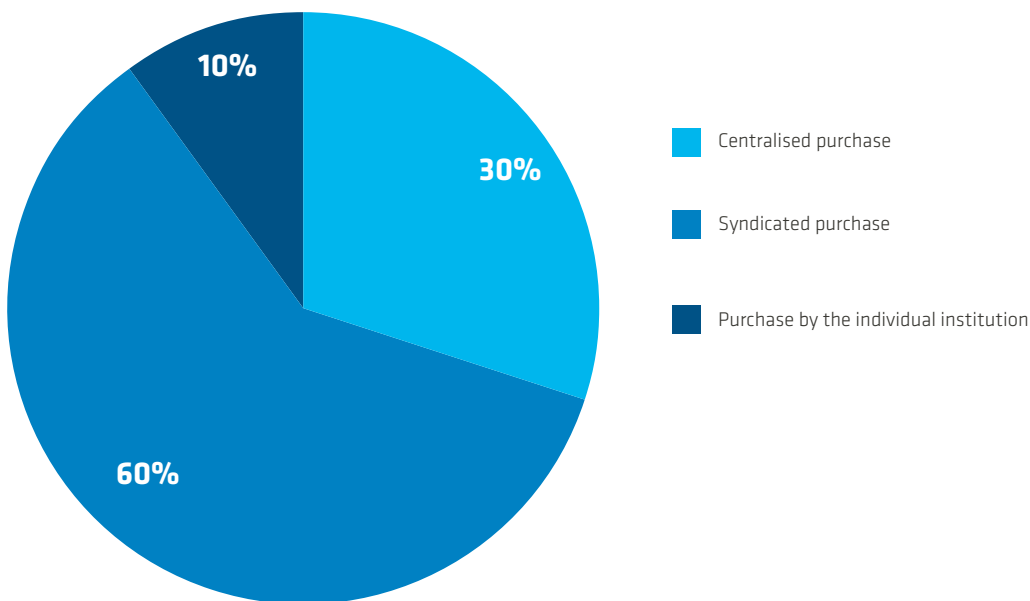


Number of contracts: 20/20.

5.4. SPRINGER NATURE – SPRINGER JOURNALS

Of the 30 contracts reported for Springer journals, five were offset agreements (reading and publishing), and all of the remaining contracts were subscriptions. Syndicated purchases were used in 60% of the contracts reported (Figure 35).

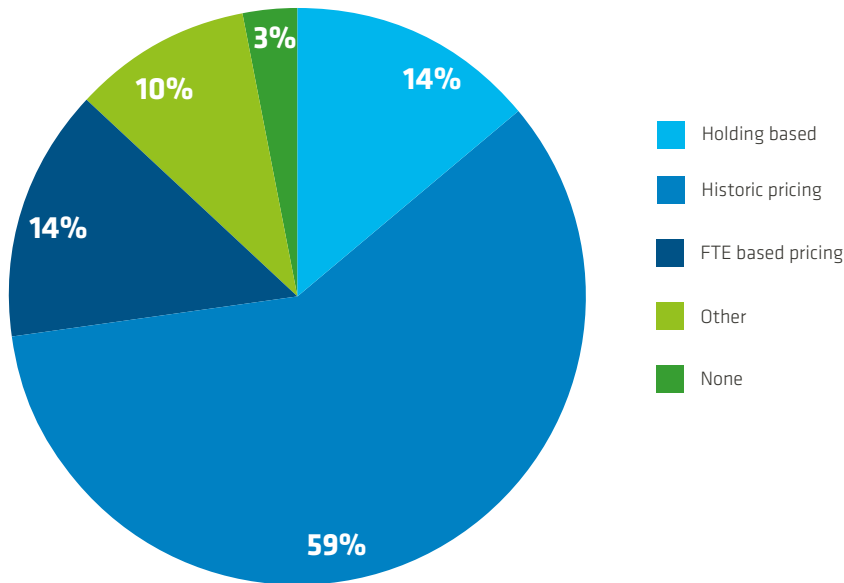
Figure 35. Springer journals purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 30/30.

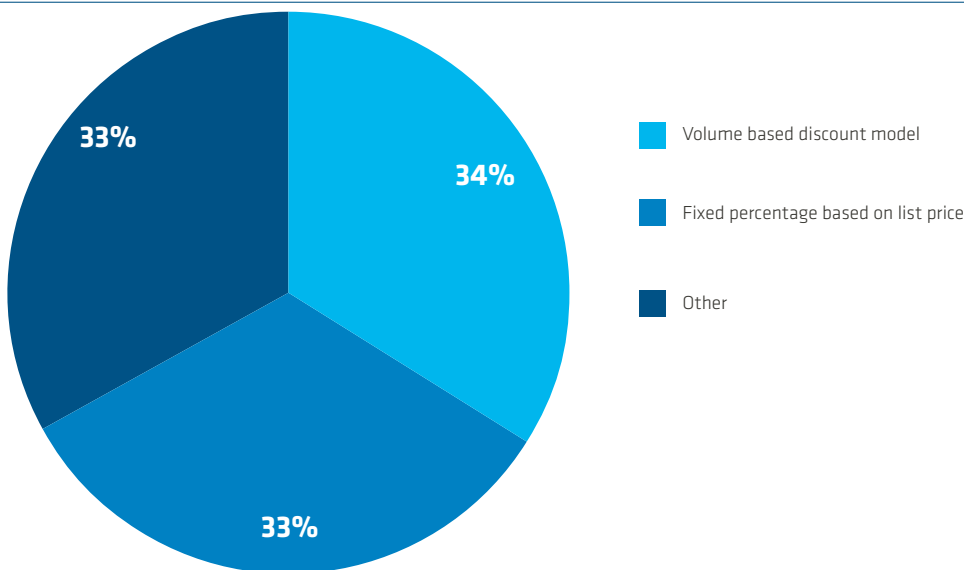
Historic pricing was the most frequent pricing model used (59% of cases). Holding based and FTE based prices were only used in 14% of the reported contracts (Figure 36). Springer journals discount models varied (Figure 37). The 'Other' category covers situations in which discounts were not applicable, where there was a flat fee or when the discount was based on a mix of different criteria (for example, FTE, number of institutions, use, cost per download).

Figure 36. Springer journals pricing model



Notes: holding based is defined as being when the price of an ejournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an ejournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an ejournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an ejournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 29/30.

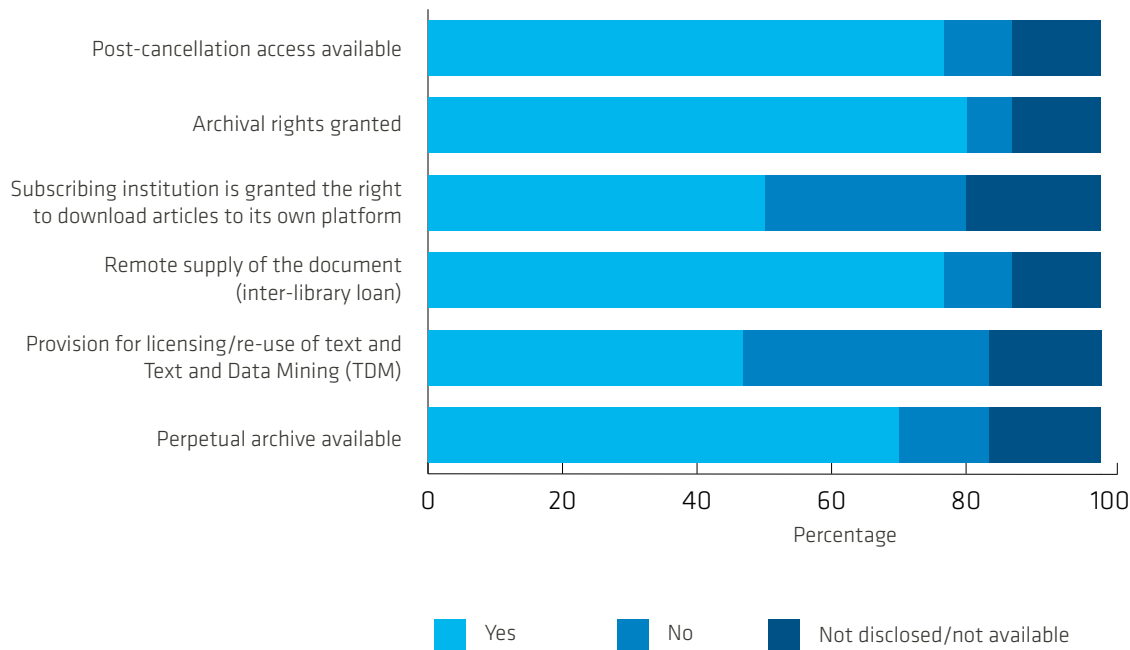
Figure 37. Springer journals consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 24/30.

Post-cancellation, archival rights, inter-library loan and perpetual archive were the most frequent associated rights granted for Springer journals, and reported in at least 70% of cases (Figure 38).

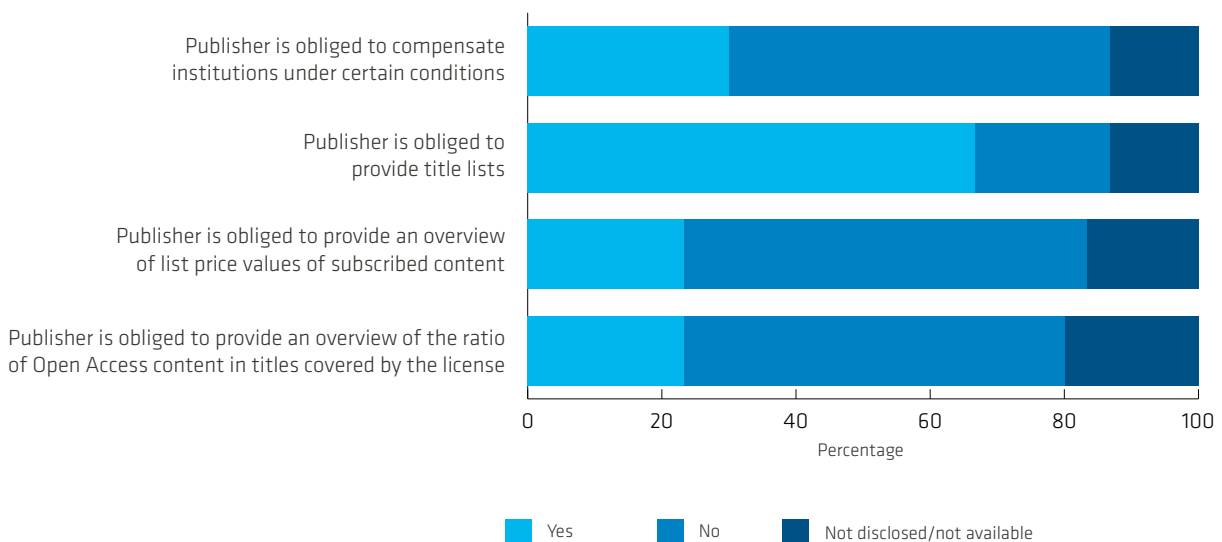
Figure 38. Springer journals associated rights granted



Number of contracts: 30/30.

The publisher is obliged to provide title lists in 67% of the Springer journals contracts, (Figure 39). The other obligations reported were only contractual in 23%-30% of the contracts reported.

Figure 39. Springer journals publisher obligations

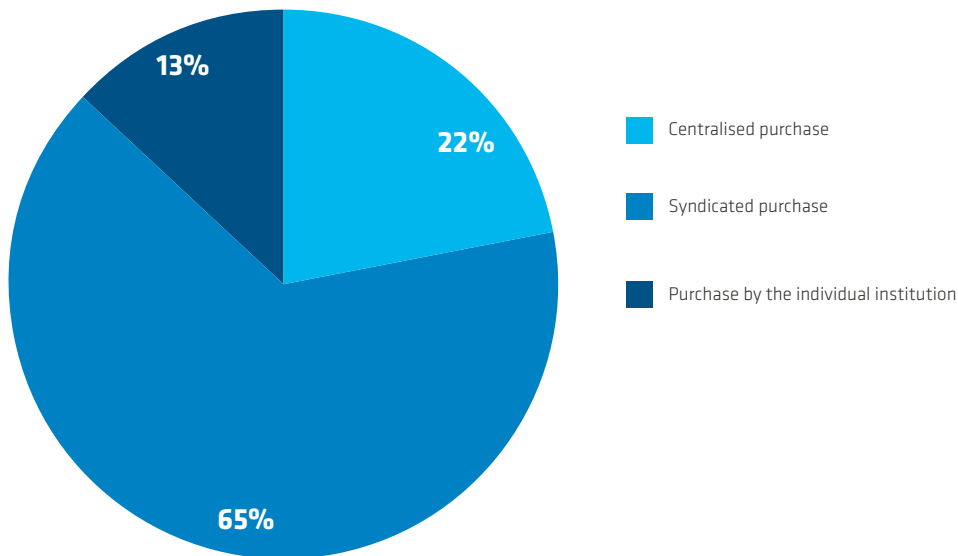


Number of contracts: 30/30.

5.5. TAYLOR & FRANCIS

Six of the 23 reported Taylor & Francis contracts were offset agreements and the remaining 17 were subscriptions. Of these contracts, 65% were syndicated and 22% were centralised, as shown in Figure 40.

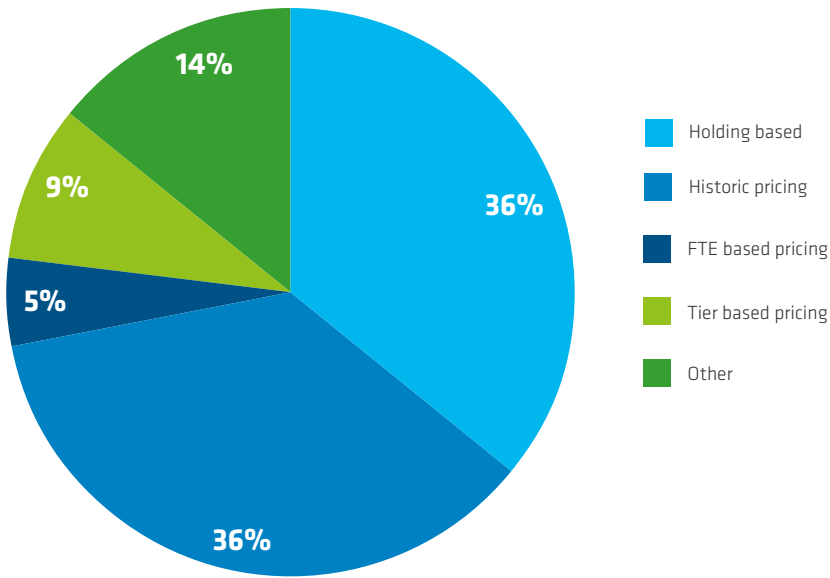
Figure 40. Taylor & Francis purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 23/23.

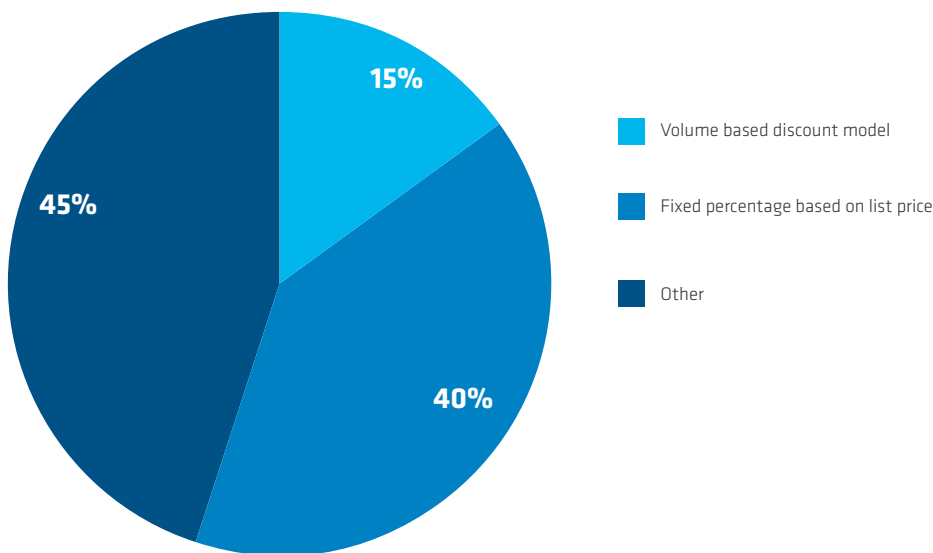
Holding based and historic based pricing were both used in 36% of Taylor & Francis contracts, as shown in Figure 41. The 'Other' category represents situations in which a mix of different models was used, for example, holding and historic pricing. The most common discount model was a fixed percentage based on list price (40%), as shown in Figure 42. The 'Other' category reported in 45% of these contracts covered situations including historic discounts, different discount amounts for different institutions or products, or situations in which discounts were not applicable.

Figure 41. Taylor & Francis pricing model



Notes: holding based is defined as being when the price of an eJournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an eJournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an eJournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an eJournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 22/23.

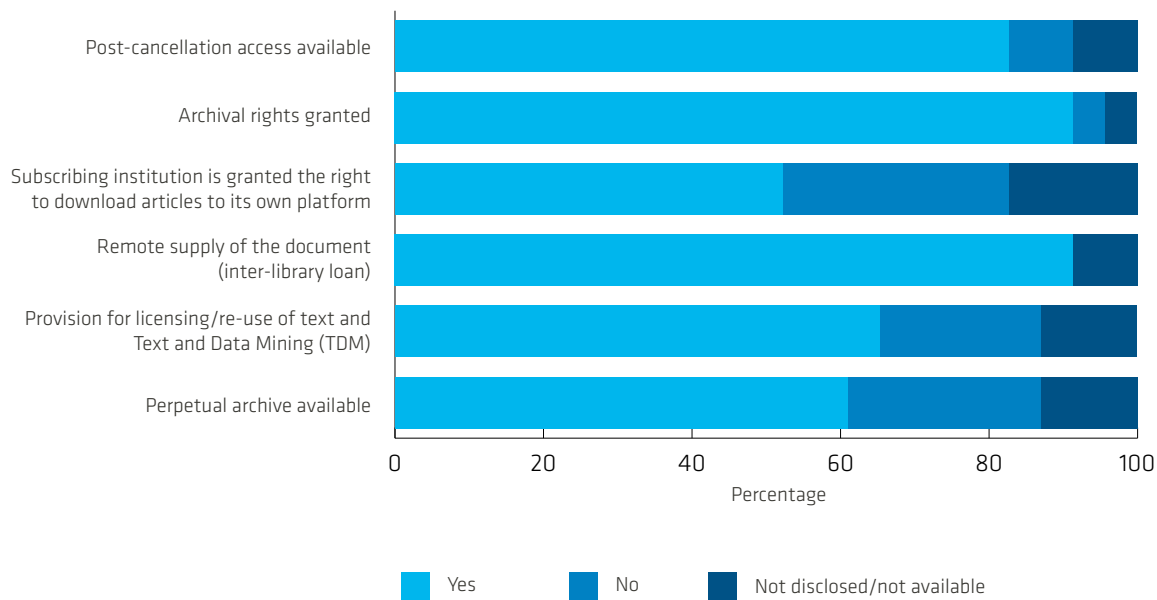
Figure 42. Taylor & Francis consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 20/23.

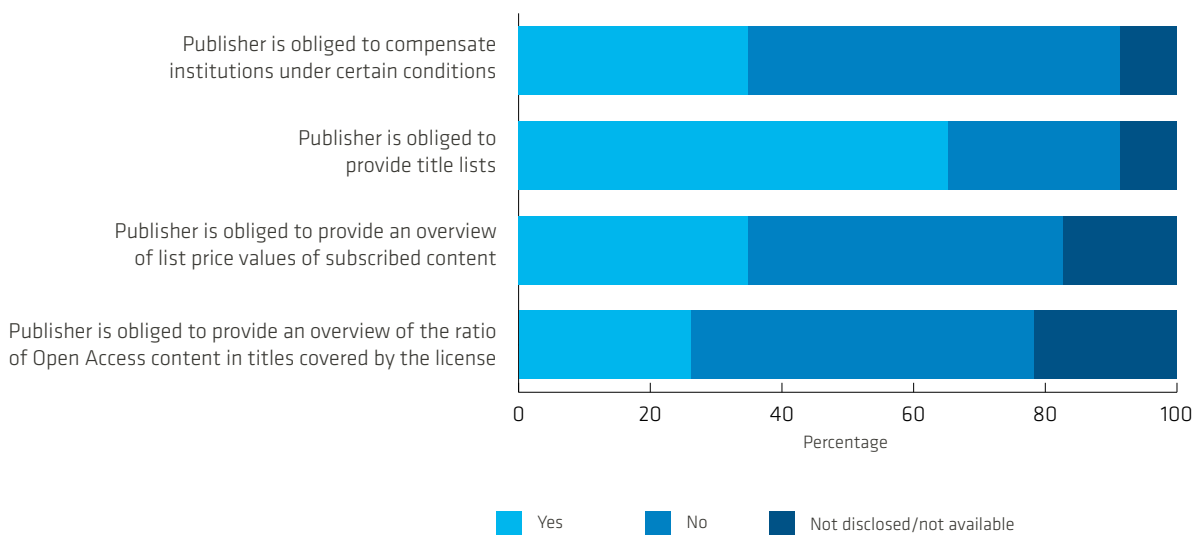
Except for the right to download articles onto the institution's own platform, all associated rights were granted in at least 60% of the Taylor & Francis contracts reported (Figure 43). This publisher was obliged to provide title lists in 65% of the reported contracts. All of the other obligations shown in Figure 44 applied in only 26%-35% of these contracts.

Figure 43. Taylor & Francis associated rights granted



Number of contracts: 23/23.

Figure 44. Taylor & Francis publisher obligations

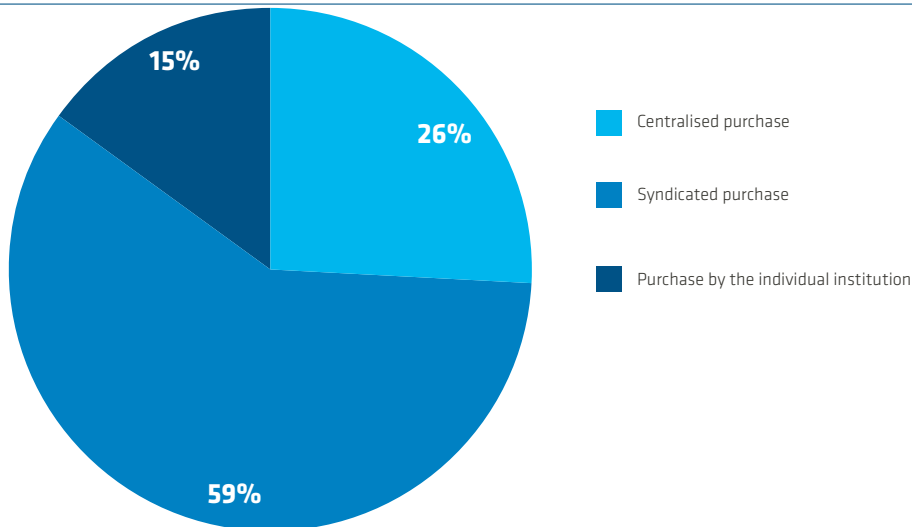


Number of contracts: 23/23.

5.6. WILEY

Three of the 29 contracts reported for Wiley were offset agreements and the remaining 24 were subscriptions. Syndicated purchases were used in 59% of these contracts while centralised purchases represented 26%, as shown in Figure 45.

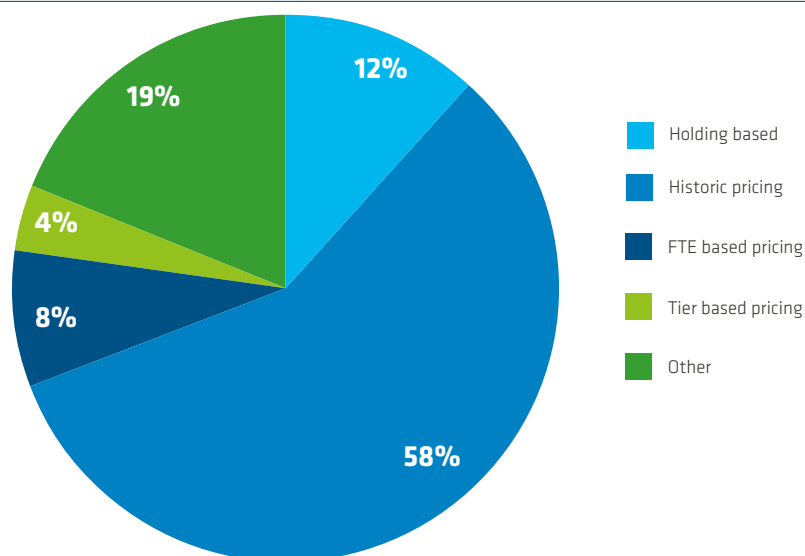
Figure 45. Wiley purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 27/29.

Historic pricing was used in 58% of the Wiley contracts reported. Holding, FTE and tier based pricing were much less common. The 'Other' category covered situations in which a mix of different discount models was used.

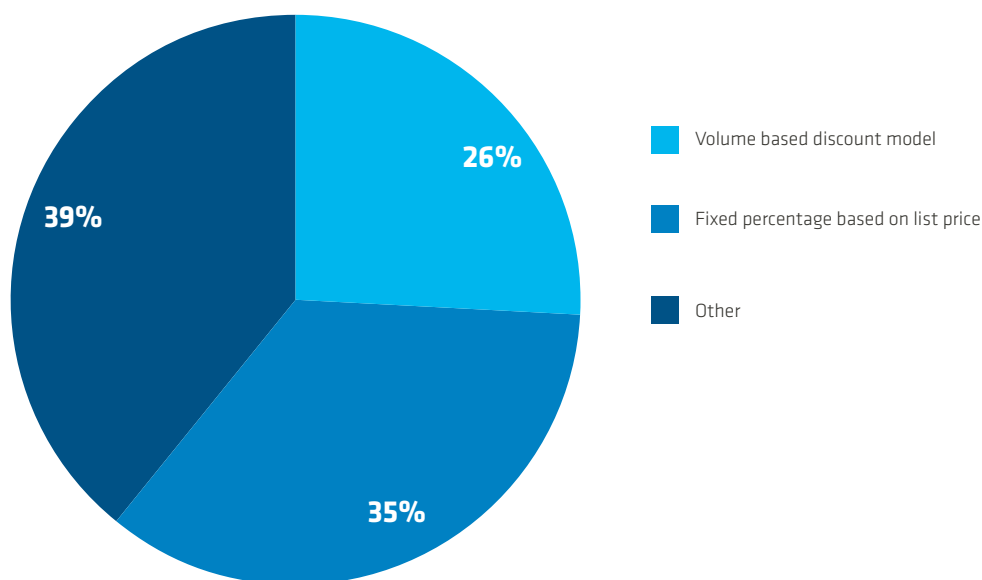
Figure 46. Wiley pricing models



Notes: holding based is defined as being when the price of an ejournal collection relates to the institution's active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an ejournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year's price plus a percentage increase. FTE based pricing is defined as when the price of an ejournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an ejournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 26/29.

A discount based on a fixed percentage was applied in 35% of contracts, while volume-based discounts were used in 26% of these agreements, as shown in Figure 47. The 'Other' category mostly covered situations in which no discount was applied, a flat fee was used, or discounts were based on a mix of several criteria (for example, FTE, use, cost per download).

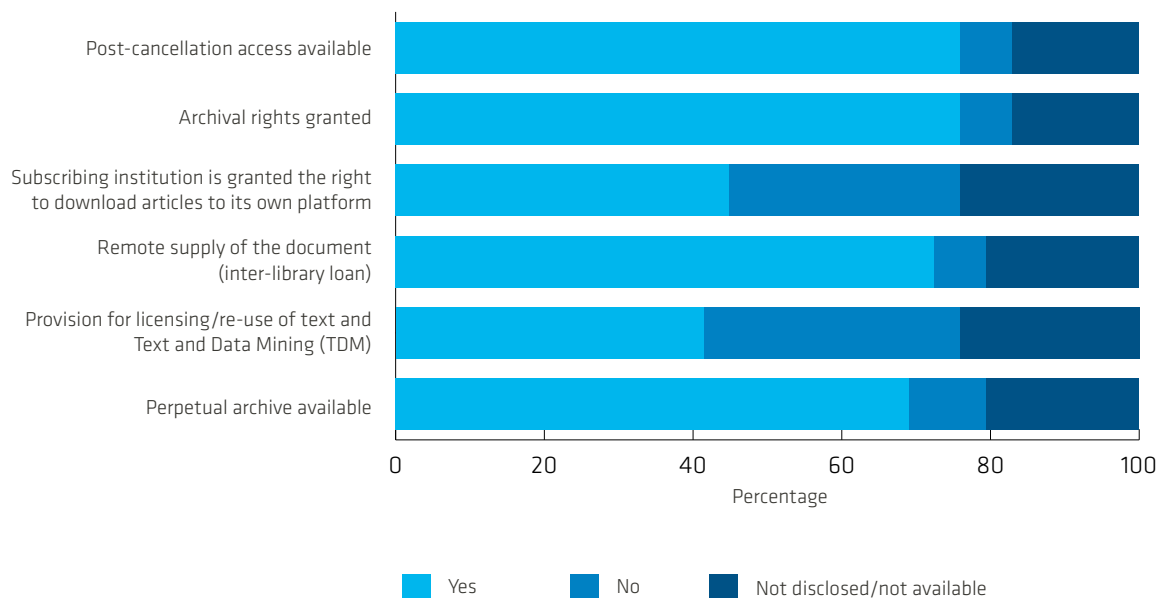
Figure 47. Wiley consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 23/29.

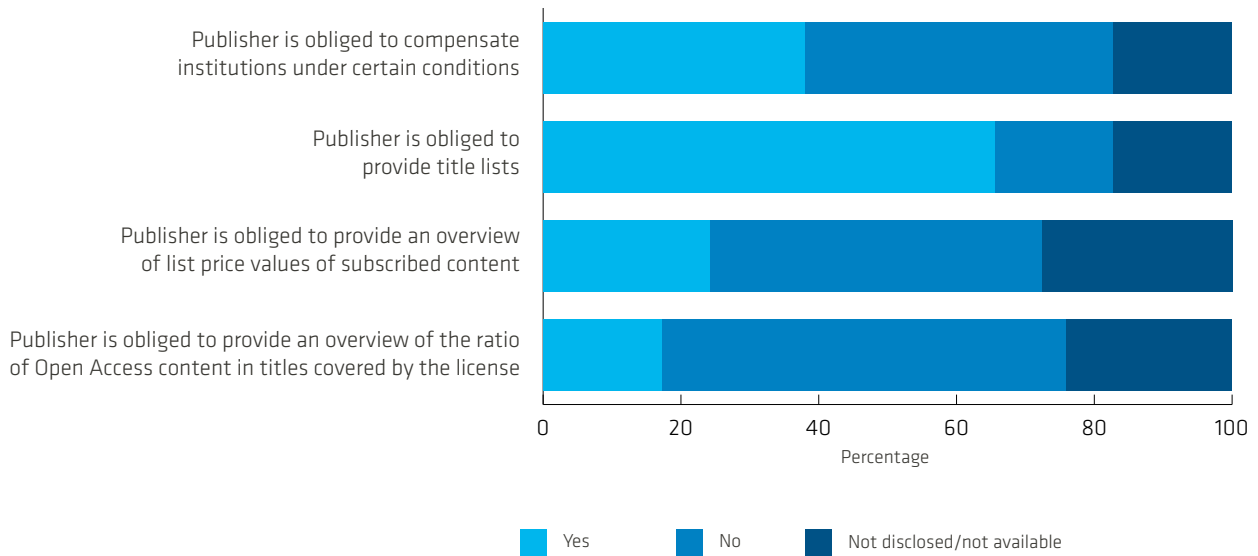
TDM provisions and the right to download articles onto the institution's own platform were the least common associated rights granted under Wiley contracts at 41% and 45%, respectively, (see Figure 48). The obligation to provide title lists was stipulated in 65% of reported contracts, and to compensate institutions in specific circumstances (usually due to down time or service interruptions) applied in 38% of the cases reported (Figure 49).

Figure 48. Wiley associated rights granted



Number of contracts: 29/29.

Figure 49. Wiley publisher obligations

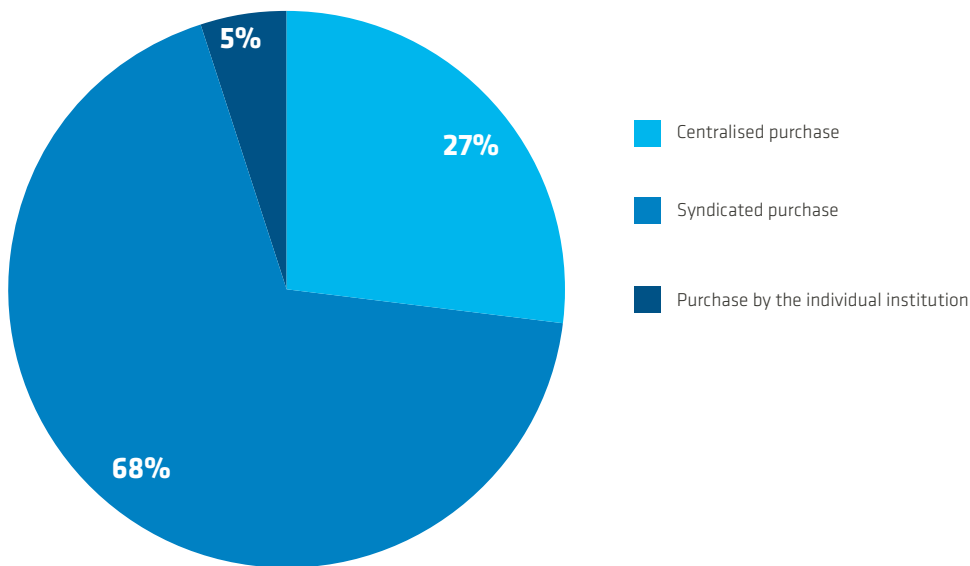


Number of contracts: 29/29.

5.7. AMERICAN CHEMICAL SOCIETY

Two of the 24 American Chemical Society contracts reported were offset agreements or included some open access elements. The remaining 22 contracts were subscriptions. Syndicated purchases applied in 68% of these cases and centralised purchases in 27%, as shown in Figure 50.

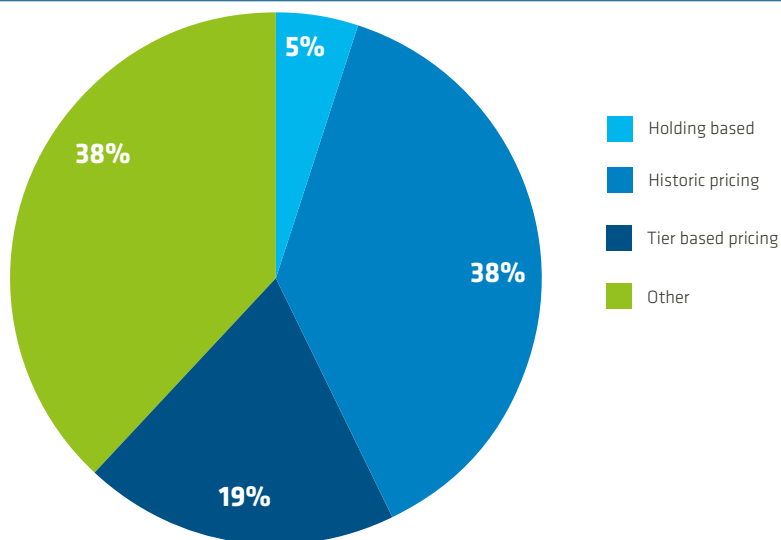
Figure 50. American Chemical Society purchasing models



Notes: centralised purchase is defined as the use of centralised funding with no recouping from institutions. Syndicated purchase is defined as purchases that the consortium performs on behalf of institutions before recouping its costs from the institutions. Purchase by the individual institution is the negotiation of contract terms at consortium level followed by direct purchase by the institutions. Number of contracts: 22/24.

The most common pricing model used in this publisher’s contracts was historic pricing, (38%, as shown in Figure 51). The ‘Other’ category covered a mix of different pricing models and a specific formula used by this publisher combining different criteria.

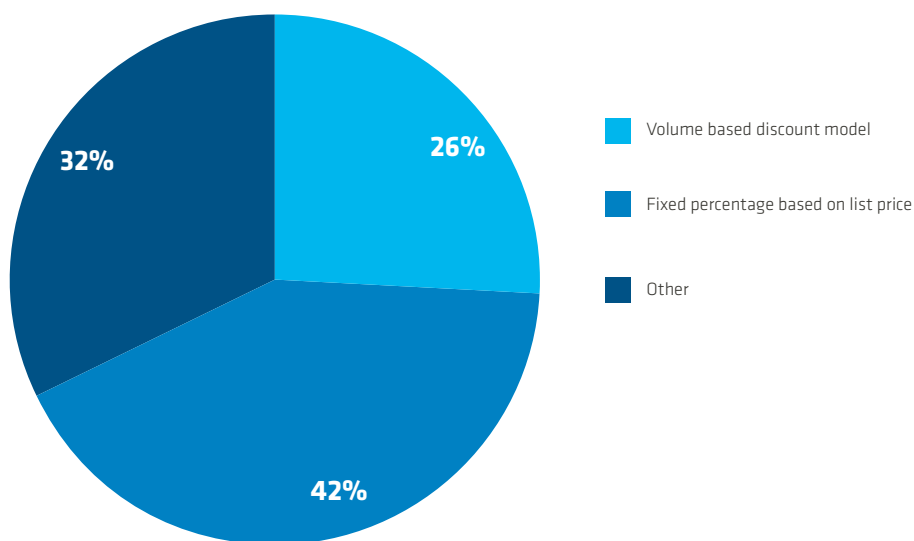
Figure 51. American Chemical Society pricing model



Notes: holding based is defined as being when the price of an eJournal collection relates to the institution’s active or historic subscriptions to individual titles included in that collection. Historic pricing is defined as when the price of an eJournal collection was once linked to specific parameters (for example, holdings) but now simply represents last year’s price plus a percentage increase. FTE based pricing is defined as when the price of an eJournal collection relates to the number of Full-Time Equivalent (FTE) users who access the content. Tier based pricing is defined as when the price of an eJournal collection relates to institutional categories, characterised by one of several parameters (for example, institutional type, Carnegie classification, publication output). Number of contracts: 21/24.

As shown in Figure 52, a fixed percentage discount based on list price was the most common discount mechanism applied: in 42% of the contracts reported. The ‘Other’ category covered situations in which no discount applied, or several criteria were used to calculate the discount value provided by this publisher.

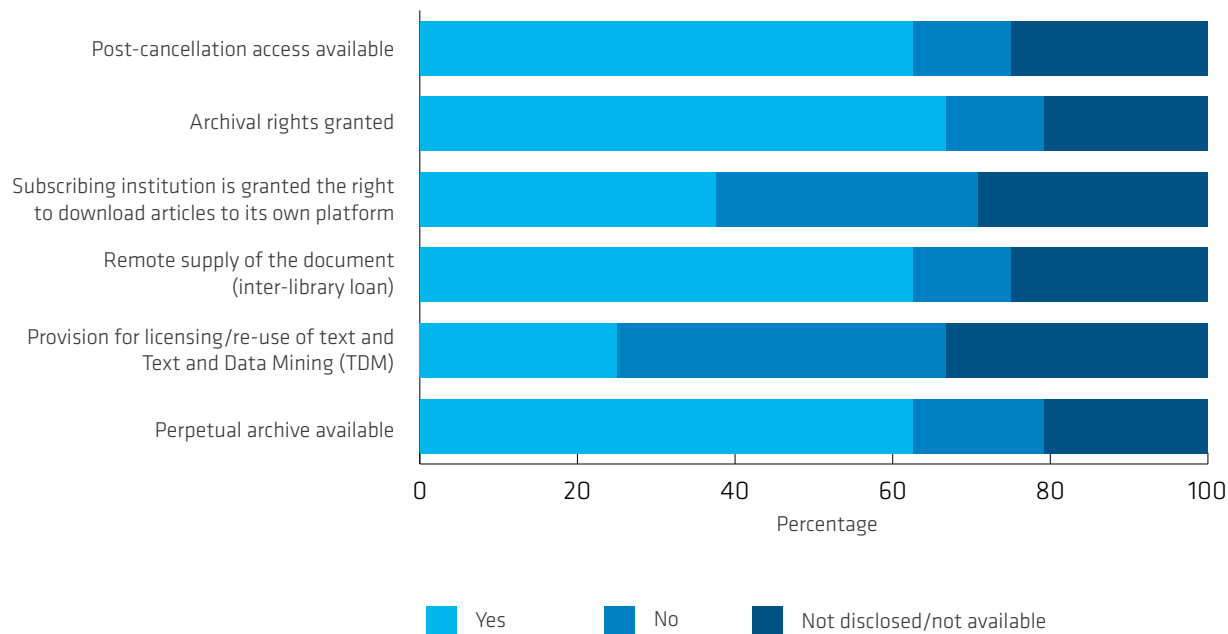
Figure 52. American Chemical Society consortium discount model



Notes: a volume based discount model increases the discount as either the number of institutions taking out a license increases and/or the value of the license increases. The fixed percentage based on list price model is when members are offered a product at the list price minus a fixed percentage. Number of contracts: 19/24.

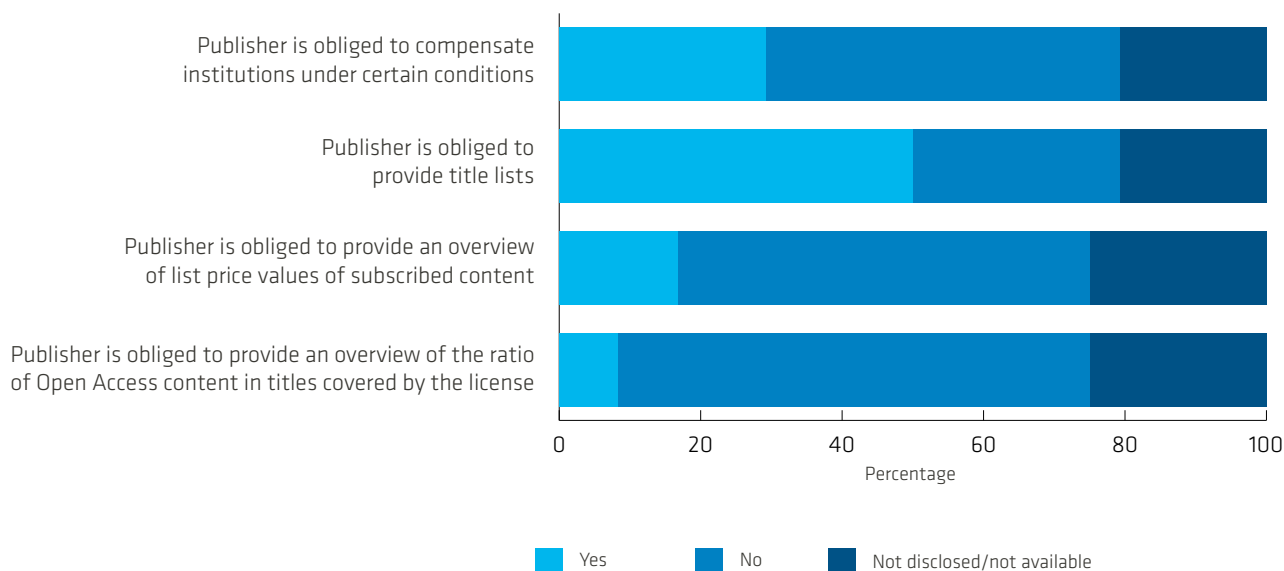
Post-cancellation access, archival rights, inter-library loan and perpetual archival rights were granted in over 60% of contracts. TDM provisions were only included in 25% of American Chemical Society contracts (Figure 53). The obligation to provide title lists was reported in 50% of contracts, while the obligation to compensate institutions in specific circumstances was reported in 29% of contracts. The other obligations covered by the survey were much less common (Figure 54).

Figure 53. American Chemical Society associated rights granted



Number of contracts: 24/24.

Figure 54. American Chemical Society publisher obligations

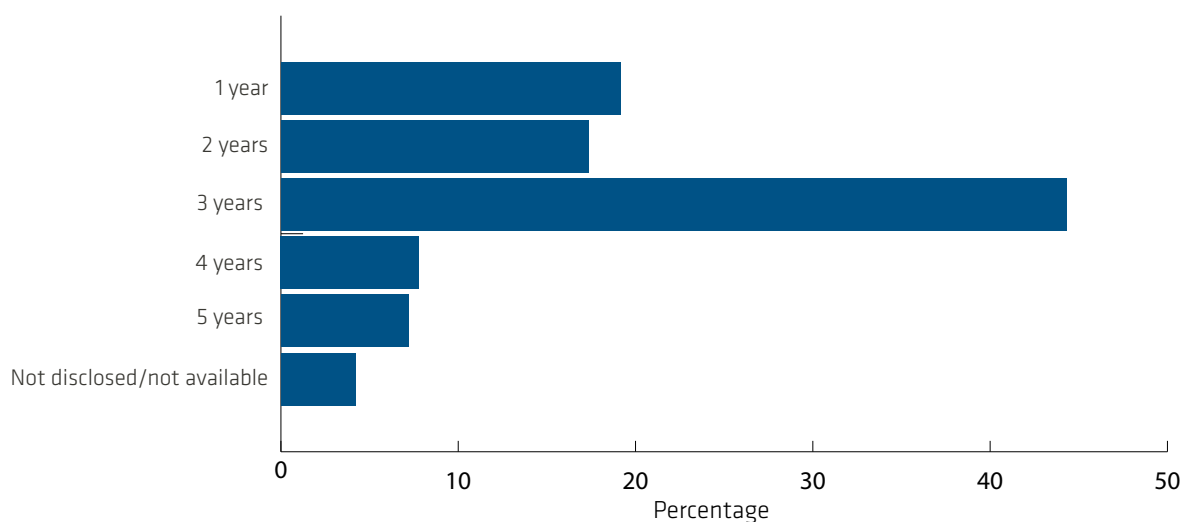


Number of contracts: 24/24.

5.8. CONTRACT DURATION

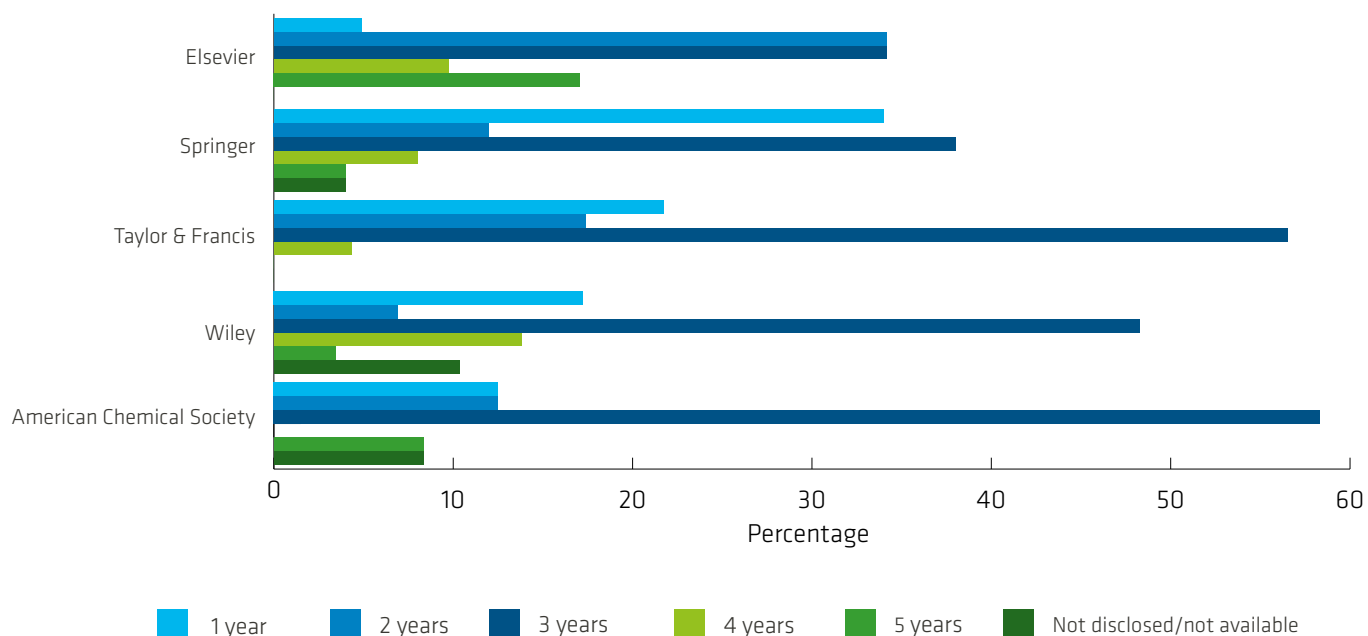
Figure 55 shows the overall duration of all contracts with the five large publishers reported (a total of 167 contracts). Most contracts last between one and three years, and three-year contracts were the most common instruments (44%). The pattern is identical in Figure 56, which shows the disaggregated data by publisher.

Figure 55. Overall contract duration



Number of contracts: 167/167.

Figure 56. Contract duration by publisher

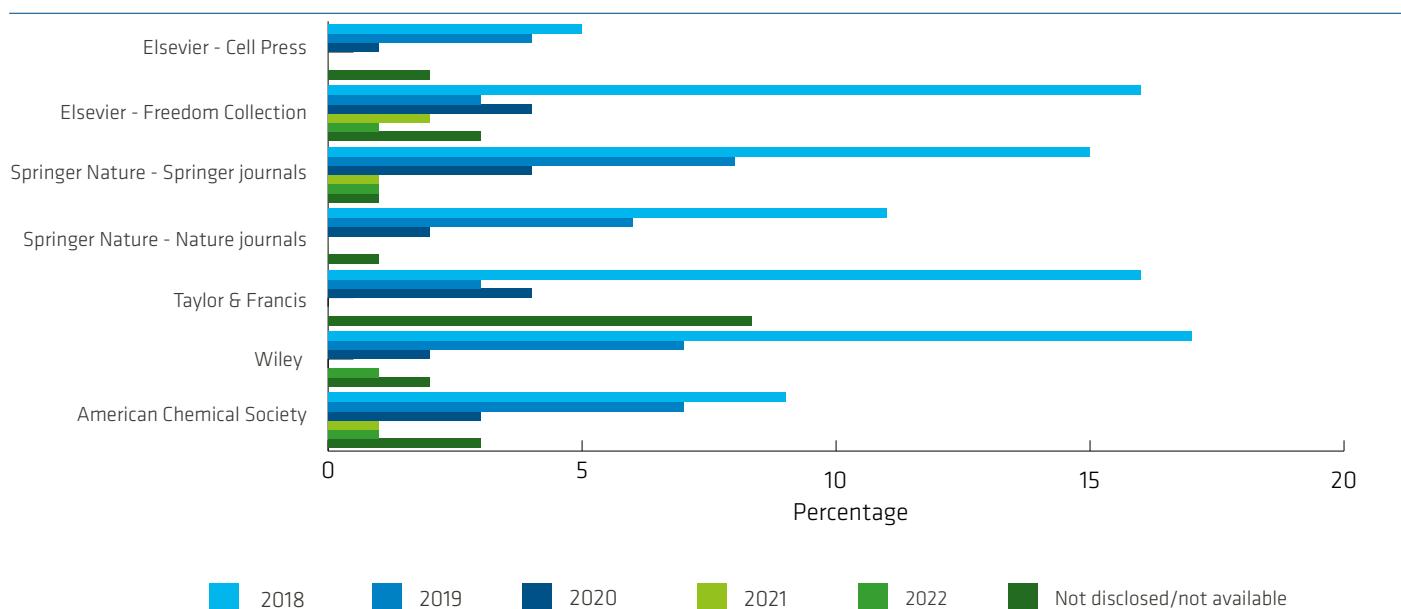


Number of contracts: 167/167.

5.9. CONTRACT RENEGOTIATIONS

Figure 57 shows the end year stated in the contracts with the five large publishers reported in this survey. It shows that most of these contracts ended in 2018 or will end during 2019. Contracts ending after 2020 are much less common.

Figure 57. Big Deal contract end years per publisher



Number of contracts: 167/167.

5.10. OTHER CONTRACTUAL METRICS

The EUA Big Deals Survey included questions about the cost per download for the different products, price per article⁸ and APCs. Costs per download are shown in Table 4. Although not all consortia were able to provide this data, the results show huge variations in the cost per download across European consortia, for all of the publishers examined.

Table 4. Cost per download per publisher

Cost per download	Minimum and maximum reported
Elsevier	
Cell Press	€0.64 – 3.12
Freedom Collection or other Elsevier product	€0.79 – 2.68
Springer Nature	
Nature	€0.8 – 9.5
Springer	€0.27 – 4.16
Taylor & Francis	
	€0.69 – 7.34
Wiley	
	€0.4 – 6.5
American Chemical Society	
	€0.72 – 5.11

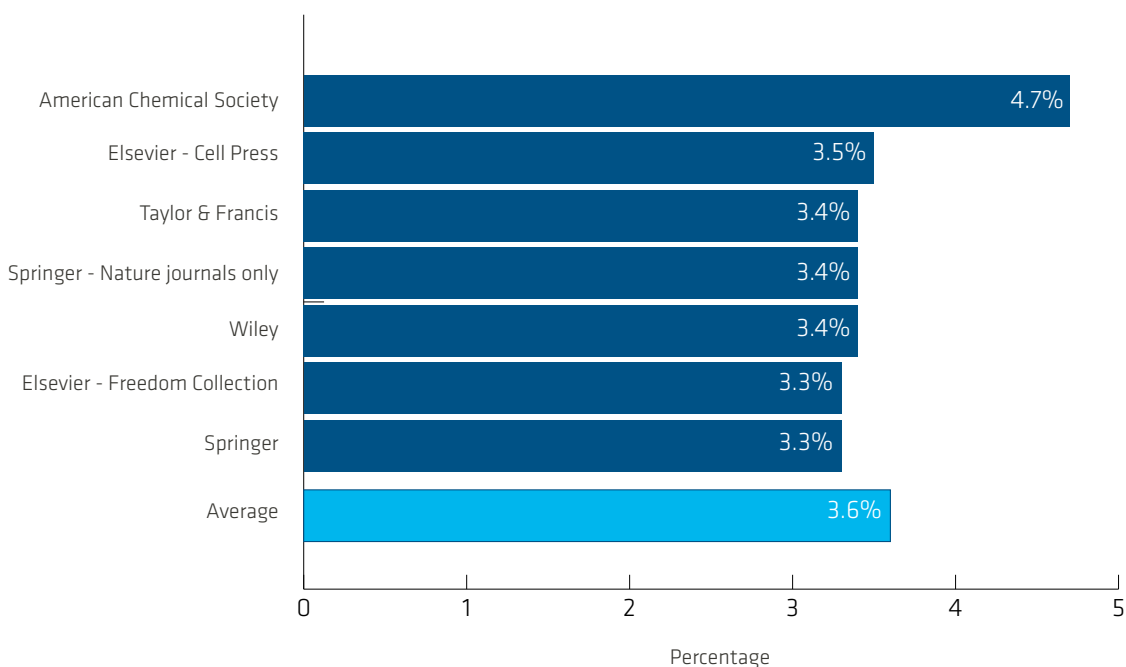
⁸ Price per article was defined as the cost of the annual license/number of articles per year [the number of articles is based on the number of corresponding authors in the relevant country].

The results also showed that price per article is only used at a few European consortia. Due to the limited availability of this data, this metric has not been presented in the current report. APC costs were also seldom reported. This is partly as the majority of contracts reported only covered subscriptions (see Fig.6). In addition, almost all consortia across Europe noted difficulty monitoring APC costs. This is due to a variety of reasons, mainly: 1) the different university procedures used to collect APC data (for example, different accounting codes used for APCs at the same institution, making it difficult to compile data at institutional level); and 2) where data is available at institutional level, it may not be aggregated at national or consortium level. It is therefore very difficult to accurately assess the amount spent by researchers, research funders and institutions on APCs.

5.11. INCREASE IN PERIODICAL PRICES

Figure 58 shows the average annual Big Deals percentage increase by publisher, which typically varies between 3.3% and 4.7%. The average annual percentage increase is 3.6%.

Figure 58. Annual percentage increase per publisher



Considering that a total cost of €475,267,400 per year was reported for the five large publishers analysed (estimated in 2018), the prices for the next three years were forecast using the median increase (rather than the simple average, as the latter is more sensitive to extreme values). This estimate yielded a **projected overall cost of €1,418,122,895 for the next three years.**

6 The cost of Big Deals in Europe

This chapter presents the overall consortia costs with periodical Big Deals – extending beyond the five large publishers (Elsevier, Springer, Taylor & Francis, Wiley and the American Chemical Society) addressed in detail in the survey. In addition, the relationship between consortia costs with periodical Big Deals for the five large publishers under analysis and GDP per capita is also explored.

6.1. OVERALL CONSORTIA EXPENDITURE ON PERIODICALS BIG DEALS

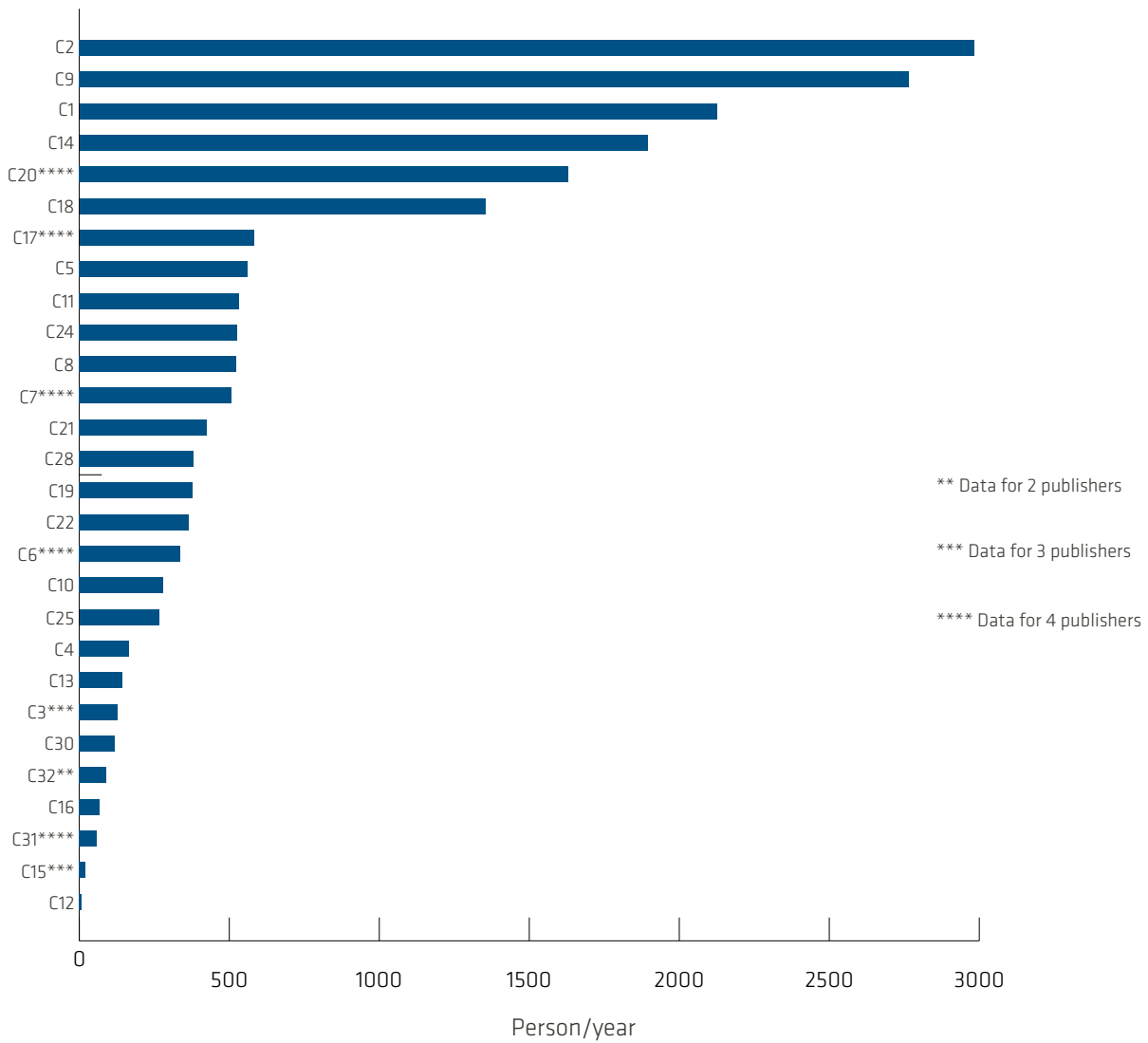
Consortia that participated in this survey were asked about the amount spent on all their periodicals Big Deals, going beyond the five large publishers analysed in detail. The 31 consortia, representing 30 European countries reported a total annual spend of €726,350,945 on periodicals Big Deals. The proportion of these costs covered by universities is about 72%, or approximately €519,973,578.

6.2. BIG DEALS SPEND ACROSS EUROPEAN COUNTRIES

The periodicals Big Deals costs for the five large publishers (Elsevier, Springer, Taylor & Francis, Wiley and the American Chemical Society) reported by consortia were compared to the gross domestic product (GDP) per capita.⁹ Figure 58 shows the number of people who need to work for one year (person/year) given a certain GDP per capita, in order to achieve the same monetary value as the cost of periodicals Big Deals with the five big publishers in that country. In some countries, periodicals Big Deals costs were only available for two, three, or four publishers, rather than the total five publishers analysed in the survey; these cases are annotated in Figure 59.

⁹ 2017 GDP per capita was retrieved from Eurostat. Eurostat defines GDP as “an indicator for a nation’s economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly different in absolute size.”

Figure 59. Big Deal expenditure and GDP per capita



Notes: ** Data only available for 2 publishers; *** Data only available for 3 publishers; **** Data only available for 4 publishers

7 Conclusions

The first EUA Big Deals Report provided a first European-level mapping of major scholarly publishing contracts. The current report gives an updated view of the Big Deal landscape in 2017-2018, while focusing on five of the largest publishers operating in the scholarly publishing market.

The conclusions of the second Big Deals Survey are divided into two parts: an overview of the Big Deals landscape in 30 European countries and the search for better agreements through the so-called “transformative agreements”. For each part, there is a summary of the main survey findings and policy messages are laid out in the broader context of developments in Open Science and scholarly communication. These are followed by specific recommendations for negotiating consortia and universities.

7.1. AN IMPROVED OVERVIEW OF THE BIG DEALS LANDSCAPE

Improving and repeating the Big Deals Survey clearly enhanced the speed of data collection, the quality of the data, and the level of information about the European Big Deal contract landscape. In the [previous report](#), EUA recorded a total expenditure of €421 million for periodicals, databases and e-books by 28 consortia. The current survey, with a higher response rate and more accurate data collection, showed that at least €1.025 billion total is spent every year in electronic resources (including periodicals, databases, e-books, etc.) in the 31 consortia surveyed in 30 European countries. This is an increase of roughly 250% in relation to the figure obtained in the first Big Deals Survey. A major twofold increase is observed for periodicals, which account for €726 million across all consortia and of which €475 million alone are paid to five of the largest publishers.

The global STM market was valued at €22.8 billion, in 2017, of which 27% or approximately €6.5 billion is generated in EMEA countries.¹⁰ The figure of €1.025 billion would therefore represent approximately 17% of this market.

Although the Big Deal contracts vary across consortia, in terms of specific journal collections, service levels and contract provisions, the data collected in this survey provides a comprehensive overview of the types of major contracts and their characteristics across European consortia. In addition, the data contributes to increased transparency of costs and understanding of the Big Deal landscape.

However, trends relating to the relationship between contract expenditure and other indicators are not straightforward. For example, costs per download reported by consortium and publisher can be up to 10 times higher or lower for contracts with the same publisher. In addition, and as in the previous report, while no clear relationship between Big Deal expenditure and GDP per capita could be determined, national differences remain striking (see Figure 59).

¹⁰ Figures cited by Johnson, R., Watkinson, A. & Mabe, M. (2018). The STM Report. An overview of scientific and scholarly publishing. 5th edition. International Association of Scientific, Technical and Medical Publishers, The Hague. https://www.stm-assoc.org/2018_10_04_STM_Report_2018.pdf

It is important to recall that the information provided by the consortia far from covers the complete picture of the European Big Deal market. The data collected in this survey does not cover a) costs of APCs or other publishing costs; b) contracts with smaller publishers; c) individual contracts between institutions, or commercial entities, and publishers. The data presented here includes only a select group of national-level negotiating consortia responsible for a majority of expenditures within their countries. It does not, however, include regional or other smaller consortia. Finally, some of the surveyed consortia could only provide partial information on their Big Deal contracts, e.g. regarding their costs due to legal constraints.

The figure of €1.025 billion annually for electronic resources, however, represents a major sum. The available data shows that the surveyed consortia spend more than 726 million per year for periodicals alone. This amount is fully paid by public funds and the bulk of these costs (72%) are borne from university budgets. Most consortia also report a clear intention to improve cost control or to eventually reduce costs. This objective clashes with the observed average annual cost increases of 3.6%. The negative effects of these increasing costs will be most challenging for higher education systems with stagnant or declining funding.¹¹

Measures to increase the transparency of Big Deal contracts are still very much needed. The data shows that Freedom of Information laws do exist in many countries, although some private contracts or details may not be covered by this legislation (see Figure 9). In other countries, public contracts must be made available by default. Different jurisdictions require different approaches to this challenge. Where the law does not guarantee transparency, negotiating consortia should strive to attain it in line with the LIBER principles for negotiations with publishers¹² and the ESAC Guidelines for Transformative Agreements.¹³ Initiatives such as the ESAC Registry for transformative agreements are also important to increase transparency.

As concerns the governance of negotiating consortia, a higher representation of university leadership could be observed: In 2017-2018, 58% of respondents claimed that institutional leadership participate in the negotiation process of Big Deals in some form (e.g. strategic role, negotiating role), compared to only 30% in the previous survey. In 24% of the cases in which the institutional leadership is involved, they do so in a capacity of lead negotiator. Still, there is much room for improvement in this area. University leadership needs to be actively engaged in negotiations, as they are essential in raising institutions' profiles in negotiations and in maintaining scientific sovereignty in the scholarly community. The need for a stronger engagement in Big Deal negotiations also extends to the leadership of other organisations that are members of the negotiating consortia, such as research institutes or hospitals.

➔ Key figures on Big Deals costs:

- At least 1.025 billion euros are spent overall, every year in electronic resources (including periodicals, databases, e-books) by 31 consortia surveyed in 30 European countries.
- Periodicals alone account for 726 million euros per year across all consortia. 72% of these costs are borne from university budgets.
- 475 million euros per year are spent in periodical Big Deal contracts with five of the largest publishers (Elsevier, Springer Nature, Taylor & Francis, Wiley, American Chemical Society).
- Contracts with the largest five publishers are subject to an average annual cost increase of 3.6%.

11 Bennetot Pruvot, E., Estermann, T. & Lisi V. (2019). EUA Public Funding Observatory Report 2018. <https://eua.eu/resources/publications/823:eua-public-funding-observatory-report-2018.html>

12 LIBER (2017). Open Access: Five Principles for Negotiations with Publishers. 7 September 2017. <https://libereurope.eu/blog/2017/09/07/open-access-five-principles-for-negotiations-with-publishers/>

13 ESAC (n.d.). Guidelines for Transformative Agreements. <https://esac-initiative.org/about/transformative-agreements/guidelines-for-transformative-agreements/>

Recommendations:

- Despite their substantial contribution to Big Deals, universities are yet to exercise market power commensurate with their financial contributions. Universities and negotiating consortia need to be aware of this, of the causes of and ways to improve the situation. Part of the challenge may be due to the still confidential nature of most Big Deal contracts and to the low levels of information shared between consortia. Changes in national and European regulations, platforms to increase dialogue between negotiating consortia, more transparency and greater Big Deal contract disclosure are all important ways to improve leverage when it comes to negotiating Big Deals.
- University leadership should be more involved in Big Deal negotiations, supported by experts in this area, such as the university librarians or national librarians. Given the importance of Big Deal negotiations for university budgets, they require both a political and a technical commitment. It will only be possible for universities to transform the current situation into a fairer and more competitive scholarly publishing system if there is more involvement from high-level leadership.
- EUA recommends to negotiating consortia to use the ESAC Registry, in order to contribute to increased transparency and enable information sharing on Big Deal contracts across Europe.

7.2. THE QUEST FOR TRANSFORMATIVE AGREEMENTS

In response to the ever-increasing prices in subscriptions and publisher related services, the quest for the so-called “transformative publishing agreements” started several years ago. “Plan S” has further triggered a debate about Open Access in general and accelerated the need for the type of deals that contain provisions for Open Access publishing in the same contractual framework. EUA’s data clearly emphasises that most consortia have the objective of brokering such agreements. A higher number of consortia, compared to the first survey, already indicated that they could conduct APC monitoring – an increase from 11% to almost 20%. Twenty-five percent of contracts include other monitoring mechanisms. Furthermore, 58% of consortia are considering the inclusion of APCs in future agreements, a decline of 5% compared with the first survey. However, this decline may be attributed to the increase of contracts with provisions or the evolution of the sample. There is, thus, an evident preference for combining licensing with publishing in future agreements, which is supported by the stipulation that “transformative agreements” will be one route to Plan S-compliant Open Access publishing.

Nevertheless, it is important to note that most European consortia currently do not monitor APC costs. They note that this is often difficult to implement at the university level, as most universities have no standardised or centralised accounting procedure for APCs. While some institutions are in the process of implementing accounting or other systems to monitor APCs, others are not yet at that stage. Still, for most countries, it is difficult, or even impossible, to accurately know how much is spent on APCs.

Consortia are also aware of the benefits and possible pitfalls of “read-and-publish” agreements. This is often related to concerns about continued vendor lock-in and limited competition in a scenario in which publishing and licensing payments are combined in Big Deals. Depending on the internal cost allocation mechanisms of consortia, costs for individual, publication-intensive organisations could increase dramatically in such a scenario.¹⁴ This is an important drawback, despite estimates that show that the possibility of switching to APC payments or similar models could be a viable, potentially cost-saving alternative to subscription payments at the system level.¹⁵ Universities and negotiating consortia should therefore continue to invest in consortia-level and institutional-level monitoring systems for APCs to allow better estimation of the possible economic benefits or drawbacks of APC models or publish-and-read models with fixed prices per published article.

¹⁴ Green, T. (2019). Is open access affordable? Why current models do not work and why we need internet-era transformation of scholarly communications. *Learned Publishing*, 32: 13-25. <https://doi.org/10.1002/leap.1219>

¹⁵ Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals’ business model for the necessary large-scale transformation to open access. Max Planck Digital Library Open Access Policy White Paper. <http://hdl.handle.net/11858/00-001M-0000-0026-C274-7>

APC-based models are not necessarily favourable for countries with policy preferences for Green Open Access, or economically advantageous for all countries. Several consortia have also noted that predominance of the APC model may hinder the development of alternative publishing models.

Recommendations:

- Universities and consortia must improve their ability to monitor all scholarly publication costs, including APCs and other costs, in order to gain a more complete view of the national and European publishing markets. It is therefore critical to establish and improve such monitoring mechanisms at institutional and national levels to be able to assess the scale of spending on scholarly publications.

While the report mainly addresses the costs of subscriptions to scholarly publications, namely periodicals, it is becoming clearer that commercial publishers are transforming their business model away from subscription revenues. The RELX Group already states that its “number one strategic priority is the organic development of increasingly sophisticated information-based analytics and decision tools.”¹⁶ This is supported by research on the mergers and acquisitions of major publishers, which pose entirely new risks of monopolistic behaviour for universities and other research organisations.¹⁷ The uninterrupted high profit margin of the RELX Group,¹⁸ supported by publicly funded Big Deal subscriptions, continues to fuel boycotts of the publisher in countries including Germany, Sweden, Hungary and the United States.¹⁹

The steady increase of Big Deal contract costs and associated conditions, namely the low-level of Open Access provisions included in such contracts, are a cause of concern for EUA and its members, as the trend of concentration and dysfunctional features of the publishing market must be reversed.

¹⁶ RELX Group (n.d.). Strategy. <https://www.relx.com/our-business/strategy>

¹⁷ SPARC (2019). Landscape Analysis: The Changing Academic Publishing Industry – Implications for Academic Institutions. <https://osf.io/preprints/lissa/58y-hb/download>; Posada, A., & Chen, G. (2018). Inequality in Knowledge Production: The Integration of Academic Infrastructure by Big Publishers. ELPUB 2018, Jun 2018, Toronto, Canada. <https://doi.org/10.4000/proceedings.elpub.2018.30>; Ellis, L. (2019). Elsevier’s Presence on Campuses Spans More Than Journals. That Has Some Scholars Worried. The Chronicle of Higher Education, 3 April 2019. <https://www.chronicle.com/article/Elsevier-s-Presence-on/246048>

¹⁸ Page, B. (2019). Elsevier records 2% lifts in revenue and profits. The Bookseller, 21 February 2019. <https://www.thebookseller.com/news/elsevier-records-2-lifts-revenue-and-profits-960016>

¹⁹ Krell, G. (2019). Why UC split with publishing giant Elsevier. Berkeley News, 28 February 2019. <https://news.berkeley.edu/2019/02/28/why-uc-split-with-publishing-giant-elsevier/>. For an updated registry of boycotts see SPARC (n.d.). Big Deal Cancellation Tracking. <https://sparcopen.org/our-work/big-deal-cancellation-tracking/>

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The Association provides a unique expertise in higher education and research as well as a forum for exchange of ideas and good practice among universities. The results of EUA's work are made available to members and stakeholders through conferences, seminars, websites and publications.