

Evaluation of offset agreements – report 3: Springer Compact

This document is the third report of five on the evaluation of offset agreements in Sweden and will focus on the agreement with Springer called Springer Compact and its outcome during 2017.¹ The evaluation is conducted to examine the effects of Springer Compact regarding economy, administration, researcher attitudes and research dissemination, and make recommendations for future negotiations with Springer Nature and other publishers.

The previous reports were written in Swedish, but the remaining reports will be written in English. Therefore, some of the sections from the previous reports are repeated here to provide a background for the international reader. In addition to this, there is also a section comparing the Swedish Springer Compact agreement to that of three other countries (Netherlands, United Kingdom and Austria) and one society (Max Planck Society).

The report is structured in the following way: below is a short summary. Then the first section presents an introduction, describing open access, offset agreements and the background to why such agreements have emerged, the aim of the evaluation and a brief overview of existing recommendations for negotiating open access with publishers. The next section explains the specific offset model of Springer Compact. The third section makes the comparison between different Springer Compact agreements. The fourth and fifth sections contain the evaluation and recommendations for future negotiations.

Summary

The Springer Compact agreement (SC) currently covers Open Access (OA) publishing in 1705 hybrid journals of Springer Nature and reading of 2110 of the Springer journals available on the SpringerLink platform. The agreement is negotiated by the National Library of Sweden for Swedish institutions within the Bibsam consortium. Forty² Swedish institutions have signed the SC agreement and all articles published with a corresponding author affiliated with one of these institutions are automatically made OA when published in one of the journals covered by the agreement.

Publication output: During 2017 Swedish authors published 1399 OA articles within SC. It is estimated that the number of Swedish OA articles with Springer Nature would have amounted to between 158 and 235 during 2017 if SC had not been implemented. Institutions in the agreement have consistently published 20 % below the number of pre-paid articles within the agreement.

Economy: Depending on the counting method, an average year of SC costs between 42 and 51 % more compared to what the Swedish institutions would have paid for the earlier agreement with Springer (Nature)³. When looking at the Netherlands and the UK who have similar offset agreements, the Swedish and British agreements entailed increased costs while the Dutch offset agreement was achieved without any cost increase. According to Springer Nature the reason for the increased costs in the Swedish and British agreements are to finance the infrastructure needed for a transition to a Read & Publish-model.

Administration: Swedish university administrators have approved 1399 and rejected 85 articles during 2017. According to the results from a survey sent to the administrators, administering SC is not a time-consuming task. To approve an article where the author is clearly affiliated with the institution takes less than two minutes. This workload is to be compared with the effort it would otherwise take each researcher to pay their separate billing, should they choose to publish OA.

Researcher attitudes: Authors express an interest in open access publishing and the SC agreement is seen as an attractive alternative because it makes OA publishing very easy for the authors. Many look favourably on similar agreements with

¹A similar report evaluating Institute of Physics' offset agreement Science Extra will follow as soon as data allows it.

² By 2018, 42 Swedish institutions will have signed Springer Compact.

³ See Section 4.1.1., Table 4 for the different estimates of the Swedish cost had SC not been signed.

other publishers. At the same time, some authors question the economic sustainability of the system supported by such agreements and instead call for lower profits and non-commercial alternatives for academic OA publishing.

Research dissemination: The articles made OA through SC during 2017 have to date (2018-01-09) attracted more online attention than articles published in the same journals the six months prior to SC, as measured by Altmetric Attention scores. Altmetric.com track a variety of digital sources reflecting different levels of interaction or engagement with a publication (ranging from likes and tweets, to citing).

Recommendations: The current deal is costlier than the previous one, and it seems to also be more costly than comparable agreements in other countries. The Bibsam consortium is recommended to consider various models concerning reading and publishing fees in future negotiations, as well as their consequences for Swedish institutions at various levels. The read and publish model has proven disadvantageous for the Swedish institutions, since the institutions in the agreement have published below the estimated number of articles. We argue, as others have argued before us, that a pure pay-as-you-publish model without a reading fee is preferable. If a model including both reading fee and publishing fee is kept, the price of the APC should be negotiated to a lower price than list price, due to the volume of hybrid OA publications pre-paid in SC. Agreeing to a smaller reduction in costs could be motivated if the agreement were to be extended to Springer Nature's gold OA journals to avoid favouring hybrid OA over gold OA.

The purpose of these kind of agreements is to pave the way for a flip of the system from pay-to-read into pay-to-publish. We assume that the infrastructure needed to make this transition is financed by the increased cost in the present agreement, and argue that a future agreement should be based on the cost before SC.

The costs paid by individual institutions in the Bibsam consortium should be reviewed, as the payment levels do not correspond to the publication outcome in 2017. Institutions with low publishing outcome will have large yearly variations in their cost per article. Institutions with no publishing have also had increased costs.

The recommendations from LIBER Europe and ESAC should be followed, especially the parts ensuring transparency of licensing deals.

Conclusion: The evaluation group finds that the advantages of the SC agreement are that it generates more open access publications compared to how many publications would have been published OA without the agreement. It also generates less administration for the individual researchers and prepares the university libraries for a transition from reading fees to publishing fees. The disadvantages are that the agreement increases the total cost for reading and publishing and that it promotes hybrid OA over gold OA.

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1 Introduction

The National Library of Sweden, through the Bibsam consortium, negotiates license agreements for electronic journals and databases on behalf of 85 Swedish universities, university colleges, governmental agencies and research institutes.⁴ Bibsam has negotiated pilot offset agreements with some publishers. The aim is to support a transition to Open Access publishing at controlled costs for the participating institutions.

Evaluations of these offset agreements are conducted based on the agreements, publication data and survey data in order to examine their effects regarding economy, administration, researcher attitudes and research dissemination. The evaluations are conducted by a group of independent researchers on behalf of the Bibsam consortium. The group consists of Henrik Aldberg, Swedish Research Council; Helena Francke, University of Borås; Ulf Kronman, National Library of Sweden; Camilla Lindelöw, National Library of Sweden; Lisa Olsson, Stockholm University (coordinator) and Niklas Willén, Uppsala University.

This section specifies what we mean with Open Access, describes different models for offset agreements, and explains the emergence of offset agreements in context.

1.1 Open Access and Article Processing Charges

Open Access (OA) is here defined as research results that are disseminated online and freely available to everyone⁵. Some publishers charge authors an Article Processing Charge (APC) to publish their research OA. We distinguish between three types of journals:

1. Subscription-based journals where OA publishing is not offered,
2. Hybrid journals where OA is offered against APC,
3. Open access journals⁶ where all publications are OA. There are two types of OA journals:
 - Those where publishing is free of charge
 - Those who charge APCs

In cases when OA journals charge APCs, the fees are in general lower than those of hybrid journals.⁷

1.2 Offset agreements

An offset agreement in this context is a transitional agreement where financing is redistributed from subscription costs to cover the costs of open access publishing in the journals of a given publisher. There are basically three types of offset agreements:

1. A pure **Offset** agreement means that an institution reduces its subscription costs with a publisher based on the article processing charges the researchers from the institution paid for publishing open access during the previous year.
2. A second kind of offset model is the **Read & Publish**. In these agreements one publishing charge and one reading charge is paid.
3. The third kind is the **Pay-as-you-publish** model which means that the costs for article processing charges are centralized and the institutions in the agreement do not have to pay a fixed amount in advance for a specific number of publications. This model does not include reading costs.

1.3 Offset agreements in context

1.3.1 The development of offset agreements

Offset agreements are transitional agreements signed with the purpose to accelerate the transition to OA, at reasonable cost, through increased transparency and more efficient administration. In short, they aim to flip the publishing system from pay-to-read into pay-to-publish. Two developments have been important in leading up to the emergence of offset agreements:

⁴ <http://www.kb.se/bibliotek/centrala-avtal/Bibsam-Consortium/>

⁵ Swedish Research Council (2015). Proposal for national guidelines for open access to scientific information. Stockholm: Swedish Research Council. <https://publikationer.vr.se/en/product/proposal-for-national-guidelines-for-open-access-to-scientific-information/> (p. 8).

⁶ <http://www.doaj.org/> (2017-08-21).

⁷ Solomon, D., & Björk, B.-C. (2016). Article processing charges for open access publication— the situation for research intensive universities in the USA and Canada. *PeerJ*, 4, e2264. <http://doi.org/10.7717/peerj.2264>

First, European and national recommendations all support a development towards Open Science, where publicly funded research is available to the public. Consequently, Bibsam strives to sign agreements that support and accelerate this transition.

Second, the development of OA, including recommendations and mandates, has led researchers to pay increasing amounts of APCs to publish OA in hybrid journals over the last years. At the same time, publishers keep charging universities subscription fees to access subscription and hybrid journals. This has been referred to as “double dipping”. The APCs paid by researchers have proved difficult to monitor, which benefits publishers. It is in licensees’ interest to sign agreements that combine subscription and publishing fees to increase transparency and control OA expenditure.

[Geschuhn and Stone](#)⁸ mean that library consortia and research institutions need to seize this moment of transition to take charge and redraft the workflows and processes for the future. It is an opportunity to reshape the publishers’ service/product to make it better fit today’s needs. More transparent sharing of information on the publisher’s part is desirable to improve institutional workflows, make best use of metadata and monitor costs. Libraries should proactively engage to include these aspects into negotiations so as not to be in the hands of the publishers.

1.3.2 Aim of the evaluation

When signing the SC pilot in 2016, Wilhelm Widmark (director of Stockholm University library and head of the Bibsam steering committee), stated that⁹:

“The purpose of the pilot is to gather experience by trying new processes and workflows for open access publishing. The pilot is in line with what the Swedish Research Council has proposed to be national guidelines for open access, and thanks to their support it can be realized.”

The aim of the current evaluation is therefore to compile arguments and make recommendations to Bibsam for future negotiations with Springer Nature and other publishers. The recommendations will mainly rely on the work of LIBER Europe (Europe’s leading association of research libraries), ESAC (Efficiencies and Standards for Article Charges), and on the findings of the ongoing evaluation.

1.3.3 Existing recommendations for negotiating OA with publishers

LIBER Europe has developed [five principles](#)¹⁰ for supporting OA when negotiating agreements with publishers.

ESACs [Recommendations for article workflows and services for offsetting/open access transformation agreements](#)¹¹ provide advice and a checklist of necessary elements to include in future negotiations, such as Author and article identification and verification, Funding acknowledgement and metadata, and Invoicing and reporting.

Similarly, an interesting overview is offered in the report [Financial and administrative issues around article publication costs for Open Access](#) from INTACT (a project aimed “to establish transparent and efficient procedures for managing article processing charges” for Open Access publications). The report provides suggestions to evolve the administrative procedures of OA publishing.¹² The suggestions involve 1) A central acquisition budget, 2) Database including publications by institutional authors, with data such as costs, Open Access license, type of publication, 3) Administrative procedures (acceptable types of offset agreements, author identification and accounting procedures), 4) Reporting and transparency.

2 The Swedish Springer Compact agreement

Springer Compact is a Read & Publish agreement between Springer Nature¹³ and 40¹⁴ Swedish institutions, negotiated through the Bibsam consortium. The agreement is a pilot and is financially supported by the Swedish Research Council

⁸ Geschuhn, K. & Stone, G., (2017). It’s the workflows, stupid! What is required to make ‘offsetting’ work for the open access transition. *Insights*. 30(3), pp.103–114. DOI: <http://doi.org/10.1629/uksg.391>

⁹ <http://www.kb.se/aktuellt/nyheter/2016/Sverige-forst-i-Norden-med-ny-modell-for-oppet-tillgangliga-forskningspublikationer/> (2017-11-30)

¹⁰ <http://libereurope.eu/blog/2017/09/07/open-access-five-principles-for-negotiations-with-publishers/> (based on <https://oa2020.org/> and <http://openaccess.nl/sites/www.openaccess.nl/files/documenten/amsterdam-call-for-action-on-open-science.pdf>)

¹¹ Geschuhn, K. & Stone, G., (2017). It’s the workflows, stupid! What is required to make ‘offsetting’ work for the open access transition. *Insights*. 30(3), pp.103–114. DOI: <http://doi.org/10.1629/uksg.391>

¹² http://repository.iisc.ac.uk/6665/1/Financial_and_administrative_issues_around_APCs_for_OA_June_2017_KE.pdf (p. 16-17).

¹³ Springer and Nature Publishing Group merged into Springer Nature in 2015, but since their agreements are still negotiated separately it is still useful to distinguish between the two.

¹⁴ By 2018, 42 Swedish institutions will have signed Springer Compact.

and the National Library of Sweden.¹⁵ The agreement runs from July 2016 to December 2018. Similar agreements have already been signed by the Netherlands, the United Kingdom, Austria and the Max-Planck Society in Germany.

The Swedish agreement currently covers Open Access publishing in Springer’s 1705 hybrid journals and reading of 2110 of the e-journals accessed on the SpringerLink platform.¹⁶ The agreement covers the OA publishing of *Original papers*, *Review papers*, *Brief communications* and *Continuing education*. There is no possibility for Swedish researchers to opt-out from publishing OA in SC.

According to the agreement, Swedish researchers from the 40 participating institutions in Bibsam are allowed to publish 4162 OA articles between July 2016 and December 2019 at the cost of 2 200 € per article, against a lowered subscription fee (called reading fee in the agreement). To be eligible for publication within the agreement the corresponding author of an article must be associated with one of the participating institutions. Agreeing to the APC list price of 2 200 € should be understood in the light of the reduced subscription or reading fee. This is where the Swedish offset lies. See the Table below for a comparison of fees 2015 and an average year of the SC agreement.

	2015 (€)	Springer Compact 2016–2018 total (€)	An average year of the SC agreement (€)
Publishing fee	*	9 156 400**	3 662 560**
Subscription/Reading fee	2 276 728	1 313 273	525 309
Total	2 276 728	10 469 673	4 187 869
Expected number of OA articles in hybrid journals	162	4 162	1 665

Table 1 - Springer Nature’s Swedish publishing fee, reading fee, total cost and expected number of OA articles in hybrid journals: 2015 (the year before SC), and an average year of the SC agreement. *In 2015 Swedish researchers paid 345 400 € in APC. **List price APC (2 200 €) times pre-paid number of OA articles per year.

In the previous report of this evaluation¹⁷ it was concluded that the agreement achieves 1) a vast increase in OA publications, 2) control over expenditure for publishing, 3) paying for publishing, rather than reading (see the flip of costs in Table 1), and 4) a great ease of the administrative burden on researchers. On a less positive note, the agreement was expensive, oversized (institutions published approximately 20 % below the pre-paid number of articles) and favours hybrid OA over gold OA.

SC is expensive and that should be used as leverage in negotiating a next agreement, in addition to knowledge on the terms of the other offset deals Springer Nature has signed. Springer Nature has piloted quite different versions of their offset agreement with different countries, making agreements (and the effects of them) hard to compare. This next section reports an overview and international comparison of the agreements signed.

3 Comparison of Springer Nature’s offset agreements

In this section we are comparing Springer Nature’s existing offset agreements (called Springer Compact or Springer Open Choice). Comparisons like this are hindered by non-disclosure clauses which counteract the principle of openness (number 3 of LIBER Europe’s principles mentioned above).

All figures in Tables 2 and 3 below have been retrieved online from public documents (see references in footnotes)¹⁸. The Netherlands share their figures openly through FOI request (2015 and 2016). The United Kingdom’s (UK) reading and publishing fees are rough estimates (extrapolated from their 2014 OA publication figures and converted from £ to €). The

¹⁵ The National Library of Sweden and the Swedish Research Council are financing the agreement with 470 000 € in 2017 and 470 000 € in 2018.

¹⁶ A list of the journals and institutions that are part of the agreement: www.springer.com/oaforse. Note that not all journals on the SpringerLink platform offer hybrid OA publishing. Also, the agreement does not cover publishing in the gold OA journals of Springer Nature, nor OA publishing in any of the hybrid or OA journals previously owned by Nature Publishing Group, Nature Academic or Palgrave. Swedish research paid Springer Nature 1.2 M€(2015) and 1.4 M€ (2017) for reading access of Nature Publishing Group, Nature Academic and Palgrave titles. Swedish research also paid M€ 2.0 for OA publishing not included in SC. The total costs to Springer Nature were 5.8 M€ (2015) and 7.6 M€ (an average year of SC).

¹⁷ <http://openaccess.blogg.kb.se/2017/09/28/offsetting-agreements-in-academic-publishing-in-sweden/> (2017-12-15)

¹⁸ Springer Nature’s official information on all their different offset agreements: <http://www.springer.com/gp/open-access/springer-open-choice/springer-compact>.

UK's total cost for Springer Compact in 2016 (in £) is exact and retrieved from online data made available by Jisc. The Swedish figures are yearly averages and comparable to the other figures in the Tables 2 and 3.

To our knowledge, the negotiating consortia for The Max Planck Society and for Austria have not published reports or evaluations on their agreements. We sent the comparison to contacts in each country for validation. Yet, only the Dutch contact has confirmed their figures.

Table 2 lists general information for all five agreements. The lengths of the agreements are between 2 and 3.25 years, cover OA publishing in 1600-1771 journals and reading rights to between 2000 and 2500 journals. All agreements except the Max Planck Society's include the same article types. Opt-out rates are zero in the Netherlands and Sweden, 19.6 % in the UK and unknown for the Max Planck Society and Austria.

	Netherlands	United Kingdom	Sweden	Max Planck Society	Austria
Negotiating party	Association of Universities in the Netherlands (VSNU) and The Royal Netherlands Academy of Arts and Sciences (KNAW) through SURFMarket	Jisc	Bibsam	Max Planck Society	Austrian Academic Library Consortium (AALC) and the Austrian Science Fund (FWF) through KEMÖ
Length of agreement	2 years (Jan. 1 2015 – Dec. 31, 2016) ¹⁹	3.25 years (Oct. 1 2015 – Dec. 31, 2018)	2.5 years (Jul. 1 2016 – Dec. 31, 2018)	3 years (Nov. 1, 2015 – Dec. 31, 2018)	3 years (Jan. 1 2016 – Dec. 31, 2018)
Participating institutions	38 ²⁰	91 ²¹	40 ²²	82 ²³	37 ²⁴
Allows OA publishing in:	1771 journals	1600 journals ²⁵	1705 journals	1751 journals	Circa 1750 journals
Allows the reading of:	+2000 journals	2500 journals ²⁶	2110 journals	+2000 journals	+2000 journals
Articles types included²⁷	Original papers, Review papers, Brief communications, Continuing education	Original papers, Review papers, Brief communications, Continuing education	Original papers, Review papers, Brief communications, Continuing education	Original Papers, Review Papers ²⁸	Original papers, Review papers, Brief communications, Continuing education
Opt-out rate	0% ²⁹	19.6 % (2016) ³⁰	0% (opt-out is not an option)		

Table 2 – General comparison of Springer Nature's offset agreements across Europe.

¹⁹ A second agreement was signed for 2017. A third agreement is currently under negotiation.

²⁰ <http://resource-cms.springer.com/springer-cms/rest/v1/content/10064952/data/v2/Participating+Dutch+institutions>

²¹ https://figshare.com/articles/Report_on_offset_agreements_evaluating_current_Jisc_Collections_deals_Year_2_evaluating_2016_deals/5383861

²² <http://resource-cms.springer.com/springer-cms/rest/v1/content/10347316/data/v5/SE-SC+participating+institutions>. By 2018, 42 Swedish institutions will have signed Springer Compact.

²³ <http://resource-cms.springer.com/springer-cms/rest/v1/content/836152/data/v5/participating+institutions+Max+Planck+agreement>

²⁴ <https://www.konsortien.at/springercompact.asp#institutions>

²⁵ https://figshare.com/articles/Report_on_offset_agreements_evaluating_current_Jisc_Collections_deals_Year_2_evaluating_2016_deals/5383861

²⁶ https://figshare.com/articles/Report_on_offset_agreements_evaluating_current_Jisc_Collections_deals_Year_2_evaluating_2016_deals/5383861

²⁷ Types: Original papers, Review papers, Brief communications, Continuing education, Abstract, Acknowledgment, Announcement, Book Review, Editorial Note, Erratum, Interview, Letter, News, Report.

²⁸ <https://www.mpdl.mpg.de/en/340-springer-compact-agreement-en.html>

²⁹ Not forcing. The agreement reads (§3) that authors "are allowed" to publish OA. Only very few opt-out. (2015)

³⁰ <https://scholarlycommunications.iiscinvolve.org/wp/2017/03/06/compact-agreement-first-year-evaluation/>.

Table 3 shows the cost of the agreements, the estimated number of readers and the number of OA-articles published for the Netherlands, the United Kingdom and Sweden.

For the Max Planck Society and Austria most values are missing so they have been omitted from the table. They have 70,000 and 22,197³¹ estimated number of readers respectively and their numbers of OA publications in 2016, according to OpenAPC, were 187³² for the Max Planck Society and 1013³³ for Austria.

As can be seen in Table 3, Springer pilots (at least) three very different financing models for their offsetting product. The pricing is seemingly arbitrarily set. The Netherlands received a reduced reading fee. The UK received a reduced publishing fee. The Netherlands and Sweden, two countries similar in size with respect to the researcher population, pay 2 900 000 € versus 4 200 000 € for what appears to be roughly the same product. Furthermore, the Netherlands and the UK are allowed to publish an unlimited amount of OA publications (compared to 1665 Swedish articles/year). Sweden is paying Springer's APC list price (2 200 €) in their model and has been compensated with a reduced reading fee but the overall cost increase compared to the previous agreement cannot be argued a successful offsetting of costs. It appears the other countries have avoided negotiating an APC-based contract.

If we divide the reading fee by the estimated number of readers for the three countries in the table, the UK pays 22 €/reader while Sweden and the Netherlands pay 5.3 and 1.8 € respectively. That is, the UK reading fee per reader is 4 times higher than that of Sweden and 12 times higher than that of the Netherlands. This seems to be compensated by a much lower publishing fee where the Netherlands pays 7 times more and Sweden pays 9 times more than the UK. The UK, given the estimated size of their researcher population, could be expected to publish five times the Dutch or Swedish. According to the table the UK only published 1.6 times as much as the Netherlands and 2.5 times as much as Sweden. The possibility to opt-out of SC in the UK may in part explain this finding. From the size of the countries, in estimated number of readers, it seems easier to compare Sweden to the Netherlands and based on the reading and publishing fee the Netherlands have gotten a better deal than Sweden.

³¹ Of the 22 197 estimated readers, 13 276 were scientists. Employees at the Max Planck Society (2016) <https://www.mpg.de/facts-and-figures>

³² https://treemaps.intact-project.org/apcdata/offsetting/#institution/country=DEU&period=2016&is_hybrid=TRUE

³³ https://treemaps.intact-project.org/apcdata/offsetting/#publisher/country=AUT&period=2016&is_hybrid=TRUE

Country	Netherlands	United Kingdom	Sweden
Estimated number of readers with access ³⁴	110 000	490 000	100 000
Reading fee per year (€)	200 000 ³⁵	10 800 000 ³⁶	525 309 ³⁷
Number of articles allowed published OA per year within the agreement	Unlimited ³⁸	Unlimited	1665 ³⁹
Publishing fee per year (€)	2 650 270 ⁴⁰	395 000 ⁴¹	3 662 560 ⁴²
Total cost an average year of agreement (€)	2 850 000 ⁴³	11 200 000 ⁴⁴	4 200 000 ⁴⁵
Total cost of agreement (€)	5 700 539 ⁴⁶	unknown	10 469 673
Cost compared to previous agreement (€) (Subscription fee the year before offset agreement) – (Total fee an average year of offset agreement) = (Cost compared to previous agreement)	- 89 732 ⁴⁷	1 289 424 ⁴⁸	Between 1 241 014 and 1 409 345 ⁴⁹
Actual number of articles published OA per year	1927 (2015) ⁵⁰	3073 (2016) ⁵¹	1399 (2017)

Table 3 – Comparison of the cost of the agreements (reading and publishing fees), the estimated number of readers and the number of OA-articles published, across the Netherlands, the United Kingdom and Sweden.

The Netherlands have signed a more favourable deal compared to the UK and Sweden when comparing the costs of previous agreements to the costs of offset agreements. The OA publishing in the Dutch offset agreement (1927 articles in 2015) was achieved without cost increase. If we calculate the average annual cost for the Swedish deal (see Table 4 in Section 4.1.1 below) the increased cost compared to if the agreement had not been signed is between 1 241 014 € and 1 409 345 €. For the UK the offset agreement entailed an increased cost of 1 289 424 €. Within their agreements, the British published 3073 articles in 2016 and the Swedish published 1399 articles in 2017.

It should be noted that the Netherlands were the first to sign an offset agreement with Springer Nature. Also, factors such as the size of a given consortium, or an increase of the overall deal compared to the prior one (by for instance

³⁴ Number of researchers (head counts) in private and public sector (2013 or 2014). <https://rio.jrc.ec.europa.eu/en/country-analysis/Netherlands/key-indicators/26164>.

³⁵ The Dutch agreement: https://wisspub.files.wordpress.com/2017/07/dutch_springer_agreement_2015-2016.pdf. (The reading fee was € 200 000 in 2015 and € 200 000 in 2016.)

³⁶ 9 547 706 £. Total cost per year (2016) minus Publishing fee per year (2016) = 9 547 706 £ (or 10 756 355 €, converted). Converted from £ to € 2017-11-06.

³⁷ Average yearly cost. The Swedish agreement's total reading fee divided by 2.5 (1 313 273 €/2.5 = 525 309 €).

³⁸ For the 2015-2016 agreement. In the 2017 agreement 2200 articles per year were allowed.

³⁹ 4162 articles are allowed during the agreement, which averages 1665 articles per year. Un-used articles roll-over to the next year.

⁴⁰ The Dutch agreement: https://wisspub.files.wordpress.com/2017/07/dutch_springer_agreement_2015-2016.pdf (2 630 581 € in 2015 and 2 669 958 € in 2016).

⁴¹ 350 000 £ (or 395 370 €). Converted from £ to € 2017-11-06. The UK agreement is based on their 2014 publishing. According to <https://www.jisc.ac.uk/reports/APCs-and-subscriptions>, Figures 8a, 8b, and 9, the UK published 200 OA articles in Springer in 2014, and the average fee was 1744.96 £. This suggests the UK paid approximately 348 992 £, or 350 000 €, for unlimited OA publishing in 2016.

⁴² Average yearly cost. The Swedish agreement's total publishing fee (2 200 € x 4162 pre-paid articles) divided by 2.5. (9 156 400 €/2.5 = 3 662 560 €).

⁴³ Total cost of agreement divided by 2 (5 700 539 €/2 = 2 850 197 €).

⁴⁴ The total cost of the British offset agreement is unknown to us. In 2016, the offset agreement cost the UK 9 897 706 £. Retrieved from https://figshare.com/articles/Report_on_offset_agreements_evaluating_current_Jisc_Collections_deals_Year_2_evaluating_2016_deals/5383861 (p. 8). This amounts to 11 154 792 € (converted 2017-11-06).

⁴⁵ Average yearly cost. The Swedish agreement's total cost divided by 2.5. (10 469 673 €/2.5 = 4 187 869 €).

⁴⁶ https://wisspub.files.wordpress.com/2017/07/dutch_springer_agreement_2015-2016.pdf

⁴⁷ In 2014 (before the offset agreement), the Netherlands paid Springer 2 939 929 € (http://www.vsn.nl/en_GB/cost-of-publication, Grafic 2). An average year of the agreement, they paid 2 850 197 €. (2 850 197 - 2 939 929 = -89 732) The OA publishing in the Dutch offset agreement was therefore achieved without cost increase.

⁴⁸ In 2015 (before the offset agreement), the UK paid Springer Nature 8 759 854 £ in subscription fee. In 2016 they paid 9 897 706 £. (Lawson, Stuart (2017): Journal subscription expenditure in the UK 2015-16. figshare. <https://doi.org/10.6084/m9.figshare.4542433.v6> (2017-12-18)). (9 897 706 - 8 759 854 = 1 137 852) Cost increase with offset agreement = 1 137 852 £, or 1 289 424 €. Converted from £ to € 2018-02-05.

⁴⁹ See Section 4.1.1, Table 4 for a description of these values.

⁵⁰ <https://wisspub.net/2017/10/04/schweden-springer-und-iop-offsetting/> (2018-01-18)

⁵¹ Lawson, Stuart (2017): Journal subscription expenditure in the UK 2015-16. figshare. <https://doi.org/10.6084/m9.figshare.4542433.v6> (2017-12-18) (p 13).

subscribing to a larger portfolio of journals than before or forcing all institutions to sign a big deal) can have influenced the negotiations and lead a consortium to score a better deal.

According to Springer Nature the reason for the increased costs in the Swedish and British agreements are to finance the infrastructure needed for a transition to a Read & Publish-model.

4 Evaluation

The evaluation sets out to examine the effects of SC regarding *economy, administration, researcher attitudes* and *research dissemination*.

When looking at the economy of the agreement we have chosen to consider two separate levels: the national and the institutional. And since the cost of the agreement is dependent on the number of articles published by the institutions we have included the publication output in the section relating to the economy.

4.1 Economy

4.1.1 National level – Economy and publication output

Table 1 summarises the cost and division of the Swedish SC agreement; 10 469 673 € for the two-and-a-half-year period July 2016-December 2018, divided between a publishing fee (87 % of the total cost and based on the APC list price) and a reading fee (13 % of the total cost). By adding a 3 % yearly price increase to the 2015 subscription fee (Table 1) we can calculate an average hypothetical cost of 2016-2018 per year, had SC never been signed and Swedish institutions continued to pay subscription fees. Table 4 displays the results of this calculation. When calculating the possible hybrid fees Swedish institutions (or more accurately: their researchers⁵²) would have paid, two approaches have been used: V1 predicts a yearly increase in number of published hybrid OA articles with Springer Nature, based on published articles 2013-2016. The other approach, V2, calculates an average value based on the articles published 2013-2016, making a more conservative estimate of the future of hybrid publishing. Since the costs thus vary between years an average cost per year has been calculated for both the SC agreement and the hypothetical costs without the SC agreement. This shows that the SC agreement is 42 % costlier than if Swedish institutions would have carried on with the former agreement and published according to V1, and 51 % costlier using the more conservative estimate of V2.

	An average year		
	Without SC V1	Without SC V2	With SC
Estimated number of publications	235	158	1665
Subscription/Reading fee (€)	2 430 295	2 430 295	525 309
Publishing fee (€)	515 680	348 229	3 662 560
Total (€)	2 946 855	2 778 524	4 187 869

Table 4 – Average costs per year 2016-2018, with and without Springer Compact. Without SC V1 and V2 are hypothetical costs, had SC not been signed. V1 is based on number of hybrid OA articles published 2013-2016, assuming hybrid OA publishing with Springer Nature will increase. V2 makes a more conservative estimate.

SC covers the publishing of 4 162 articles by the institutions in the Bibsam consortium during the two and a half years of the agreement. In 2017 the institutions could publish 1 786 articles. Table 5 below shows the number of pre-paid and approved articles for 2017 divided into two halves. Publication is done on a first come, first served basis but so far, the institutions have not reached 80 % of the pre-paid articles in any of the periods. In 2017 the total number of articles published within the agreement was 1399 which can be compared to 2015, the year before the agreement, when 162 hybrid OA articles were published in the same journals. We estimate the number of OA articles in 2017 to be within the range of 158-235 articles, if it hadn't been for SC.

⁵² Publishing costs were paid by individual researchers in the previous agreement and thus largely hidden from the institutions.

Period	Pre-paid	Approved articles	Outstanding articles	Per cent of pre-paid
Q1-Q2	893	704	189	79
Q3-Q4	893	695	198	78
2017 Total	1786*	1399	387	78

Table 5 - Number of pre-paid and approved articles in the agreement. * Initially 2017 allowed for 1614 articles, but 172 articles rolled over from 2016. (The total number of articles in the agreement are not evenly distributed across the 2.5 years.)

4.1.2 Institutional level – Economy and publication output – 2017

In this section we look at what each of the institutions in the agreement paid in 2017.

The participating institutions are divided into 6 different levels based on how many articles they published in Springer hybrid journals in 2015 (Table 6). The transition to SC results in a considerable increase in costs for the participating institutions. These extra costs are distributed between the institutions based on which level they belong to. Table 6 shows the number of institutions on the different levels and their corresponding shares of the extra cost induced by SC.

Level	Number of institutions	Share of articles in 2015 (%)	Share of the extra cost induced by SC in 2016 (%)
1	17	3	6
2	9	6	10
3	1	1	3
4	3	6	11
5	4	24	20
6	6	60	50
Total	40	100	100

Table 6 - The number of institutions in the different levels and their share of the articles in 2015 and extra cost in 2017.

In Table 7 we see the cost 2017 for each of the institutions in the agreement. The extra cost induced by the SC agreement is shown as extra cost with support by the National Library and the Swedish Research Council (what the institutions paid 2017) and what they would have paid without this support. Table 7 also shows the number of publications in 2017. Nine of the forty institutions have not published in the journals covered by the agreement.

To evaluate the current cost distribution model for institutions, the extra fee of the SC agreement is divided by number of articles published by that institution (not to be confounded with an APC cost as the distribution model is based on earlier subscription fees). Some institutions have published above expected for their level (see Tables 6 and 7) in 2017, whereas others have published below their level. The former group ends up with a low cost per publication, whereas the institutions in the latter group (primarily on levels 2 and 3) are those that have a higher cost per publication. This is also the case for the institutions on level 1 with very few publications. Smaller institutions seem to have a higher variation in their publication numbers, and the figures indicate that for institutions with comparatively few publications, the costs per publication can vary very much from year to year. If the levels of Table 6 should be used in the future, data from several years would probably be needed to calculate levels.

Institution	Level	Number of publications 2017	Base cost (subscription cost 2016 with 3 % raise) (€)	Extra cost SC (€)	Extra cost SC without support (€)	Extra cost per publication (€)	Extra cost per publication without support (€)
Blekinge Institute of Technology	1	9	12154	2866	4525	318	503
Dental and Pharmaceutical Benefits Agency	1		5573	2866	4525		
Institut Mittag-Leffler	1	1	5060	2866	4525	2866	4525
Kristianstad University	1	12	20206	2866	4525	239	377
Medical Products Agency	1		37983	2866	4525		
Mid Sweden University	1	8	42979	2866	4525	358	566
Public Health Agency of Sweden	1		5150	2866	4525		
Stockholm School of Economics	1	5	7110	2866	4525	573	905
Swedish Agency for Health Technology Assessment and Assessment of Social Services	1		7590	2866	4525		
Swedish Defence Research Agency	1	4	7046	2866	4525	716	1131
Swedish Environmental Protection Agency	1		5573	2866	4525		
Swedish Institute for Educational Research	1		5060	2866	4525		
Swedish National Road and Transport Research Institute (VTI)	1		8804	2866	4525		
Swedish Patent and Registration Office	1		11951	2866	4525		
Swedish School of Sport and Health Sciences (GIH)	1		5305	2866	4525		
Södertörn University	1	6	28052	2866	4525	478	754
University of Skövde	1	3	20783	2866	4525	955	1508
Dalarna University	2	3	16837	8947	14169	2982	4723
Halmstad University	2	6	22042	8947	14169	1491	2362
Jönköping University	2	10	19270	8947	14169	895	1417
Karlstad University	2	17	28776	8947	14169	526	833
Malmö University	2	13	37559	8947	14169	688	1090
Swedish Museum of Natural History	2	9	11897	8947	14169	994	1574
University of Borås	2	6	12752	8947	14169	1491	2362
University of Gävle	2	2	27969	8947	14169	4474	7085
University West	2	14	11935	8947	14169	639	1012

Mälardalen University	3	13	23104	21741	35841	1672	2757
Linnaeus University	4	23	56570	30196	47430	1313	2062
Lulea University of Technology	4	38	59405	30196	47430	795	1248
Örebro University	4	30	44384	30196	47430	1007	1581
Chalmers University of Technology	5	84	132980	40262	63762	479	759
Linköping University	5	84	169932	40262	63762	479	759
Swedish University of Agricultural Sciences	5	68	146066	40262	63762	592	938
Umea University	5	88	180383	40262	63762	458	725
Karolinska Institute	6	140	225412	67103	106269	479	759
Lund University	6	214	235059	67103	106269	314	497
Royal Institute of Technology	6	101	151969	67103	106269	664	1052
Stockholm University	6	101	176654	67103	106269	664	1052
University of Gothenburg	6	144	217539	67103	106269	466	738
Uppsala University	6	143	211494	67103	106269	469	743
Total		1399	2456369	805232	1275232	576	912

Table 7 - The cost in 2017 for the institutions in the agreement, with and without the support from the National Library and the Swedish Research Council.

4.2 Administration

This section reports the results of a survey distributed to the administrative staff handling Springer Compact at each participating institution. The overall impression is that the Springer Nature's Article Approval Service (AAS) appears to work well for those who administer SC. In the approval process, local Swedish administrators have approved 1399 and rejected 85 articles between January and December 2017 (report date). The main reason for not approving an article is that the corresponding author is lacking adequate affiliation. It appears that authors changing affiliation during the publishing process has not caused many problems. Only a few administrators have had to address instances where authors contest rejection. The issue at hand was often that journals sometimes use a different terminology when naming their article types than Springer Nature does.

The administrators' workload varies. In 2017 the administrators approved three articles per month on average (ranging from 0 to 27). Nine of the 40⁵³ institutions did not publish at all in 2017.

Administrative staff representing 16 of the 40 participating institutions in SC chose to respond to a survey about their workload. It turns out that administering SC is not a time-consuming task. The respondents deem the system easy and efficient. Most respondents (13 of 16) state that they have spent less than an hour of work on SC per month. No administrator spent more than 3 hours (work for this evaluation included). When the author affiliation is unequivocal, it takes less than two minutes to approve the article. This workload is to be compared with the effort it would otherwise take each researcher to pay their separate billing, should they choose to publish OA.

There were some difficulties reported by the administrators in the survey. Three of these, regarding the affiliation of the corresponding author, the possibility to export data from the system and confusion caused by the fact that researchers were informed about billing information, have been addressed by Springer since the survey. One issue from the survey that Springer informed Bibsam they cannot fix is the wish that:

- Administrators would like to see all e-mail addresses and affiliations stated by the corresponding author for the publication before approving a publication. This could be done for instance by giving direct access to the first page of the article, where all addresses are stated.

4.3 Researcher attitudes

A questionnaire has been kept active since February 20, 2017 in order to gather author attitudes, experiences and suggestions in relation to the SC agreement. The questionnaire is aimed at corresponding authors of publications covered by the SC agreement submitted since January 1, 2017 and has been distributed with the help of the administrative staff handling Springer Compact at the participating institutions. On January 2, 2018, there were 333 responses to the questionnaire. There may be minor sources of error in the responses, such as replies from more than one author per publication, but this should not significantly change the results.

The main reasons for submitting an article to a particular journal (multiple responses possible) were stated as the journal being the best topical match (77 %), having a high Journal Impact Factor (25 %), a good editorial process (18 %) and offering the possibility for open access publishing (17 %). This means that open access publishing is among the four top reasons for submitting a publication to a particular journal, but that traditional considerations about topic, impact and quality are more or equally important. This was further supported by responses to a question about whether authors would prefer Springer journals because of the agreement. For most authors, the possibility of open access publishing through the SC agreement was not a reason for submitting their article to a Springer journal, as only 28 % of authors said they knew about the SC agreement before submission. Other fairly common reasons for choosing a journal were that it had been recommended (13 %) and that the publication had been submitted to a special issue (11 %).

When asked if they would have paid for open access publishing if the journal had not been part of the SC agreement, 14 % responded yes and 23 % maybe. 20 % stated that their research is covered by some type of open access mandate, and a further 19 % that some part of their research, if not all, is covered. 20 % were unsure. The discrepancy between the number of authors who would have paid for open access publishing and those whose research is covered by an open access mandate may indicate that non-APC open access journals and green open access are publishing alternatives considered by the authors. Almost 40 % stated that they had paid for publishing open access on previous occasions. Payment has mainly been handled by the institution, in a few cases through their library, but 20 authors stated that they made an outlay that was later reimbursed, or that they had published at their own expense.

⁵³ By 2018, 42 Swedish institutions will have signed Springer Compact.

Among the responses to the question “What do you think about the university covering publishing fees through deals such as Springer Compact?”, 93 % expressed positive reaction, from “Super” and “Excellent” to more nuanced or problematizing answers. Some authors highlighted the advantages of the agreement to researchers who do not have external funding for paying APCs, not least doctoral students. Some also expressed gratitude that they did not have to spend time on administration or on securing funding. On a question about whether the university should have similar agreements with other publishers, only 2 % replied no, and 87 % supported such a suggestion, naming among interesting alternatives many of the big publishing houses such as Elsevier, IEEE, ACM, Wiley, ACS and BMC. This positive reaction to the agreement on the authors’ part is further supported by the fact that to this date, 1.5 years into the agreement, no author has opposed to having their article published through the agreement. This suggests that researchers are positive to publishing OA, when supported.

A number of authors expressed some hesitation with regard to the agreement, although they were generally open access advocates. Only a few had the opinion that the subscription system for journals works fine. Most of them said that it is difficult to assess the agreement without knowing more about it or knowing the costs involved (8 %). About half as many more or less strongly opposed the fact that there are costs involved in either reading *or* publishing academic work and expressed the opinion that academic publishing should not be run as a commercial activity. A couple of authors pointed to green open access as an alternative. Recurring in both motivations for why open access publishing is important and in considerations on the agreement are references to the fact that research and much of the work involved in publishing (authoring, peer review, sometimes layout) is paid for by public funding. Concerns are expressed about the high fees demanded by commercial publishers. A few responses pointed out that hopefully the deals on APCs achieved through national agreements are better than those that individual authors must accept.

Overall, the authors who have responded to the questionnaire express an interest in open access publishing both for increased visibility of their work and for ethical reasons connected with free accessibility to research results and accessibility for a broader audience than researchers in well-funded institutions (both the general public and researchers in the global South were mentioned). Offset agreements such as Springer Compact provide a means to reach this goal without any administrative or financial burden on the part of the author, which is greatly appreciated. However, many emphasize that the topical match and status of the journal, along with its expected audience is a priority, and that an agreement such as this one may be significant when there is a choice between two journals that are considered equally fitting for the paper. For this reason, a number of respondents also asked for similar agreements with other publishers. Furthermore, some authors question the economic sustainability of the system supported by such agreements, pointing to problems with high costs to the academic system and disputing that public funding is being paid to large companies for services that the authors do not think justify the costs involved.

4.4 Research dissemination

Too little time has passed to assess research dissemination or impact in terms of citations, but something can be said about the online attention the published articles have attracted. It appears that to date⁵⁴ the articles made OA through SC during 2017 have attracted more online attention than articles published in the same journals the six months prior to SC.

We wanted to learn if an article’s publishing license (rights reserved in subscription or hybrid journal; CC-BY in hybrid journal; CC-BY in gold OA journal) could be related to the attention an article has attracted online, measured as Altmetric Attention score. Altmetric.com track a variety of digital sources reflecting different levels of interaction or engagement with a publication (ranging from likes and tweets, to citing). Exactly how scores are weighted is unknown, but Twitter is by far the main source of attention for the articles compared here. The attention scores of articles published within SC during 2017 (date published online) were compared to the attention scores of articles published in Springer Nature’s hybrid journals before SC (January – June 2016; i.e. in titles that were later included in SC), and to the attention scores of articles published in Springer Nature’s gold OA journals (published January – September 2016). We found that there was a statistically significant difference between the attention scores achieved by different licenses ($H = 34.05, p = 0.05$), with a median of 2 for SC articles, 1 for articles published in Springer Nature’s hybrid journals before SC, and 2 for the articles published in Springer Nature’s gold OA journals.⁵⁵

⁵⁴ The Altmetric Attention scores were retrieved on 2018-01-09.

⁵⁵ The test conducted was a Kruskal-Wallis test and the significance Level (α) was set at 0.05.

5 Recommendations

In the coming negotiations we recommend Bibsam to rely on the work of LIBER Europe and ESAC, and on the conclusions from the current report. We recommend Bibsam to:

Follow existing recommendations

- Strive to meet the five open access principles of LIBER Europe for negotiating with publishers. The principle of Transparency for Licensing Deals: No Non-Disclosure has not yet been met. We furthermore suggest that usage reports should follow the standard of Counter.⁵⁶
- Ensure that Springer Nature continues to comply with the recommendations set up by ESAC. Furthermore, improvements are needed 1) so that information about Open Access funding is included in the articles, and 2) with regards to the metadata delivery to the paying institutions (Bibsam/individual institutions) and to Crossref, although good efforts have already been made in the metadata delivery area.

Include gold OA

- The goal of agreements like this is to go from a system where subscribers pay for reading a journal into one where authors pay for publishing in a journal. The present agreement is a combination of the two where authors pay for publishing and subscribers pay for reading. Acknowledging that SC is a pilot we think that to move forward, OA gold journals must be included in future agreements.

Re-negotiate the terms

The recommendations below are made based on the following premises:

- The Swedish SC agreement rendered an increased cost of 42 %, as compared to if SC had not been signed and Swedish institutions continued paying to read alone. This calculation takes into account both a yearly price increase of 3 % and an increase in hybrid OA publishing without SC over the years 2016-2018. With a more conservative estimation of the Swedish hybrid OA publishing rate with Springer Nature, the cost increase is 51 %.
- Springer has signed quite different offset agreements with different countries, making them hard to compare. However, based on available figures, the Swedish agreement appears to be the least favourable when comparing it to the Dutch and the British ones. Increased transparency of licensing deals is preferable for the consortia and institutions to be able to enter into the agreements well-informed.
- Fully open OA journals on average have a lower APC than hybrid journals.⁵⁷ For the OA journals, the APC is expected to cover all costs involved. Yet SC includes both a reading fee (to pay for the platform, among other things) and a publishing fee which has been calculated based on the APC list price. Is the Bibsam Consortium paying twice for the infrastructure? The reading fee cannot be considered reasonable to cover the non-hybrid journals included in the agreement.
- According to Springer Nature the reason for the increased costs in the Swedish and British agreements are to finance the infrastructure needed for a transition to a Read & Publish-model. The cost of a future agreement should therefore be based on the cost before SC, that is the cost for V1 or V2 calculated in Table 4, and not on the assumption that this infrastructure needs further financing.
- The Swedish SC agreement is oversized. In 2017 the Swedish institutions have not reached 80 % of the allowed number of articles in the agreement.

Recommendations

- Do not agree to use the current agreement's level of payment as a starting point for future negotiations with Springer Nature. The agreement both seems to be less favourable than those made by other consortia and includes a significant rise in costs compared to 2015.

⁵⁶ <https://www.projectcounter.org/about/> (2018-01-09).

⁵⁷ E.g. Solomon, D., & Björk, B.-C. (2016). Article processing charges for open access publication— the situation for research intensive universities in the USA and Canada. *PeerJ*, 4, e2264. <http://doi.org/10.7717/peerj.2264>. Figures given in Solomon and Björk were around 1,600 € for OA journal APCs and 2,400 € for hybrid journal APCs on average (conversion from USD made 2018-01-15).

- Consider various models concerning reading and publishing fees and their consequences for Swedish institutions at various levels. Compare any future offset offer from Springer Nature to the deals signed in the Netherlands and the UK. See Tables 2 and 3 in section 3.
- An agreement with an APC fixed at list price will inevitably be expensive. It appears the Netherlands and the UK have avoided APC-based contracts and instead negotiated total cost contracts.
- An agreement where costs are based on a pay-as-you-publish model or an agreement where no pre-paid lump sum is paid based on a fixed number of prognosticated articles is preferable.
- An agreement with a low reading fee, covering only the reading rights of non-hybrid journals, would be better. This would mean that the main model would be based on pay-as-you-publish. Non-OA journals should be encouraged to move to an OA model.
- If a model including both reading fee and publishing fee is kept, the price of the APC should be negotiated to a lower price than list price, due to the volume of hybrid OA publications pre-paid in SC.
- One way to compensate for if the cost is not substantially lowered would be if more journals are included in the agreement. For instance, pure Springer OA journals, as well as OA and hybrid journals from Nature and from BMC. It would be a pedagogical advantage if all of Springer Nature's OA titles were included (not only hybrid) in an agreement signed to support OA. Furthermore, including more publication types in the agreement could be considered, but not to an APC that is equal for all publication types.
- Keep 1) the guarantee to authors that they do not need to apply for APC funding, 2) the easy administration of the articles for authors and administrators, and 3) the ban on opting-out of the agreement for authors. These three factors have led to a significant increase in articles by Swedish authors that are published OA in Springer journals.

Review the institutional levels

The model used to divide the costs for the institutions according to six levels seems to work well for the institutions with the largest output of publications. However, for the institutions with fewer publications, yearly variations can have important implications for their cost per article. If payment is made afterwards, this can be adjusted for. However, the predictability of the costs will be lower.

Recommendations

- Consider reviewing how institutions are placed into levels and the consequences of level placement. It might be advisable to use data from several years to determine an institution's level.
- Consider a level for institutions that do not have (or expect to have) any publishing authors. On one hand their pricing seems unfair. On the other hand, they will benefit from a transition to OA in the future when they no longer must sign journal subscriptions to access scientific material and can therefore be argued to take share in the transitional costs now.