



Paying for Open Access

The author's perspective

Report dated June 2017



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This is an abridged version of the report 'Financial and administrative issues around article publication costs', which contains the complete results of this study by Knowledge Exchange.

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1. Introduction

How are authors of journal articles paying Open Access (OA) fees or Article Processing Costs (APCs)? What is the administrative burden for authors? And do their research organisations have an accurate overview of all these payments?

This report aims to share a better understanding of authors' perspectives on APC payments. This will support the development of an optimal communication and administrative strategy in order to encourage the use of existing APC funding mechanisms by authors.

To address these research questions, Knowledge Exchange has carried out a study among authors of six research organisations. In total, 1,069 researchers participated in online surveys about their articles published either in OA journals or in subscription journals that offer the option to publish individual articles on OA for an additional fee (so-called hybrid journals).

The aim of this abridged report is to provide a bird's eye view of the study outcomes. The focus is on the results of a survey of authors in three large, multidisciplinary universities with rather contrasting OA policies:

- ▶ University of Helsinki
- ▶ University of Göttingen
- ▶ University of Glasgow

For brevity's sake, the results of the other three participating research organisations (Roskilde University, Technical University Eindhoven and Inria – the French Institute for Research in Computer Science and Automation) will only be mentioned if relevant.

The complete results of the study – including references to relevant literature – are published in a separate report: knowledge-exchange.info/event/paying-for-oa

Financial and administrative issues around article publication costs for Open Access: the author's perspective

Knowledge Exchange report, to be published June 2017; M. van der Graaf
www.knowledge-exchange.info

2. Journal selection and OA

2.1 The scholarly journal landscape

When authors select a journal to publish their article, they have plenty of choice: there are about 34,500 scholarly peer-reviewed journal titles to choose from. What about the OA status of those journals? Based on the journal collections recorded in DOAJ and Journal TOCs, one can estimate that about one third are OA journals, another third are hybrid journals and a third are subscription-only journals. Of the OA journal titles, about half are APC-free OA journals, while the other half are APC-OA journals (see figure 1).

However, this is not the whole story: not all journal types publish the same number of articles. Estimates on the number of articles published per journal type in recent years are presented in figure 2:

- ▶ About 20% of the articles are published in OA journals: the majority in APC-journals, a minority in APC-free journals
- ▶ About 60-70% of the articles are published in hybrid journals, of which some are published on Open Access
- ▶ About 10-20% of the articles are published in subscription-only journals.

Figure 1: Proportions of different types of scholarly journals

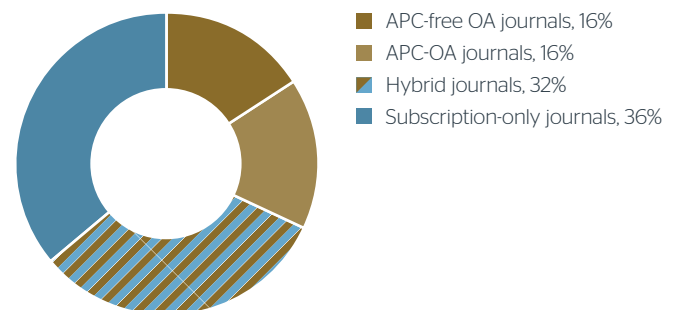
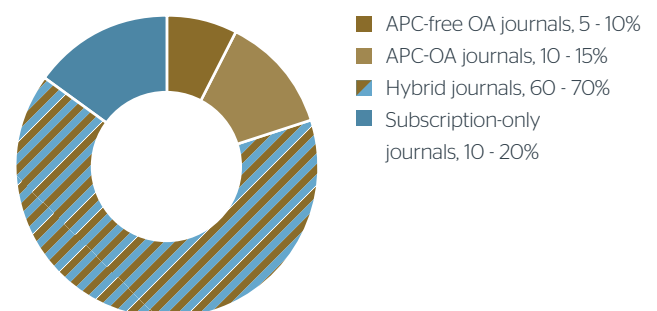


Figure 2: Estimated proportions of articles published per journal type

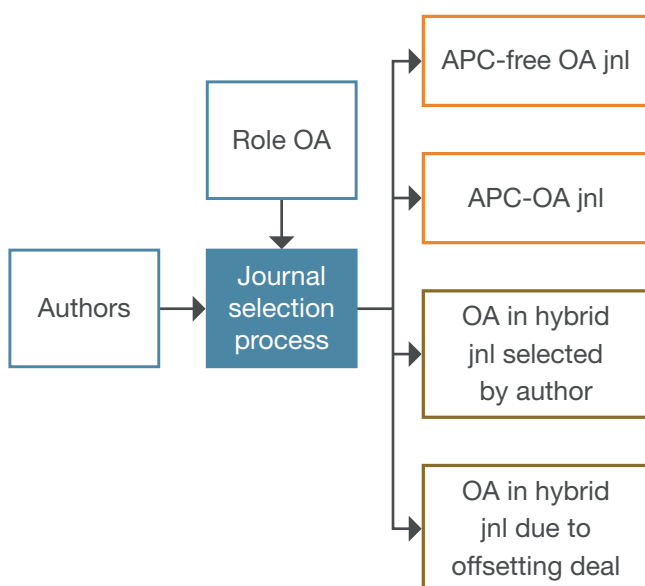


2.2 Pathways to OA articles

Figure 3 presents four possible pathways to OA article publishing for authors:

- ▶ The outcome of the journal selection process for the as-yet-unpublished article might be an APC-free OA journal or in an APC-OA journal. In the latter case, libraries sometimes have so-called membership deals with publishers of OA-journals, which give discounts on the listed APCs to the authors of their research organisation
- ▶ The process might also result in a hybrid journal. After acceptance of a paper, the authors will then have a choice about whether to publish on Open Access. In this case, the authors have to pay an APC. It is also possible that their library has an offsetting deal with the publisher of this journal, so that the APC for publishing this article on OA is included in this arrangement

Figure 3: Pathways to OA articles



2.3 Institutional differences regarding OA articles published

What were the actual results of these pathways to OA for the three universities in 2015? These universities have contrasting OA policies in place:

- ▶ University of Helsinki has no financial support for APCs, but does have some membership deals
- ▶ University of Göttingen has an APC-fund for OA-journals, while hybrid OA is discouraged
- ▶ University of Glasgow manages APC-funds for OA journals as well as OA articles in hybrid journals and a number of offsetting deals

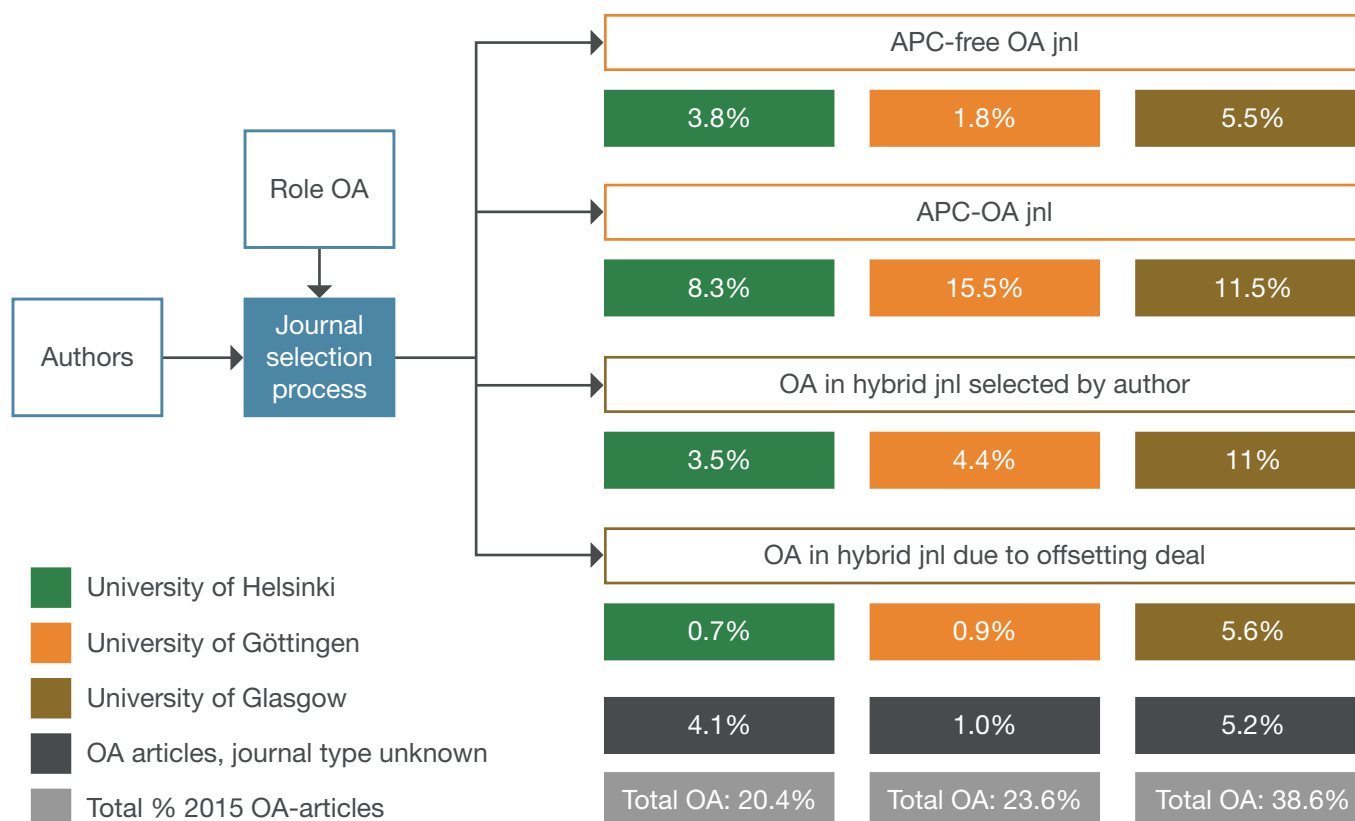
Figure 4 presents the results based on the responses to online surveys among authors of journal articles published in 2015 in Open Access or hybrid journals. These responses have been extrapolated to include the total number of journal articles published by the authors of each university. The total percentages of 2015 OA articles from the other participating institutions are: 11.1% for Inria, 17.2% for the Technical University Eindhoven and 22.9% for the Roskilde University. Regarding the Roskilde University, it has to be noted that the percentage of articles in APC-free OA journals is exceptionally high: 16.3%.

From these data, the following conclusions can be drawn:

- ▶ **Growing importance of OA in scholarly journal publishing:** The fact that one third of scholarly journals are now OA journals means that the outcome of a journal selection process for a given article will frequently be an OA journal, even when the authors are not particularly interested in OA. One of the results of this is that between 11% and 38.6% of the 2015 articles were published on Open Access, across six research organisations with very different OA policies in place

- ▶ **Policy of APC-funding and/or offsetting deals crucial for OA articles in hybrid journals:** The percentages of OA articles in hybrid journals are generally lower than 5% if the authors themselves have to select this OA option and thus pay for the APC involved. However, the total percentages of OA articles in hybrid journals are above the 10% level at two universities: the Technical University Eindhoven (11.8%), mostly as a result of offsetting deals, and the University of Glasgow (16.6%) as a result of a combination of offsetting deals and active funding of APCs for articles in hybrid journals.
- ▶ **APC-funds increase articles in APC-OA journals:** At two institutions with Open Access publication funds, the proportion of APC-OA journal articles is above 10% (Glasgow with 11.5% and Göttingen with 15.5%). The percentages of APC-OA articles at the other four organisations are below 10% (one with a limited APC-fund and three without)

Figure 4: Proportions of 2015 OA articles for the universities of Helsinki, Göttingen and Glasgow

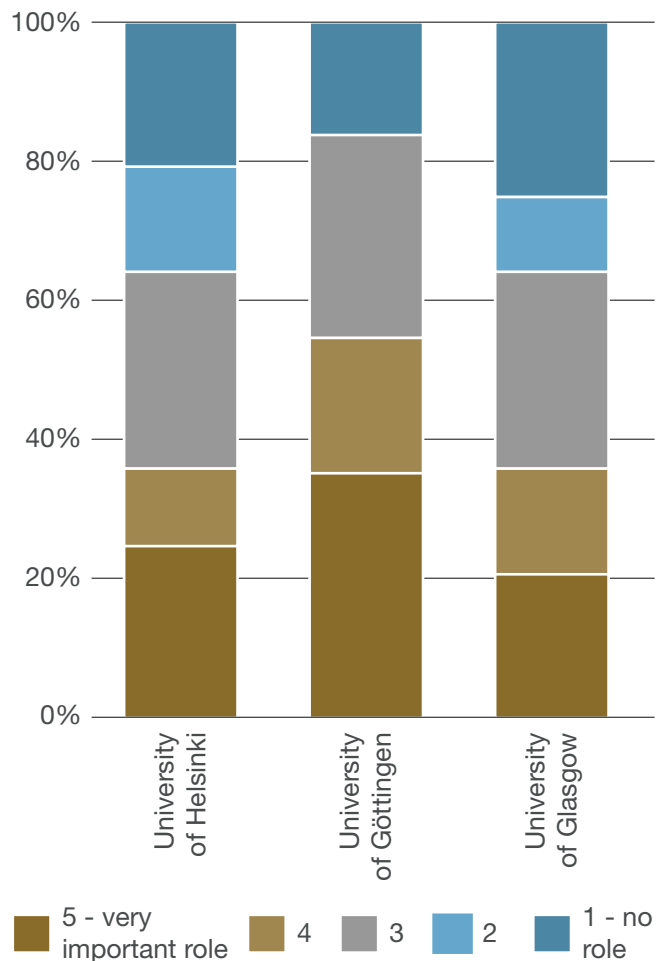


2.4 Journal selection by authors

We know that the match between the article and the journal, and the journal reputation (impact factor, audience reached) are generally the overriding factors in the selection process. Do OA-aspects also play a role in the selection of journals by authors? The results are presented in figure 5, from which we can draw the following observations:

- ▶ **In over one third of the cases, OA aspects did play a role in the journal selection of those articles that were eventually published in OA journals.** For example, 36% of the authors in the Helsinki survey stated that OA aspects did play an important or very important role in the selection of the journal for that particular article
- ▶ **In a similar proportion of the cases, OA aspects did *not* play a role in the journal selection of those articles that were eventually published in OA journals:** Interestingly, the same percentage of Helsinki authors stated that OA-aspects did not or hardly play a role in the journal selection process. In other words, this last group of authors selected the journal solely based on the best match between article and journal and the outcome was an Open Access journal
- ▶ **OA aspects hardly played a role in the journal selection for articles that were published on Open Access in hybrid journals:** In the two surveys that could measure this, 59% (Helsinki) and 82% (Eindhoven) of the respondents indicated that OA did not play an important role in the journal selection. 0% of the Eindhoven respondents and 9% of the Helsinki respondents stated that OA aspects played a role in selecting the journal for publication

Figure 5: Role of OA in journal selection [authors of articles in OA-journals; for Glasgow also including authors of OA articles in hybrid journals]

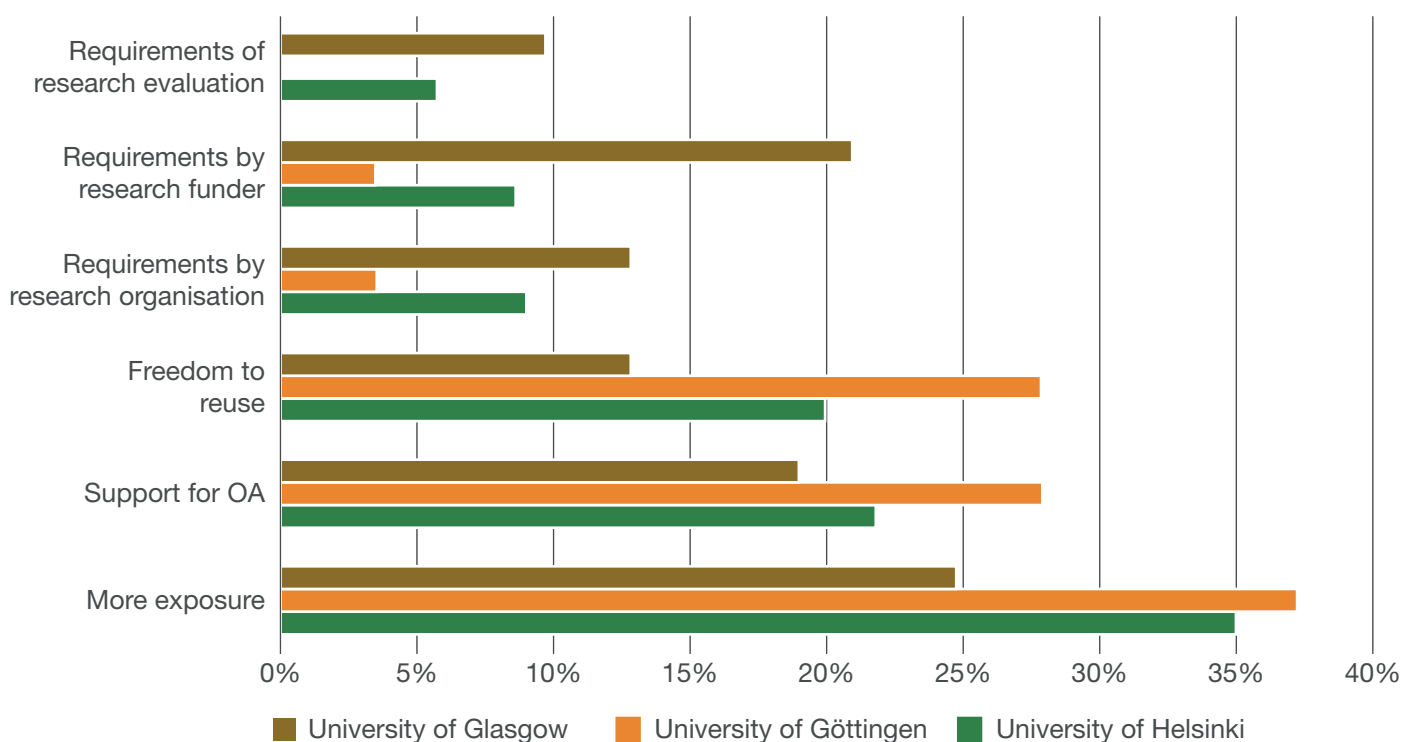


2.5 Reasons for OA

For which reasons does OA play a role in the journal selection process? The results of the three surveys are presented in figure 6 and these show:

- ▶ **Two pragmatic reasons top the list for OA publishing:** More exposure/wider audience for the article is the top reason, followed closely by the complete freedom to reuse, republish, and distribute your article
- ▶ **Ideology is important too:** Many respondents also gave an ideological reason, namely their support for Open Access /Open Science
- ▶ **Requirements for OA play an increasing role:** The effects of requirements by research funding organisations, universities and/or research evaluation exercises are visible in authors' reasons for choosing OA. Glasgow authors score the highest on these three reasons, as the policies in the UK are the most advanced in this respect. In summary, authors do see intrinsic reasons to publish on Open Access, but policy measures and requirements clearly form additional factors in their thinking.

Figure 6: Reasons for OA [authors of articles in OA journals; for Glasgow including authors of OA articles in hybrid journals]

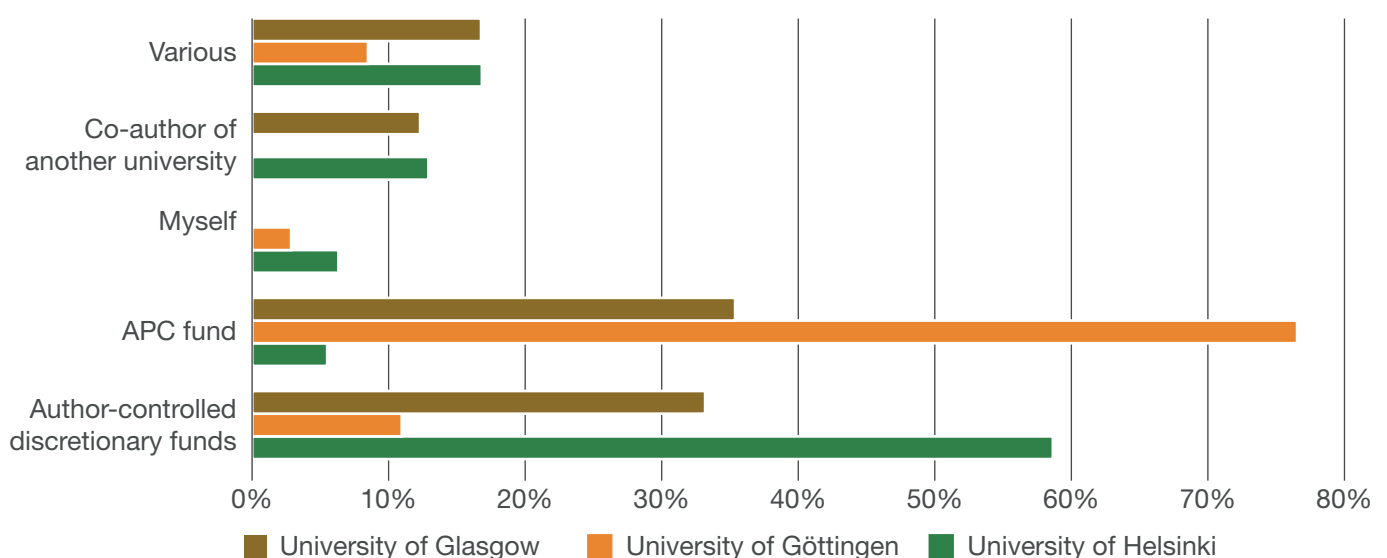


3. Financing the APCs

How do authors pay APCs for articles in OA journals or for OA articles in hybrid journals? The results of the online surveys are presented in figure 7 and 8. The respondents were presented with a number of answer categories¹. In addition, questions were asked about the level of the APC and about discounts (see table 1). These results show that:

- ▶ **Author-controlled discretionary funds** are chiefly used if there is no APC fund available (Helsinki) or if such a fund does not finance OA articles in hybrid journals (Göttingen)
- ▶ **APC funds have two effects:**
 - ▶ Replacement effect: authors prefer using the APC fund instead of their own discretionary funds, as is clearly visible among the Göttingen authors for OA journals and among the Glasgow authors for OA and hybrid journals
 - ▶ Stimulating effect: it is also clear from the figures, from paragraph 2.3 and from the interviews with authors that APC funds do stimulate and facilitate OA publishing. This is particularly evident for OA articles in hybrid journals: 47.2% of the OA articles in hybrid journals by Glasgow authors are funded by the APC funds of the library, leading to the highest percentage of OA articles in hybrid journals of all participating institutions (16.6%)
- ▶ **Private payments by authors suggest flaws in the system:** In the Helsinki and Göttingen surveys, a small minority of authors reported having paid the APC for OA journals privately (6.5% in Helsinki; 2.9% in Göttingen). In addition, in the interviews and the survey several authors commented on a period of uncertainty about the funding of their APC after acceptance of a paper, which often resulted in them personally taking on the financial risk

Figure 7: Financing APCs for OA journals



- ▶ **Discounts are quite normal:** The surprising result of this study is that discounts on APCs are not an exception. Respondents report discounted APCs for OA-journals in up to 16% of cases (Helsinki), while discounted APCs for hybrid journals are also reported (Glasgow). Discounts are given for many reasons: relationship with the journal, membership of the society, arrangements by the library (membership deals) and so on, but also as a result of price negotiations between author and publisher
- ▶ **Great variation in APC levels induces price sensitivity among authors:**
 - › Respondents report a great variation in APC levels: between 16% and 25% of the respondents report that for OA-journals the cost was lower than 1000 euro or pounds, while others report an APC of more than 2000 euro or pounds (4.3% to 21.9%)
 - › The respondents reported generally a lower APC-level for OA journals than for hybrid journals, which is corroborated by other data in the literature
 - › Due to the large variation in APCs and the increasing experience of respondents with this, quite a number of comments by the respondents show an increasing price sensitivity to APCs

Footnotes

- 1** Under the header 'author-controlled discretionary funds' two answer categories were combined: payment out of a research grant from a research funder and payment out of the budget of the research unit.

Figure 8: Financing APCs for OA articles in hybrid journals

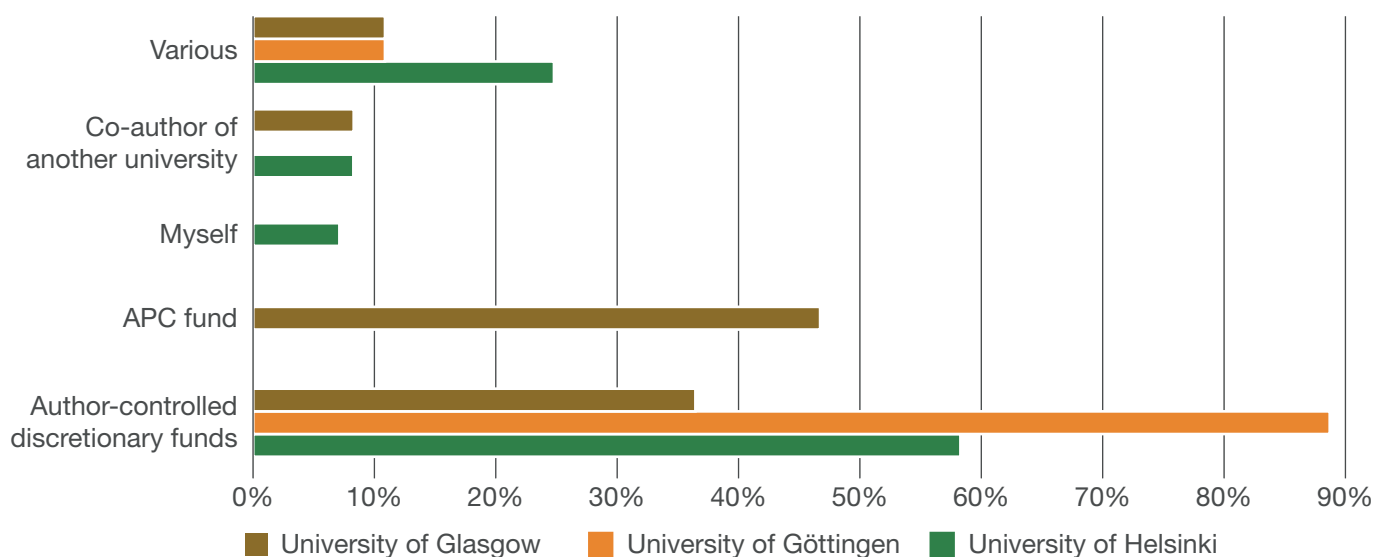


Table 1: APC level and discounts as reported by the respondents

	University of Helsinki	University of Göttingen	University of Glasgow
Articles in OA journals			
APC level			
Less than 1000 (euro or pound)	16.1%	26.1%	25.0%
1000 to 2000 (euro or pound)	67.7%	56.5%	53.1%
More than 2000 (euro or pound)	14.5%	4.3%	21.9%
Average (euro or pound)²	€ 1,441	€ 1,337	£1,504
Discounts			
Discount received due to relation with journal	7.8%	0.0%	2.1%
Discount due to arrangement of library	3.9%	8.8%	0.0%
Discount as result of negotiation	1.3%	0.0%	4.2%
Discount due to other reason	3.9%	2.9%	0.0%
Total discounted APCs	16.9%	11.7%	6.3%
OA Articles in hybrid journals			
APC level			
Less than 1000 (euro or pound)	23.1%	33.3%	5.3%
1000 to 2000 (euro or pound)	15.4%	0.0%	57.9%
More than 2000 (euro or pound)	53.9%	44.4%	42.1%
Average (euro or pound)	€ 1,767	€ 1,657	£1,900
Discounts			
Discount received due to relation with journal	0.0%	0.0%	2.8%
Discount due to arrangement of library	0.0%	0.0%	2.8%
Discount as result of negotiation	0.0%	0.0%	0.0%
Discount due to other reason	4.2%	0.0%	11.1%
Total discounted APCs	4.2%	0.0%	16.7%

Footnotes

² The authors of the University of Glasgow reported the costs in pound sterling. The conversion rate GBP/EUR fluctuated in 2015 between 1.28 and 1.44.

4. Administrative efforts by authors

Table 2: Administrative efforts by authors of articles in OA journals

APCs for OA-journals	University of Helsinki	University of Göttingen	University of Glasgow
Effort by authors			
Less than 1 hour	68.7%	92.5%	82.3%
Average (minutes)	62	33	51

Table 3: Authors on offsetting deals

OA in hybrid journals due to library arrangement	Technical University Eindhoven	University of Glasgow
Effort by authors		
Average (minutes)	35	27
Less than 1 hour	92.3%	82.4%
How were you informed about this Open Access option?		
By the publisher	56.3%	35.3%
By the library	18.8%	47.1%
Other	18.8%	11.8%
Don't remember/ don't know	6.3%	5.9%

Tables 2 and 3 present an overview of the data on administrative efforts by the authors regarding procedures around invoices of APCs and offsetting deals. The main results are:

- ▶ **Administrative efforts by authors regarding APCs take too long:** The average time is 62 minutes for the Helsinki authors of articles in OA-journals, 33 minutes for the Göttingen authors and 51 minutes for the Glasgow authors. If one considers a maximum of one hour of administrative effort as acceptable, the time spent on administrative efforts by the respondents is too high: these efforts took 31.3% of the Helsinki authors of articles in OA-journals, 17.7% of the Glasgow authors and 7.5% of the Göttingen authors more than one hour
- ▶ **Administrative efforts by authors to partake in offsetting deals are negligible:** The administrative efforts by authors to make use of OA in hybrid journals as a result of library arrangements is minimal. The respondents from Glasgow reported on average 27 minutes and the respondents from the Technical University Eindhoven, which has quite a number of offsetting agreements, reported 35 minutes. However, the information about these OA publishing options deserves attention. A clear way of communicating to the authors in question seems to be needed as considerable numbers of authors were informed of the offsetting arrangement by the publisher and others by the library.

5. Three areas for action

One third of the scholarly journal titles are now OA. This means that the outcome of the journal selection process for a given article will frequently be an OA journal, even when the authors are not particularly interested in OA.

These authors are then confronted with the APC costs. This phenomenon - in concordance with requirements of universities and/or research funding organisations regarding OA - makes an efficient and effective organisation of the financial and administrative aspects of APC payments increasingly critical.

The outcomes of this study point to three areas where more, and more streamlined, support for authors is needed. These three areas are:

▶ **Financing APCs:** There is now a wide range of options for OA publishing and for financing the APCs. However, research funders have different rules that do or do not allow authors to fund APCs with research grants. Moreover, some APC-funds have a long list with complex conditions. This can make it difficult for authors to find ways to fund the APC for their article. Furthermore, for many situations, there is no funding for APCs available, leading sometimes to private payments by authors. This situation needs to be addressed urgently by authors, but also requires stakeholders to work on creating a level playing field between subscription journals and OA journals. Libraries can play an important role here, as demonstrated by the popularity of APC-funds they manage³

▶ **Administrative procedures for APCs:** Considerable percentages of researchers from institutions with or without APC-funds stated that their administrative efforts with regard to the payment of the APC took them more than 1 hour. Clearer, more streamlined administrative procedures within the research organisations would greatly help the

authors involved. This would at the same time give the research organisations more insight in the financial streams regarding APCs.

▶ **Communication about OA publishing:** Another result from this study shows that authors now use a mixture of communication channels about Open Access that are operated by different stakeholders: publishers, research funders, universities, and libraries⁴. One also sees that the use of terminology often differs greatly among the various stakeholders, which adds to the confusion about the many OA options and OA policies⁵. Again, we see here a clear task for libraries to provide clear communication to authors and to take the lead in the development of simple, harmonised terminology on Open Access

Footnotes

- ³ The APC-funds managed by the libraries of the University of Göttingen, Inria and the University of Glasgow were considered as either very relevant or relevant by 92.1%, 95.7% and 88.4% respectively of the authors surveyed. See for further details the complete report.
 - ⁴ The top three information sources on Open Access, according to the Helsinki authors surveyed were: journal websites, colleagues and the scientific press, with lower percentages for the scientific press, the library and research funding organisations. For the Glasgow authors surveyed, the library was the top information source about Open Access. See the full report for further details.
 - ⁵ A proposed library service providing information on OA options and policies of the University, research funders etc. was seen as relevant or very relevant by 57.7% to 89.3% of the authors in the various surveys of this study. See the full report for further details.
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