

What do academic authors think of open access – De Gruyter Open Author Survey

Contents:

- Introduction
- Highlights
- Research goal and method
- Who was surveyed
- The distribution of gold open access among authors
- How authors make their publishing decisions?
- Access problems
- Licensing
- Self archiving
- Article processing charges
- Funding for open access books
- Less wealthy countries publish more in open access
- Article Processing Charges by GDP of author's country of residence

Introduction

This report is a summary of the output of the De Gruyter Open Author Survey. Partial results of this research were already presented in more details in several blog posts on the [openscience.com blog](#). The data behind the survey [are open](#) and every researcher and institution is welcome to reuse them and to verify our findings.

Highlights

The main findings of the research are:

- A model with a big number of researchers who publish in gold open access from time to time might be a better representation of open access publishing than a model in which a small group of highly motivated practitioners are producing the lions share of the output.
- The majority of the surveyed authors believe that open access is a helpful and ethically good feature, but even without it, their work might be read by all the readers they want to be read by.
- There is no strong correlation between the frequency of facing shortcomings in access and beliefs about access problems faced by other readers.
- Lack of knowledge and the legal complexity of copyright are the main problems inhibiting green open access to all types of academic output.
- Books remain an important form of research communication and teaching. However, opening academic books to a general audience is still a challenge without an easy solution.
- Authors from the less wealthy countries more often publish in gold open access.

Research goal and method

The main goal of the research was to examine the attitudes of academic authors around the world towards open access publishing, including their experiences with open access, their publishing practices and their opinions about different publishing models. We knew that our research was preceded by several other surveys of this kind. However, since none of these surveys (including ours) were close to reaching a representative sample of the global community of researchers (which is probably impossible, or almost impossible), we put our major focus on repeating some questions presented in other research, to see whether the earlier results would be confirmed or not.

We have also added a couple of new questions (or have modified old ones), based on current discussions in the open access community and the experience of our staff in working with academic authors. The major difference with our present research is the emphasis on open access book publishing, a field which had been little examined to date.

The survey questionnaire is available [here](#).

Emails containing links to the survey were sent to 107,296 scholars listed on [De Gruyter's Open](#) mailing lists in a period from December 2015 to January 2016.

We received 1,012 responses to the survey, so the response rate was 0,94%.

A response rate below 1% is rather low, which means that our respondents must be seen as a group of self-selected volunteers, with extraordinary interests in the subject of the research (research communication) or with extraordinary sympathy towards De Gruyter Open's brand, rather than a representative sample of global researchers.

This is a common bias of all large scale surveys on open access (there is no truly representative study so far). In the case of our survey it resulted in the over-representation of authors who publish open access works. We were trying to diminish this effect at the stage of research design by avoiding the phrase "open access" in the invitation to take part in the research and in the introduction to the survey, but we did not achieve satisfying results. Therefore we should keep it in mind (when talking about the results), that our respondents probably have more knowledge on open access and more sympathy towards it than other researchers.

Who was surveyed

Out of 1,012 respondents 91 claimed to have no publishing output in the last 3 years and 23 failed to provide valid answers about their recent publications. Therefore, 898 respondents were classified as academic authors. Among respondents classified as academic authors 90.3% are based in Europe (counted with Russia and Turkey).

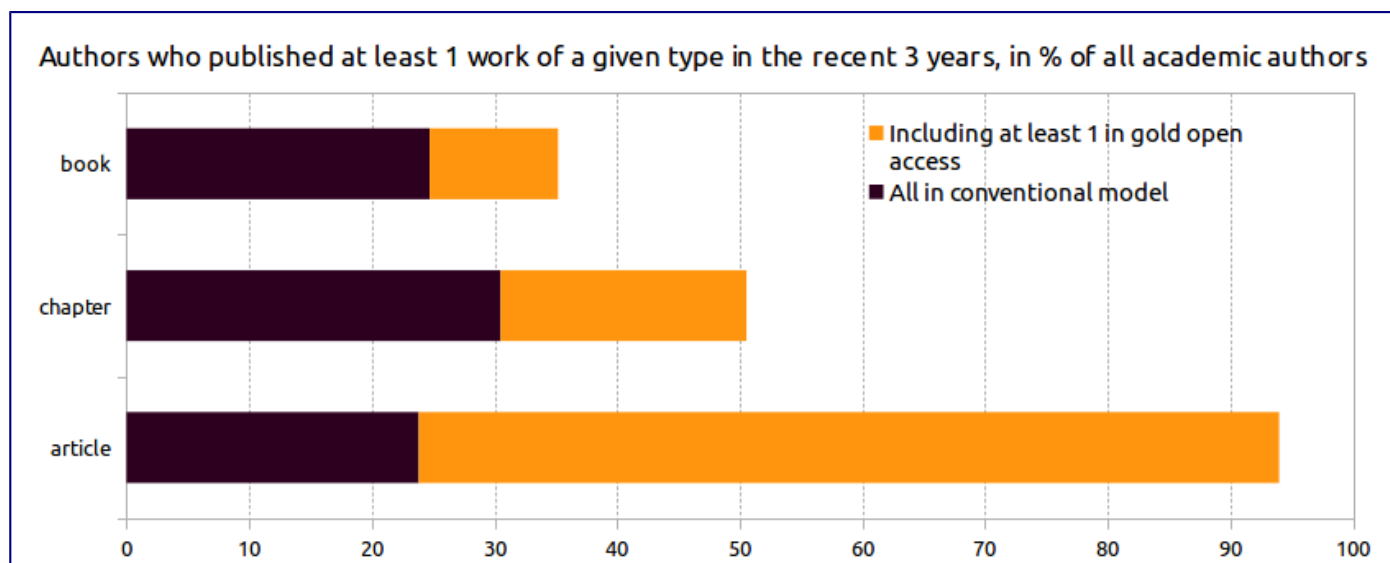
The total share of articles that are openly available on publisher's websites (gold open access) in global publishing output was calculated by Laakso and Björk to be 16.2% in 2011, growing steadily by 1 percent point annually. [\[1\]](#)

Meanwhile 35.8% of articles published by our respondents in the years 2012-2015 used this model.

Therefore, authors who are more familiar with open access are significantly over-represented in our sample. It should also be noted that all statistics presented in this report are based on the self-declarations of our respondents. This is important because they classified their publications as "academic" by their own criteria that are unknown to us. Bibliometric studies are usually conducted on literature indexed by some exclusive services, while our authors might also declare as academic work and open access academic work those papers that would not be indexed, and so would not be covered by

biometric studies.

Declared publishing output of our respondents is presented in the graph below.



The distribution of gold open access among authors

Among our respondents, the gold open access article output is well dispersed. 74.6% of all who recently published an academic article published one or more papers in a gold open access model in the last 3 years. This is a surprisingly high outcome, even taking into account the over-representation of open access practitioners visible above.

This outcome suggests that a model with a big number of researchers who publish in gold open access from time to time, might be a better representation of open access publishing than a model in which a small group of highly motivated practitioners are producing the lions share of the output.

29.7% of those who published an academic book in the last 3 years published 1 or more in gold open access (available freely on a publishers website). The top 5% of authors of gold open access books published 21.7% of all books of this kind.

When it comes to book chapters, 39.6% of all authors who published this kind of work in the last 3 years published at least one that was free to read on a publisher's website. Gold OA book chapters are more concentrated among a small number of authors than gold OA papers. The top 5% of gold OA book chapter authors published 33.7% of all works of this kind in our sample.

Interestingly, the share of gold open access articles published by a researcher does not correlate with the same statistics for books or book chapters. This is probably because

authors choose open access venues of publication for other reasons, not because they are open.

How do authors make their publishing decisions?

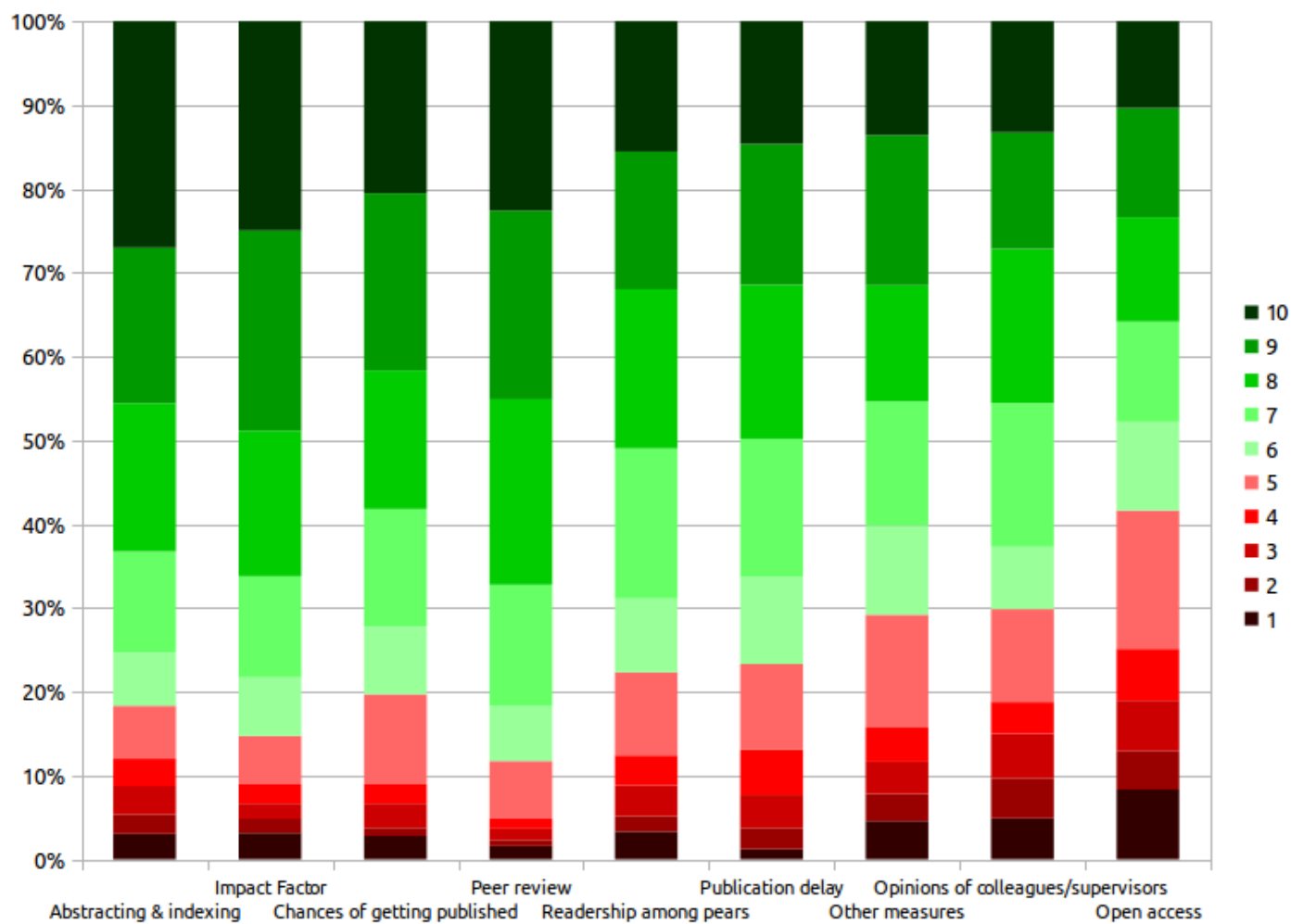
Our respondents have a generally positive view on open access. 87.5% agree or strongly agree with the statement that “open access may have a positive influence on the chances of being cited”. Only a slightly smaller fraction believe that “the general public should have access to research”. 83.3% of surveyed researchers agree or strongly agree that “Open access makes it easier to promote an academic work”. However, sharing these ethical principles does not correlate significantly with the share of open access in their research output.

Authors try to balance a journal’s Impact Factor, quality of peer review etc. with the chances of getting a particular paper published and, in consequence, their beliefs about open access have little to do with their actual publishing output.

The majority of the surveyed authors believe that open access is a helpful and ethically good feature, but even without it, their work might be read by all the readers they want to be read by.

Open access was chosen as the least important factor of choosing a journal. 10.4% of authors labeled open access as a “10 – extremely important” factor to them and 58.3% rate it with 6 or more on a 1 to 10 scale, so we cannot say that open access is not important to researchers, but apparently there are more important factors.

How important to you are the following factors in choosing a journal to publish your work in?
(1 - Not important at all, 10 - extremely important)

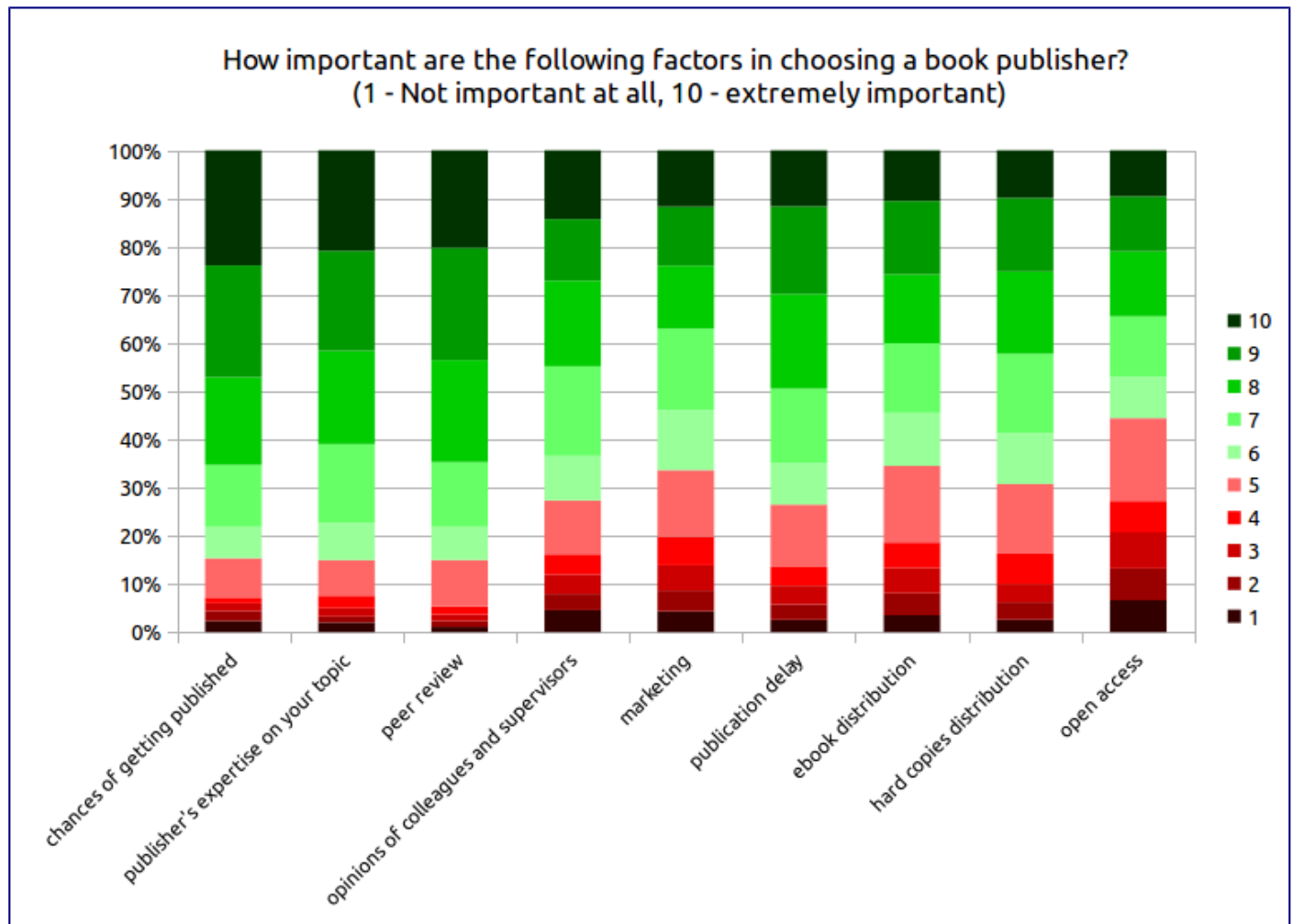


Social pressure (from colleagues and/or supervisors) has the biggest potential to make open access important to the authors as a factor of choosing a journal to publish their work in. These two variables correlate quite strongly (Spearman correlation of 0.41).

Recognizing the citation advantages also makes openness important to authors of academic articles (Spearman correlation of 0.32). This is even more true in the case of perceived promotional advantages of open access, measured by acceptance of the sentence, "Open access makes it easier to promote academic work" (Spearman correlation of 0.33).

However, none of these factors correlate with the actual publishing output of a particular author.

When it comes to choosing a book publisher the role of open access options provided is similar to choosing academic journals.



Book authors who feel that they are expected to publish in open access by supervisors or colleagues are more likely to treat open access as an important factor in choosing a book publisher (Spearman 0.36). However, again, this pressure seems to have no effect on their real publishing behaviours.

To publish an article or a book in gold open access, authors have to choose an open access journal (or at least a hybrid journal, but these journals usually charge higher fees) or an open access book publisher. As a result, shares of gold open access papers in a researcher's portfolio are a result of his/her choices that employ many more factors than openness and follow current rules of academic promotion.

Access problems

43% of academic authors declared that they “quite often” have problems with getting access to a book or an article that might be important for their work. 26.5% confessed that it happens to them “very often”. Counted together it is as much as 69.5% of academic authors face access problems.

What is astonishing, is that there is no strong correlation between the frequency of facing shortcomings in access and beliefs about access problems faced by other readers. 51.7% of academic authors, who themselves often cannot get access to works they need, agree or strongly agree that “Virtually all the readers that I want to be read by have access to all the important journals operating in my field”.

Researchers would probably value open access more as a factor for choosing a journal to publish in if they had a realistic view of the access problems among other scholars.

Licensing

While, according to [DOAJ data](#), Creative Commons licensing became a standard in open access publishing and more than half of open access papers are published under the terms of a liberal Creative Commons Attribution License, the majority of authors seem to have quite a conservative view on copyright. They tend to not accept any forms of reuse that are allowed by CC licenses.

Authors from less wealthy countries and those working in STEM disciplines are more likely to accept reuse of their work, however in none of the analysed groups a liberal approach was shared by majority of researchers.

| Do you agree to grant your readers the right to: ("Yes" answers in % of column) | Arts and Humanities | Medical and Life Sciences | Science, Mathematics and Engineering | Social Sciences |
|--|---------------------|---------------------------|--------------------------------------|-----------------|
| Translate your work without your approval | 18,6 | 37,5 | 34,4 | 22,2 |
| Include your work in a text anthology without your approval | 21 | 27 | 36,8 | 28,1 |
| Extract data from the text of your work by automatic software without your approval | 32,1 | 26,3 | 32,0 | 32,4 |
| Republish your work with a commercial company without your approval | 5,4 | 8,3 | 6,2 | 4,5 |

| Do you agree to grant your readers the right to: ("Yes" answers in % of column) | Researchers based in countries with GDP per capita equal or lower than 20,000 USD | Researchers based in countries with GDP per capita higher than 20,000 USD |
|--|---|---|
| Translate your work without your approval | 35,5 | 19,0 |
| Include your work in a text anthology without your approval | 37,7 | 19,1 |
| Extract data from the text of your work by automatic software without your approval | 35,9 | 25,1 |
| Republish your work with a commercial company without your approval | 9,1 | 4,0 |

Interestingly, the conservative view is dominant among those authors who have experience with open access publishing, so probably among those who accepted their works to be published under CC licenses. This is possible because academic authors probably do not care about licensing too much. Finding a good place to publish their work is complicated enough without it.

Self archiving

28.6% of researchers who published an academic article in the last 3 years archived at least 1 paper published in traditional way in open access repository. These green open access papers are 13.07% of all academic articles published by our respondents.

Green open access to academic books seems to be a marginal phenomenon. Only 5% of all authors of recent academic books in our sample archived a book in an open access repository. They archived 2.4% of books published in the last 3 years.

21.8% of recent book chapter authors have experience with green open access. Green OA works consist of 15.1% of all book chapters published recently by our respondents.

There is a significant correlation between choosing green open access in the case of papers and book chapters (Spearman 0.45). An author with a preference to make his or her toll access papers open via the green route is likely to also have a similar preference in the case of book chapters, and the other way round.

However, preferences to publish in open access journals seems to be unrelated to the habit of archiving work in open access repositories. Authors who publish a lot in gold open access are no more likely to archive copies of their conventional works in open access repositories. The number of gold open access works depends on rules of academic promotion, or more precisely, on a supply of open access publishing venues that can meet the demand resulting from these rules. Green open access depends on immanent features of an author – his/her ethical beliefs and knowledge about copyright, which might be called together “the green attitude”.

46.9% of academic authors who archived one or more of their paywalled papers claimed that they did it because “the general public should have access to the research”. A further 5.2% chose “because it helps researchers in low-income countries” as the main motivation, which might be also treated as an ethical reason. So together, 52.1% researchers archived their works because of ethical reasoning mostly. The second-largest group chose increasing chances to get cited as a main reason, but it was only

15.3% of respondents. The third-largest group was undergoing some kind of open access policy or other external pressure (7.1%).

The belief that open access is ethically good is common, while green open access is rare. And there is no correlation between the share of works that were archived by an author and his/her ethical beliefs. Except for ethical reasoning, one needs some additional competences to openly archive an academic work.

Among academic authors who DID NOT archive any of their recent articles published in a conventional way, 29.6% said that they did not know about such a possibility. 27.4% said that they were not allowed by publishers to do so. A further 24.6% claimed that they did not have the time to do so, while 6.9% declared that open access is not important for them. As much as 11.5% chose the "other" option, and responses they gave as an explanation showed huge confusion and a lot of misconceptions around green open access.

In the case of book authors who did not archive their works, 52.7% said that they were not allowed by publishers to copy their works. A further 16.5% did not know about such a possibility and 9.7% claimed that lack of time was a major reason. Only 7.6% stated that they did not want to lose part of their royalties from sales and 5.9% that open access is not important to them.

46.8% of the book chapter authors who did not use open access repository stated that they were not allowed to by a publisher. 19.9% of authors of chapters did not know that there is a possibility to archive copies of their works in open access (it was 29.6% in the case of authors of academic papers). 17.7% said that they did not have time to do it. Only 4.7% claimed that open access is not important to them. As much as 10.7% gave other answers that usually expressed confusion and misunderstandings about green open access.

The data presented above, shows that a lack of knowledge and the legal complexity of copyright are the main problems inhibiting green open access to all types of academic output.

Additional barriers exists in the case of book and book chapters. Publishers indeed usually do not have green OA policies concerning books and book chapters, while they are the norm in the case of journals. Funder policies also focus on journals mostly. According to [ROARMAP](#) there are 296 OA policies around the world that require the making of academic output open through the green route, but only 86 of them mention

books and book chapters. Further, 14 policies do not specify the type of content that undergo a policy at all. Therefore two thirds of strong open access policies do not concern books.

Article processing charges

In 2012 a number of journals using article processing charges as a source of revenue was counted to be around a quarter of all OA journals, but their share in the number of articles was estimated to be much larger. [\[2\]](#)

Meanwhile, 23.8% of those who publish an open access academic paper recently declared paying 1 or more article processing charges for an open access paper in the last 3 years. APC-funded articles were only 16.9% of all open access papers published by our respondents. The top 5% of authors of articles of these kind are responsible for 34% of this amount.

Thus, A\articles that article processing charges were paid for are extremely unevenly distributed among researchers. This uneven distribution, visible among our respondents, is probably also the reason why the share of works that APC were paid for in our sample differs so much from what we know from analysis of publishing market. Our research does not represent well the authors who paid APCs, which might be the result of their scarcity. A big number of APCs come from a small group of authors, working in Life Sciences mostly. And life scientists are underrepresented in our sample.

APCs are still rare in the Humanities and Social Sciences.

Authors who paid at least 1 APC in recent 3 years by discipline

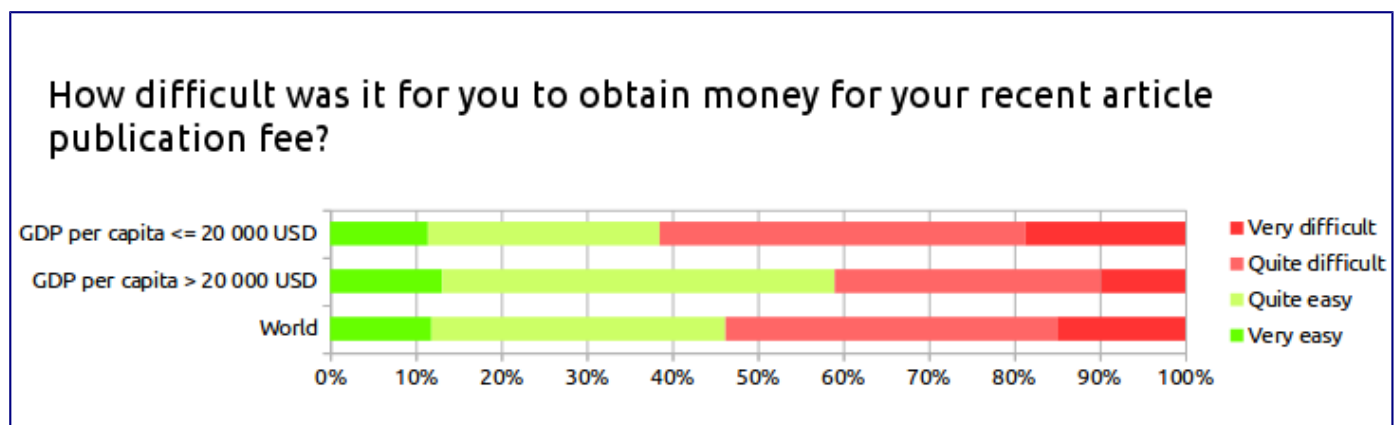
| | Arts and Humanities | Medical and Life Sciences | Sciences, Mathematics and Engineering | Social Sciences |
|---|---------------------|---------------------------|---------------------------------------|-----------------|
| In % of authors who published at least 1 gold open access article | 11.9% | 49.3% | 40.2% | 10.3% |
| In % of authors who published at least 1 article | 8.8% | 44% | 25.8% | 7.1% |

The mean of the most recent APCs paid by the respondents is 722.9 euros. The median is 500 euros, and 30% of researchers who knew the amount of their recent APC claimed it was 206 euros or less. The top 30% of declared APCs were 1,000 euros or above. There is a big diversity in the amounts paid, which is well known from previous research. The lower mean of APCs paid by our respondents than may be found in other work, is a result of the overrepresentation of humanists in our sample. Higher amounts of APCs are widely accepted in Medical and Life Sciences but not in Arts and Humanities.

Interestingly, the frequency of paying Article Processing Charges decreases with career level, while its average amount increases.

For 38.7% of them it was “quite difficult” to obtain the amount that was necessary to pay recent APC. Only 11.8% claimed that it was “very easy” and 34.3% said that it was a “quite easy” task. For 15% it was a “very difficult” issue.

Perceived difficulty of this problem appears to be independent from the amount of money that was actually paid. However, researchers from less wealthy countries more often face hardships with it.



These authors who are not paid for their research work and those on temporary contracts (counted together), often find it more difficult to organize money to pay APC. 47.3% of researchers working on stable conditions find it “quite difficult” or “very difficult” to obtain money for APC, while the amount of their precarious colleagues was 58.8%.

At the time of survey, 26.8% of academic authors predicted that they will have money to cover publication fees in the year 2016. Researchers from the field of Arts, Humanities and Social Sciences seem to be more pessimistic than their STEM colleagues. Also an army of academic authors who are not paid for conducting research see even smaller possibilities of funding for their publication fees. Only 23.1% of them believed that they

will be able to pay a publication fee, versus 33.1% of those who are paid for doing research.

Will you have access to any money (your own or from funders) in 2016 that might be used to cover the publication fee for your article? („Yes” answers in % of columns)

| Arts and Humanities | Medical and life sciences | Science, Mathematics and Engineering | Social Sciences |
|---------------------|---------------------------|--------------------------------------|-----------------|
| 23.4% | 29.1% | 32.2% | 22% |

Among authors who declared that they will have funding, 26.1% claimed that they did not know how much money it would be. 40.6% claimed that the amount is not specified. The rest were able to provide an exact amount that is available to them in the current year.

Half of this group have access to 1,000 euros or less in the year 2016. The bottom quarter have access to 425 euros or less, while the top quarter to 2,000 euros or more. Only 3.4% declared to have more than 5,000 euros to spend on APCs in the year 2016.

For sure, the vast majority of respondents that declare to have funding and provide an amount will be able to publish some articles in the APC based model. However, the majority of them will have to count money very carefully while choosing a journal to publish.

Analysis of sources of funding declared to be available to our respondents have shown that access to grant money that might be used to spend on APCs is smaller in Arts, Humanities and Social Sciences. Disciplinary differences do not affect the probability of treating one's own money as a resource that may cover APCs. So smaller amount of available grants translate directly into a smaller percentage of authors who want/can pay publication fees in Arts, Humanities and Social Sciences.

It is also important to remember that 58.1% of academic authors agree or strongly agree with the statement that “No one should pay a single dollar in publication fees”. This means that apart from issues connected to funding, there is still a huge cultural barrier that should be overcome if model based on article processing charges are supposed to become a dominant one.

Funding for open access books

The dominant voice in discussion on open access comes from the community of life scientists, who welcomed the success of numerous open access journals in recent decades. These successes and the business model that lay behind them shaped the whole public debate on open access. However, neither research communication nor open access ends on journal publishing. Monographs and edited volumes remain important in numerous disciplines. Even in those fields of research that have been dominated by research papers, some books are still able to make a big impact.

35.1% of academic authors published an academic book (monograph, textbook, or edited volume) in the last 3 years. What is even more striking, a further 43% of academic authors think it is “very possible” or “quite possible” that they will publish an academic book in the next 5 years. Thus, 78.1% of active academic authors that answered our survey are actual or potential book authors. This is more evidence that too little attention is paid to forms of academic output other than journal articles in current discussions about research communication.

Books remain an important form of research communication and teaching. However, opening academic books to a general audience is still a challenge without an easy solution. Gold open access is more developed here, albeit a business model that might support its expansion in book publishing is still seen as experimental.

Open access for books seems to be even more in demand than for academic articles. Conventional book publishing models undergo big market pressure, which might result in the virtual extinction of whole fields of research, which are unable to generate books that will become bestsellers.

Books are also expensive in production. Labour intensive text editing is growing disproportionately with its length, so editing a book is more time consuming and more expensive than editing several academic articles. The high price of book processing makes it harder for authors and their institutions to bear the whole cost of book publication, which in conventional book publishing is divided among numerous libraries. Both non-profit and commercial publishers that publish books in this model charge fees in the range of 10 to 15 thousand euros per book.

Only 17% of authors who published an open access book recently paid an Book Processing Charge. These researchers are 5% of all book authors and only 1.7% of all

academic authors in our sample. BPCs were paid for 17.1% of all books published in open access by our authors and only 2.8% of all their books. Half of books that a fee was paid for came from one author.

The BPC based model is just a small part of current open access book publishing and is less important for the whole open access books landscape than the APC based model is to the whole journal publishing environment.

Access to funding that might be spend on BPCs is even less common than access to funds that might be spent on APCs. And funds available to researchers are often scaled to meet the needs of APCs market, rather than to cover book publication fees, which are significantly higher.

The market for BPC is unlikely to grow until new sources of funding emerge. However, our respondents were able to publish a significant amount of gold open access books using alternative funding models that do not involve BPCs.

What do these models look like? This is unclear. The only two that we know quite well are a crowdfunding model employed by [Unglue.it](https://unglue.it) and a consortium model, represented for example, by [Knowledge Unlatched](https://knowledgeunlatched.org). Both of them operate on a small scale at the moment.

Less wealthy countries publish more in open access

Our respondents were divided into two groups during the analysis. Those originating from countries where GDP per capita is equal or lower than 20,000 USD, and those from states where this amount is higher. The border value was chosen because of two main reasons. First of all, it is quite close to the median for our sample, so it splits the sample into two quite even groups. Second of all because it seems to be the borderline between the core countries, where academic knowledge production is concentrated, with nearly all of world's top universities and headquarters of the biggest publishers, and the rest of world.

Countries with GDP per capita at least equal to 20,000 USD (the core countries) in our sample include USA, 15 Western European countries that belonged to European Union before the year 2004, as well as Australia, New Zealand and Japan. Bellow this line are Eastern and South-Eastern European countries, Argentina, Mexico, Republic of South Africa, Iraq and India. Data about GDP per capita was taken from the World Bank's dataset for the year 2014.

70.4% of authors from less wealthy countries published a gold open access article in the last 3 years, which is true only for 43.1% of researchers based in the core countries. The average researcher from the core countries published 22% of their work in gold open access (median), while it is as high as 50% for researchers from less wealthy countries. (For the whole sample the median is 33.33%)

The geographical difference in the average share of gold OA in articles publishing output is even more striking when seen on a career level.

While in less wealthy countries Early Career Researchers are the group with the highest median of gold open access share in recent output (60%!), in the core countries they have the lowest median (12.5%).

Less wealthy countries also publish more than the core in gold open access in the case of book chapters and books.

What triggers the preference of authors from less wealthy countries to publish in gold open access? Importantly this preference limited to a gold route only. Authors from less wealthy regions do not use open access repositories more. This may suggest, that main reason is that open access is simply more often offered by publishers operating on the peripheral publishing market.

Albeit, it should be also noted that:

1) Authors from less wealthy countries are even more likely to accept both the promotional advantage and the citation advantage of open access (in both cases median is "Strongly agree" for authors from less wealthy countries and "Agree" for those from the core).

2) More authors from less wealthy countries feel that they are under pressure from colleagues or supervisors to publish in open access.

Albeit, sharing these beliefs have no correlation with actual share of gold open access works in a researcher's portfolio, neither in the core countries nor in less wealthy countries.

3) Open access is also generally more important for authors from less wealthy countries, both as a factor of choosing a book publisher and a journal to publish a paper in.

However, it is hard to say which aspect or effect of openness makes it more attractive to them. Beliefs about the ethical state of open access and about possible promotional or citation advantage do not correlate with the importance of open access.

This is also worth to remind here that authors from less wealthy countries more often accept liberal licensing.

Article Processing Charges by GDP of author's country of residence

Authors from less wealthy countries pay APCs as frequently as their colleagues from the wealthy countries, even though, they claimed more often that organizing money is problematic for them.

19.7% of researchers from less wealthy countries paid at least one APC in the last 3 years, while 15.1% researchers from core states did the same.

Geographical location has not much influence on expectations concerning having access on funding in 2016.

Authors working in less wealthy countries often have less access to money from grants intended to be spent on publication costs (8.7% vs. 15.7%), and to grant money without a specified goal (8.5% vs 12%). However 11.4% of them are ready to treat their own money as a resource that may cover Article Processing Charges, which is true for only 6.1% of those based in the core countries. In consequence, they are able to pay APCs as often as their richer colleagues.

Of course, their resources are more limited anyway. When the median of recent APCs paid by authors from the core is 1,100 euros, for less wealthy countries is 300 euros.

The bigger importance of open access for the authors from less wealthy countries is visible in numerous statistics. However, the reasons of this importance seem to be complex and need some further investigation.