



The role of advertising in financing open access journals

by Jan Erik Frantsvåg

Abstract

In a number of articles or books, advertising is pointed to as a possible way of financing open access (OA) journals. Very little work seems to have been done on finding out how advertising actually functions as a source of financing for OA journals. A survey was carried out to explore the field, both why journals did not employ advertising, and how advertising was employed. The findings show little uptake of advertising among OA journals, and indicate that there is a lack of understanding of how advertising could best be employed.

Contents

[Introduction](#)

[Forms of advertising](#)

[Survey background](#)

[The survey](#)

[Conclusion](#)

Introduction

In his book on how to establish and operate open access journals, David Solomon wrote [1] that "A [...] way to generate income from the operation of an OA journal is through advertising on the journal's Web site." Solomon dedicated several pages to discussing the possibilities of generating advertising income. In other sources, advertising is mentioned as a possible source of income, but only in passing. It is difficult to find any real treatment of the subject — see, for example, Björk and Hedlund (2009) and Hedlund, *et al.* (2004). Crow [2] examined the subject in detail, but except for examples of journals using different kinds of advertising, there was little about what OA journals actually do. I have not been able to find any survey or analysis of what advertising actually means for OA journals.

Advertising revenue is important to many media, not the least online newspapers. Contrary to some scholarly journals, newspapers depend on generating advertising revenue in order to finance their operations. Very few newspapers have tried to generate income directly and solely from readers, and — to my knowledge — none from their authors. To some extent, newspapers have tried to generate revenue from their back files, by making access to older information — that is, their archives — a paid service. Libraries often subscribe to these kind of services. For many online newspapers, the online news service is an offspring of a traditional newspaper, financed by subscriptions, sales and advertising revenues.

For traditional scholarly journals, advertising has been a non-existent or negligible source of income. The readership is too small to be interesting to advertisers or the journal itself is published too irregularly to be suitable for advertising. For some journals, the readership will often not constitute a meaningful target group for an advertiser. The exceptions to this are large, frequently published journals with strong connections to professional societies or associations, like medical journals. For such journals, advertising has been and will be an important source of income [3].

A transition to OA publishing, with an Internet presence as the means of distribution, creates new possibilities for scholarly journals relative to advertising income. OA journals constantly create new scholarly content to attract very specific readers, but this content is not tailored to create advertising income. Hence, all OA journals have some kind of readership of some size and composition, dependent on the latest developments in research in a given discipline. OA journals have an additional advantage in that archival content is valuable and attracts readers. Therefore, this longer "lifespan" for a given archival article in an OA journal — compared to one in an Internet newspaper — will offset the significantly smaller (but focused) circulation of an OA journal. This archival content will also compensate for the less frequent publishing schedule of an OA journal compared to a daily or weekly newspaper.

Forms of advertising

There are a number of mechanisms for generating advertising revenue for an OA journal. Some of these mechanisms resemble those available to traditional journals, like directly negotiated product advertisements. These "traditional" advertising forms need administrative resources to negotiate content, location and pricing, as well as statistical services on views or clicks and invoicing. This kind of "negotiated" advertising could also lead to problems with editorial integrity — or to suspicions concerning this integrity [4].

Online advertising also comes in forms that are unknown in traditional publishing. "Affiliation" describes these new forms of advertising. This means that the publisher joins an affiliate network of some kind, either directly with some advertiser or through a third party. Typically, the publisher is paid not for time invested or the space used for advertising, but for the traffic brought to the advertiser — by the click, per registration or as a percentage of sales. There is no negotiation, the publisher either applies to become an affiliate or not, based on the advertisers' range of products or services and on the commission structure offered. Either the advertiser accepts the publisher, or rejects — generally, a rejection will be based on poor Web site quality or inappropriate content. The percentage of rejections is often very low. Editorial integrity is not threatened, as there is no communication about editorial content between the publisher and advertiser.

If an OA journal is in a field where books are important, affiliation with Amazon or a national Internet bookstore (depending on journal language and geographic distribution of readership) could be a way of generating income. The simple way of doing this is to place a clickable logo on the journal Web site. The more pages the logo is found on, the better the chances of generating income. A more labour-intensive way is to link to specific book titles — books reviewed, discussed in articles or cited in the journal. This may result in significantly more income, but obviously requires more resources.

A more general way of employing advertising is to affiliate with Google AdSense. This Google service places ads on your Web pages. Their choice of ads to place on your pages depends on an automated analysis of the textual content of pages. A given journal sets aside space on their pages, and leave it to Google to fill in the space with ads. The journal has no control over what advertising is shown on their pages. The ad content actually differs from viewer to viewer, based in part on what domain the viewer is coming from. There are some mechanisms for a journal to exclude advertising from specified sources. The journal also has very little control over revenue, but has to accept Google's numbers. Implementing Google AdSense is a one-time operation, so income generated this way requires little additional work for a given journal.

Survey background

While OA journals generally seem to have problems in finding stable and long-term financing, relatively few OA journals seem to employ advertising as a means of generating revenue.

It therefore seemed interesting to find out why so few OA journals seek advertising in any form. Based on conversations with scholarly editors, I expected to find a high degree of ideological resistance to the idea of advertising.

I was also interested in understanding how those OA journals that accepted advertising worked with advertisers. Did they affiliate — and if so, with whom — or did they negotiate directly with advertisers? The expectation was that journals, especially smaller journals, would prefer to affiliate, mainly with Google AdSense, as this would be a low-cost way of generating income, while larger journals would go for more labour-intensive ways of employing advertising. For those that employed Google AdSense I also asked for financial information to see if any background variable could be seen to have a clear influence on the income potential of a given journal.

For both sets of questions, I was also interested in any discernible pattern based on background variables like language, subject, journal size, etc.

The survey was constructed in three parts: one general part with general and background information on the responding journal and a question whether the journal accepted advertising or not. Those journals responding no to this question were presented with questions aimed at clarifying the reasoning behind their non-acceptance. The respondent could choose one or more reasons, or add other reasons or clarifying the answer with a comment field. Journals accepting advertising were asked how they selected advertising (direct negotiation, affiliation and — if affiliates — what kind of advertisers they affiliated with). Those using Google AdSense then were asked about click-through rates and income per thousand clicks.

At the end, all respondents were given the chance to comment on the survey and to add any information they felt relevant.

The survey

On 13 May 2009, I downloaded a file containing information on all 4,148 journals then in the Directory of Open Access Journals (DOAJ; <http://www.doaj.org/>).

Every journal was assigned a serial number, and a random selection of journals was taken by finding journals whose serial number was divisible by 10, then 9, 8 and 7, giving a sample of 1,719 journals. All Nordic and Baltic journals were included in the sample.

I then tried to assign an e-mail address to each journal, in order to mail this survey. A not insignificant number of journals hid their e-mail addresses; 387 journals were removed from the sample, primarily due to a lack of visible e-mail addresses. While journals with no visible e-mail addresses came from all over the world, problems with language (my language skills) probably led to a lower participation rate for journals using languages other than English, Scandinavian, German, Spanish or Portuguese. These issues did not apply to journals using Open Journals System (OJS; <http://pkp.sfu.ca/?q=ojs>) as e-mail addresses usually are found at a given location in the journal structure in these journals.

The remaining 1,332 journals were e-mailed the survey between 14 May to 6 October 2009. Some of these messages bounced and in other cases administrators of journals decided not to participate in the survey. In total, the survey was answered by representatives of 474 journals, a response rate of 35.6 percent. Of these, 377 gave full answers to the survey, giving a response rate of 28.3 percent. These answers representing 377 journals were used for further analysis.

Publisher size

Statistics from the entire DOAJ file indicate that most journals are published by single-journal publishers — 2,430 of 4,148 journals, or 58.6 percent of all DOAJ journals. In fact, 97.9 percent of publishers listed in DOAJ create five or fewer journals, publishing a total of 72.8 percent of all DOAJ journals. How do we define a publisher? Is it the editorial team that is the publisher, or is it the technical organisation that operates the infrastructure? The large number of small publishers in DOAJ is probably a result of assuming that the editorial team is equivalent to the publisher, at least for those journals representing academic institutions. An assumption is that the larger the publisher, the more professional a publishing venture it is. It is also probable that professional publishers and less professional ones will have different policies and views on how publishing should be financed. It is therefore interesting to compare the respondents with the DOAJ population concerning publisher size. Twenty-two journals that responded could not be identified in the DOAJ population so they were removed.

Table 1: Size distribution of publishers (number of journals published) in DOAJ and in survey.

Publisher size	1	2–5	6–10	11–15	16–20	21–50	51–100	161	188	
DOAJ percentage of journals (N=4,058)	58.6%	14.2%	6.4%	3.2%	1.4%	2.6%	5.3%	3.8%	4.5%	100.0%
Sample percentage of journals (N=355)	76.9%	13.0%	5.6%	1.7%	0.6%	0.3%	0.8%	0.0%	1.1%	100.0%

In Table 1 we note that single-journal publishers are over-represented, medium-sized (2–10 journals) are fairly represented while publishers with more than 10 journals are greatly underrepresented. The one publisher in the column “161” is the Hindawi Publishing Corporation (<http://www.hindawi.com/>). No Hindawi journal participated in this survey.

Journal language

Journals in the survey were published in 60 different countries. In addition there is a “International” category containing 12 journals that were unable to pinpoint a single country as their country of publication.

English was the main language for 66 percent of the surveyed journals, Spanish in 14 percent and Portuguese in five percent. Various languages and combinations of smaller languages and English account for 15 percent of the total.

Comparisons with the DOAJ population were difficult, as DOAJ lists all languages that a journal uses. As mentioned previously, the survey has a bias towards over-representing journals published in Western European languages. Furthermore, I was not able to secure comparable data on country of publication from DOAJ. Hence, I do not have a clear picture of bias in the sample relative to the geographical distribution of journals.

Use of advertising

Obviously, the question of acceptance of advertising by journals was one of the most important in the survey.

Publisher size	1	2–5	6–10	11–15	16–20	21–50	51–100	188	Total
Not accepting advertising	217	36	17	4	1			3	278
Accepting advertising	56	10	3	2	1	1	3	1	77
Total	273	46	20	6	2	1	3	4	355
Not accepting advertising	79%	78%	85%	67%	50%	0%	0%	75%	78%
Accepting advertising	21%	22%	15%	33%	50%	100%	100%	25%	22%

Except for the largest publisher, there is an increasing tendency to accept advertising as the size of the publisher — in terms of number of journals published — increases. However, verification of the reports reveals that the numbers for the largest publisher is misleading, as two of three journals answering that they do not accept advertising, actually have advertising on their Web sites. This problem could be a result of editors, not publishers, answering the questionnaire. Editors for larger publishers often will not have anything to do with advertising, which is in the realm of the publisher.

In addition to the 355 journals in Table 2, there were another 22 journals that we could not identify in DOAJ, so they cannot be classified according to publisher size. If we include them in the total, we end up with 21 percent of the surveyed journals accepting advertising. It seems fair to assume that a majority of these 22 journals would have ended in the single journal publisher category — which includes more than three-quarters of all surveyed journals. That would bring the percentage of journals accepting advertising to slightly less than 20 percent.

Even though absolute numbers for medium-sized and larger publishers were small, the survey shows a tendency for small publishers not to accept advertising, while larger publishers are more likely to exploit this source of income [5]. Remembering that the smallest publishers — single journal publishers — are greatly over-represented in the survey, a reasonable estimate for the percentage of journals accepting advertising should lie somewhere between 22 and 25 percent.

Table 3: Articles published in journals accepting advertising or not accepting advertising by publisher size (actual numbers and percentage).

Publisher size	1	2-5	6-10	11-15	16-20	21-50	51-100	188	Total
Not accepting advertising	77,918	4,676	9,632	1,248	100			305	93,879
Accepting advertising	27,399	1,037	920	750	200	30	40,050	80	70,466
Total	105,317	5,713	10,522	1,998	300	30	40,050	385	164,345
Not accepting advertising	74%	82%	91%	62%	33%	0%	0%	79%	57%
Accepting advertising	26%	18%	9%	38%	67%	100%	100%	21%	43%

If we look at articles, not journals, the picture was similar. All journals were asked to provide an estimate of the number of articles published on the Internet. Any given article may be surrounded by advertising. For larger journals, the numbers corresponded closely but the numbers for the largest publisher were misleading. For the mid-sized group of publishers the numbers differed, but the absolute numbers were too small to be significant. In total, about 43 percent of articles were published in journals accepting advertising. However, more than half of these were published in three journals in the journal size 51-100 category, influencing the average heavily. If we include articles from 22 journals that we could not identify in DOAJ, and hence have no information about the size of the publisher, 39 percent of articles were published in journals accepting advertising.

The interesting difference — between the percentages based on number of journals and the percentages based on the number of articles — lies in the group of journals published by single-journal publishers. Twenty-one percent of these journals accepted advertising, but 26% of articles published in these journals were published in journals accepting advertising. The difference can only be explained by larger journals (those with many articles) accepting advertising to a larger extent than smaller journals. Table 4 illustrates a tendency in this direction with the percentage of journals published by single-journal publishers accepting advertising increasing as the number of articles in a given journal increases.

Table 4: Journals published by single-journal publishers accepting advertising or not accepting advertising, by journal size.

Number of articles	Accepting advertising?		Total	Percentage accepting advertising
	No	Yes		
1-250	164	35	199	18%
251-500	30	10	40	25%
501-750	8	3	11	27%
751-1,000	5	4	9	44%
1,001-1,250	2	1	3	33%
1,251-1,500	3	1	4	25%
1,751-2,000	1		1	0%
2,751-3,000	2		2	0%
3,751-4,000		1	1	100%
5,751-6,000	1		1	0%
7,501-7,750		1	1	100%
22,001-22,250	1		1	0%
Total	217	56	273	21%

As the absolute numbers of journals in the categories of more than 500 articles are small, one should be careful not to draw conclusions based on the data. However, it seems reasonable to associate acceptance of advertising with larger journals in terms of number of articles published.

What are the reasons for not accepting advertising?

Table 5: Reasons for not accepting advertising (multiple answers per journal possible).									
	Publisher size								
Reason	1	2-5	6-10	11-15	16-100	188	N/A	Total	Percentage not accepting advertising
It is our policy not to have advertising.	94	16	7	2	1	1	6	127	43%
Scientific journals should not have advertising.	57	5	4	3			3	72	24%
The potential income is too small to be interesting.	32	5		1		1	4	43	14%
We do not want the extra work associated with advertising.	38	6	1			2	4	51	17%
Our publishing solution does not easily allow advertising.	33	3	3			1	1	41	14%
We haven't thought of it.	56	9	3	1			8	77	26%
Other	31	9	1			1		42	14%
								453	
Number of journals in sample	273	46	20	6	6	4	22	377	

Overall, 298 out of 377 journals did not accept advertising. Respondents were presented with a list of possible reasons for not accepting advertising, and had the option of formulating their own reason by choosing "Other". Some respondents selected more than one reason, so that the number of answers does not equal the total number of journals. Not all journals not accepting advertising provided a reason.

A working hypothesis in this research was that there was a strong non-commercial bias, making advertising undesirable for many journals. The survey confirmed this non-commercial bias, but there were more practical considerations equally, or more, important.

The most common answer (43 percent) was that a given journal had a policy of not accepting advertising. This is essentially a statement of policy. However, 60 of the 127 journals stating this reason provided no other explanation for not accepting advertising. Of the remaining 67 journals, 42 answered that scientific journals should not include advertising in their pages. Nine journals with a policy of not accepting

advertising also answered that they had not thought of it.

That scientific journals should not have advertising was given as an answer by 24 percent of journals not accepting advertising. It is possible that some of the 60 journals stating that they have a policy of not accepting advertising may have agreed with this statement. Hence there is support for a working hypothesis that there was a strong non-commercial bias among scholarly journals, but it was not as widespread as one would have imagined.

Practical considerations — income potential too small, extra work or problems with a given publishing solution — each accounted for a substantial number of journals. A total of 98 journals (33 percent) had given one of more of these reasons for not accepting advertising. Many provided other reasons as well.

The "Other" category (14 percent) covered a number of reasons, but was also used to express interest in accepting advertising in the future.

It was surprising that 77 journals (26 percent) of non-advertising journals noted that they had not thought of using advertising as a source of income.

There is a strong sentiment that advertising is inappropriate for scholarly journals, but practical considerations and a lack of knowledge about the potentials and possibilities of advertising were major factors in explaining the attitudes of some journals towards advertising.

What kind of advertising is accepted?

There are various strategies for accepting advertising, differing in income potential, amount of work and possible conflicts of interest. Respondents were presented with a number of different kinds of advertising, and could choose one or more kind of advertising as being relevant to their journal. An "Other" category was also provided for advertising that did not fit into the categories listed in the survey. Altogether, 79 journals participating in the survey accepted advertising in some form, some accepting more than one kind of advertising. Overall, there were 95 replies to what kind of advertising was used. Seventeen "other" answers covered a number of different aspects, with limiting advertising to specific scientific partners (institutions, conferences, journals, products or services) being the most common answer.

Table 6: Advertising selection (number of journals accepting advertising = 79).										
Advertising selection	Publisher size									Total
	1	2-5	6-10	11-15	16-20	21-50	51-100	188	N/A	
We deal directly with firms interested in advertising in our journal.	39	6	3	1	1	1	3		2	56
We are members of one or more affiliate programs.	1		1	1						3
We are members of one or more affiliate networks like ValueClick, TradeDoubler, and CommissionJunction.	1		1							2
We provide links to books through affiliation with an Internet bookstore like Amazon.	4	1								5
We use Google AdSense.	8	1		1			2			12
Other sources of advertising.	13	3						1		17
Total										95
Number of journals in total sample	273	46	20	6	2	1	3	4	22	377

Given the small size of the sample, we are cautious in drawing any firm conclusions. However, we see that there are two main strategies for generating advertising income — directly working with prospective advertisers and using Google AdSense. Affiliation in various forms was only used by a handful of journals.

It was surprising that directly working with prospective advertisers was the most common way of generating advertising income. More than two-thirds of the journals accepting advertising selected this option (56 journals of 79; 71 percent). This methodology is the most time-consuming and expensive means of generating advertising income, as a given journal needs to invest time both in handling prospective advertisers and managing the practicalities of advertising such as reporting and invoicing a specific advertiser. It is also the kind of advertising that could open a journal to possible conflicts of interest and to potential editorial pressure from advertisers. Nevertheless, this solution provides a given journal control over the nature of advertisements, allowing a journal to exploit its networks and market potential to the fullest.

Google AdSense is quite different from working directly with advertisers. It is simple to implement and has little administrative overhead. However a given journal has no control over what products and services are advertised and what kinds of ads will be viewed by readers. There is little control over income as well.

My advance hypothesis before the survey was that smaller journals would use Google AdSense, while larger journals would deal directly with advertisers. This would be consistent with the administrative resources that one would assume available for journals of different sizes. The survey supported the notion that larger journals dealt directly with advertisers, but surprisingly smaller journals also worked directly with advertisers and did not *en masse* use Google AdSense.

What is the income potential of advertising?

In order to advise journal editors, we wanted to understand the potential for income. We also wanted to see if we could find any connection between journal publishing language, journal size and other factors with advertising income.

We asked for financial information only if journals used Google AdSense. This kind of advertising is probably highly dependent on background variables in deciding income potential. With other forms of advertising there are a number of other variables that would affect income potential. Thus, we saw Google AdSense as the easiest advertising strategy to analyze.


Much to our surprise, no journal using Google AdSense was willing to share financial and statistical information in our survey. Hence, we are unable to report on the advertising income potential for OA journals.

Conclusion

This survey demonstrated that advertising was used to generate income for some OA journals but was not widespread. This was due partly to ideological motives, but also to practical considerations and a lack of knowledge about possibilities.

There was some indication that the tendency to use advertising as a source of income increased with increased size of a given publisher, in terms of the number of journals published, and with increased size of a given journal, in terms of articles published. This could be due to larger publishers having more administrative resources, thus being able to utilize these resources to generate income. It could also be a result of increased pressure from patrons or hosting or co-operating institutions to generate income.

There was some indication that the strategies chosen for generating advertising revenue were not optimal. Strategies placing a heavy administrative burden on journals were favoured over less burdensome strategies. These decisions could reflect a lack of experience about alternatives.

More information about advertising as a possible source of income for open access journals is sorely needed. Further research is needed in understanding the complex administrative behaviors of open access journals and their editors and publishers. 

About the author

Jan Erik Frantsvåg is an economist working at the University Library of Tromsø. He has a lower degree in economics, banking and computer science from the University of Bergen (1985) and has later studied documentation science at the University of Tromsø, where he currently is studying for a Master's degree.

After a career in banking, he joined the finance department of the university administration in Tromsø in 1993. He has held various administrative positions in the finance and computing departments, and at the faculty of humanities. Since 2006, he has been working full-time on open access at the University Library.

He is currently chair of NORA — Norwegian Open Research Archives, a co-operation between the Norwegian Institutional Repositories. This article is a result of his involvement in the Nordic project "Aiding Scientific Journals Towards Open Access Publishing," where he has been focusing on business models for open access journals.

E-mail: jan [dot] e [dot] frantsvag [at] uit [dot] no

Acknowledgements

The work leading to this article has been funded in part by Nordbib, a funding programme under NordForsk, which is financed by the Nordic Council of Ministers, through the project "Aiding Scientific Journals Towards Open Access Publishing" (NOAP); partly by NORA — Norwegian Open Research Archives (financed by The Norwegian Ministry of Education and Research) and partly by The University of Tromsø.

Notes

1. Solomon, 2008, p. 122.

2. Crow, 2009, pp. 16–20.

3. See, for example, Michael D. Mills, Robert J. Esterhay, and Judah Thornevill, 2007. "Using a Tetradic Network Technique and a Transaction Cost Economic Analysis to illustrate an economic model for an open access medical journal," *First Monday*, volume 12 number 10, at <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1964/1840>.

4. For a more detailed introduction to advertising possibilities in OA journals, see the NOAP wiki (*Advertising*) or Crow (2009), pp. 16–2.

5. Hindawi, which did not participate in the survey, seems to be a notable exception.

References

Bo-Christer Björk and Turid Hedlund. 2009. "Two scenarios for how scholarly publishers could change their business model to open access," *Journal of Electronic Publishing*, volume 12, number 1 (February), at <http://dx.doi.org/10.3998/3336451.0012.102>, accessed 10 March 2010.

Raym Crow, 2009. *Income models for open access: An overview of current practice*. Washington, D.C.: SPARC, at <http://www.arl.org/sparc/publisher/incomemodels/>, accessed 10 March 2010.

Turid Hedlund, Tomas Gustafsson, and Bo-Christer Björk, 2004. "The open access scientific journal: An empirical study," *Learned Publishing*, volume 17, number 3 (1 July), pp. 199–209.

Nordic Open Access Publishing (NOAP), 2009. "Aiding scientific journals towards open access: Advertising," at <http://www.ub.uit.no/wiki/noap/index.php/Advertising>, accessed 7 December 2009.

David J. Solomon, 2008. *Developing open access journals: A practical guide*. Oxford: Chandos.

Editorial history

Paper received 10 December 2009; accepted 28 December 2009; revised 6 January 2010.



"The role of advertising in financing open access journals" by Jan Erik Frantsvåg is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 Unported License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

Permissions beyond the scope of this license may be available at [janerik \[at\] janeriks \[dot\] no](mailto:janerik@janeriks.no).

The role of advertising in financing open access journals

by Jan Erik Frantsvåg.

First Monday, Volume 15, Number 3 - 1 March 2010

<http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/2777/2478>